

MIRRORS IN THE MAKING





university of
 groningen

Mirrors in the Making

*Culture, education, and the development of metacognition
in early and middle childhood (4-10)*

PhD thesis

to obtain the degree of PhD at the University of Groningen
on the authority of the Rector Magnificus Prof. E. Sterken
and in accordance with the decision by the College of Deans.

This thesis will be defended in public on
Monday 19 October 2015 at 11.00 hours

by
Theisje van Dorsten

born on 5 August 1983
in Leiden

Supervisor

Prof. B.P. van Heusden

Assessment Committee

Prof. A.M. Bevers

Prof. C.J.M. van Eijck

Prof. P.L.C. van Geert

Prof. H.J.M. van Oers

To my father, Jan van Dorsten



CONTENTS

11	ACKNOWLEDGEMENTS
15	INTRODUCTION
21	PART ONE <i>Theory</i>
23	CHAPTER 1: <i>Theoretical framework</i>
53	CHAPTER 2: <i>Theories in the cultural education field</i>
91	PART TWO <i>Development</i>
93	CHAPTER 3: <i>Self-imagination in childhood and the development of metacognitive skills</i>
131	CHAPTER 4: <i>Artefacts in childhood and the development of media skills</i>
179	PART THREE <i>Empirical research</i>
181	CHAPTER 5: <i>The development of teachers' understanding of cultural education – an empirical study</i>
227	CHAPTER 6: <i>Cultural education 'live'</i>
241	CONCLUSION
249	BIBLIOGRAPHY
265	SUMMARY
269	NEDERLANDSE SAMENVATTING
274	CURRICULUM VITAE



ACKNOWLEDGEMENTS

It was 2009 when I moved from the southernmost university in The Netherlands to the northernmost, in search of my great passion: doing research. I left one life behind and started a new one. The *Culture in the Mirror* project seemed to have everything I was looking for at the time: a pioneering research project which allowed for sharing and developing interdisciplinary theories and ideas in a field I have been interested in for a long time: cultural education. Throughout this research I feel that I have grown, as a researcher and as a person. This I could never have achieved without the people who have been my companions on this journey. In this section I would like to thank some of them.

First, I would like to thank the VSB Fund, Fund21 en SNS REAAL Fund for backing this ambitious and novel project. Their support has allowed for the opportunity to investigate and contemplate cultural education in ways that have never been possible before. I especially want to thank Martine Consten and Frank Verhagen for their engagement and constructive efforts. Furthermore, the Ministry of Education, Culture and Science has supported our partner SLO, The Netherlands Institute for Curriculum Development and has been with us from the start. I specifically want to thank Joost Kuggeleijn and Wim Burggraaff for their enthusiasm and continuous interest.

The *Culture in the Mirror* project would probably never have come to fruition without the amazing driving force of Hadewijch de Jong. Her passion for the field and belief in all of those involved has been invaluable. She saw the person behind the researcher and recognized the importance of those little chats in the hallway, coffee breaks, dinners and outings to keep us all motivated and united. I am also very grateful for the support that Anne Marie Backes (at SKVR, now KCR), and Gerdie Klaassen have continually shown for *Culture in the Mirror*. I wish to thank Anky Jacobse, Inge Roozen and Astrid Rass as well. The many hours we spent discussing ideas in meetings, on trains, buses and at metro stations have always sharpened my thoughts. Our research project was fortunate enough to have the support and interest of many people. I especially want to thank the members of the scientific committee Willem Elias, Ton Bevers, Diederik Schönau and Kees Vuyk for their involvement and critical questions.

This thesis would not have been possible without the aid of my promotor Barend van Heusden. His theory and ideas have been the main source of inspiration behind the *Culture in the Mirror* project. It was a joy to be able to explore new theoretical possibilities in our meetings and they always kept me enthused. Although it was not always easy, his optimism and originality are truly infectious. Unlike most Humanities' PhD students, I worked in

close collaboration with my colleagues, Welmoed Ekster and Emiel Copini, for most of the time. I would like to thank them for all the lunches, dinners, joys, sorrows and pranks that we shared throughout the years. It is such a comfort to exchange experiences with those who know exactly what you mean. Adam Handelzalts' input has also been very helpful. His expertise in the field of educational science has been a great asset and I am very thankful for his advice and support.

My research could not have been done without the support of the schools. I am very obliged to the teachers who were brave enough to join this venture with me and who have been my partners throughout these years. Bea de Vries, Geke Slagman, Alina Sierts, Frederika Boersma, José Mets, Robert Rijnvee, Annet Kaat, Carmen van der Roest, Anika van der Wijk, Nienke Wulp, Simone Lameris and Judith Heller. You have taught me things no book could have ever taught me and both you and your pupils have been a joy to work with. Thank you for allowing me into your midst.

I was very fortunate to be able to exchange ideas in the several committees that I joined during this project. I am grateful for the opportunities people have given me to present my ideas and findings in the public debate about cultural education. A special thanks goes to Dirk Monsma whose drive and care for the cultural education field is inspiring and who has become like a mentor to me. I also would very much like to thank *Justar* for the layout and design of my thesis and Claire van Wengen for her corrections.

With my new life in Groningen came new friends and my experience here would not have been half as enjoyable without the friendship of Gunn Larsen, Jennifer Meyer, Klazina Botke, Anne van Buul and Korrie Melis. With all the theoretical discussions, home baked cookies, trips, drinks, painting classes, walks, coffees and dinners they brought to my PhD experience they have made it truly wonderful. I also want to thank Floor Krooi, Floortje Daemen, Hilde Schellekens, Tanja Dorresteijn, Daniël Wendt, Tim Linssen, Timme de Bruin, Joost van Willigenburg, Joris Linmans, Meike Bont and Marije Gordinou for their support and friendship over the many years I have known them. I feel very blessed to have them in my life. I also wish to thank Jasper's family, Jan, Greetje and Esther den Boer, for their continual interest and care.

In this PhD project I had to overcome many obstacles and it was invaluable to always feel the love and support of my mother and sister, Diederike and Janneke van Dorsten. I am very grateful for the strong bond we have which I cherish as something really special. It is very sad that I have not been able to share my academic journey with my father, and that he is not here today to read my thesis and witness my defence; I have no doubt that his love for doing research runs through my veins. I hope to have made him proud and dedicate this book to him.

I never would have thought that moving to Groningen would bring me so much, not only

professionally but also personally. The love of Jasper has greatly enriched my life and I feel so fortunate to be able to spend my life with him. Having our own family with our daughter Sterre and her little sister on the way is truly unexpected and wonderful. To find myself finishing my PhD with them by my side brings me more joy than I can express.



INTRODUCTION

Cultural education – i.e. education in the arts, philosophy, media education, cultural heritage and citizenship, – has the potential to make children aware of who they are, as individuals, as part of a social and cultural col-

lective and as members of the human species. However, at the moment, cultural education lacks a strong, scientific basis – which hinders this potential. In this thesis I will use the theoretical framework of cultural cognition developed by Van Heusden as my searchlight, and looking glass, on an exploratory journey to gain a better understanding of the theory, development, and practice of cultural education. In this endeavour, I aim to make new connections between existing ideas and theories, question some traditional views on metacognition, propose an alternative view on the way children reflect on culture, and investigate if the framework could be beneficial for teachers’ practice.

This thesis is part of the *Culture in the Mirror* project, a research project which aims firstly to improve teachers’ understanding of cultural education in order to develop a continuous learning line for the ages four to eighteen, and secondly, to study the metacognitive development of children and adolescents. The project is divided into three age groups: ages four to ten, ages ten to fourteen and ages fourteen to eighteen above. My studies are concentrated on the youngest group¹. Thus, within the context of the broad topics of culture and cognition that are addressed, the cultural education for children in early and middle childhood is the focal point of this book. Childhood is in itself a very interesting object of study. From a biological point of view, this is the period between infancy and juvenility. At first glance, this long stretch of time between weaning and the ability to reproduce seems rather inefficient and illogical. The period of immaturity in humans is also very long compared to that of other primates and a baby is born with comparatively poor physical and mental abilities. However, the human infant and child will use this long phase of immaturity to good effect, to develop cognitive skills unlike any other animal: “At birth they may be motorically and perceptually far behind the sophistication of other primate infants, but they have a brain that will continue to grow and eventually be capable of great things, including language and symbolic thought” (Bjorklund 2007, 51).

While there are biological reasons for our long, and in many ways unique childhood, how we view this period of life is very much culture-bound. Childhood has not always been regarded as a distinctive period, nor is it treated the same across the globe. ‘Childhood’ very much depends on an adult construction, influenced by time and location, which is constantly reinvented (Waller 2005). For a

¹ For the research on the other two age groups, see the studies of my fellow *Culture in the Mirror* PhD students Welmoed Ekster and Emiel Copini.

very long time childhood was predominantly seen as just a phase in the development towards becoming a mature, abstractly thinking adult. However, nowadays scholars tend to acknowledge the child's abilities rather than its inabilities and are more focused on what children can do instead of what they cannot. "A modern view of the child acknowledges agency, that is, children's capacity to understand and act upon their world" (63).

Our view of childhood obviously influences how and what we teach the children in our society. Cultural education is one of the domains that the Dutch government deems important for the developing child. Hence, funds are allotted to schools and cultural institutions to incorporate cultural education lessons and projects into their programmes and curricula. However, the question as to what exactly should be taught, and how, is largely left unanswered. As we shall see in chapter one, the confusion about the subject of the arts is not exclusively tied to the educational domain, but a common problem of the art world as well. The Bamford Report of 2007 revealed how this uncertainty about the subject of cultural education hinders the Dutch cultural education ventures of schools. In 2009, the *Culture in the Mirror* (CiM) project was designed to deal with this fundamental issue. Its ambitions with regards to cultural education were clear: the content of cultural education, as well as the connection between cultural education and other realms of education should be made known to teachers. They should also be informed as to which aspects of pupils' development are particularly relevant for cultural education. The project was to be a joint venture: an interplay between the framework developed by Van Heusden, which served as its theoretical basis, and the everyday practice in schools. Teachers were to enter the University grounds and researchers would have to leave their books to assist in classroom work.

The framework offers many new insights into human cultural cognition that are highly relevant for cultural education. As will be discussed in chapter one, it reveals the mechanism behind our cultural consciousness, or metacognition, which lies at the heart of cultural education. In this book I will take this framework as my reference point and explore its potential on theoretical, developmental and practical grounds. Van Heusden's theory does not tell us what to do, nor does it guarantee high quality cultural education. However, as I will demonstrate in this thesis, it can be used to structure existing ideas and theories about culture and education and make new connections between them. By placing the model like a grid on what is known about the way a young child develops in developmental psychology, different aspects of this development which are relevant for cultural education can be highlighted and some existing ideas about the child and its way of reflecting on culture can be questioned.

Because of the multi-layered focus of the CiM project, my research attempts to answer three main questions:

- ▶ What is cultural education about, and why?
- ▶ Which cognitive developments in children aged four to ten are relevant to cultural education?

- ▶ Does working with Van Heusden's theoretical framework affect the understanding of the selected primary school teachers who have participated in the CiM project in terms of the knowledge of the content, connection and cohesion of cultural education? How, and why?

The thesis is structured according to these three main questions and thus divided into a *theoretical* (part one, chapters one and two), *developmental* (part two, chapters three and four), and *empirical* (part three, chapters five and six) section. In chapter one I will first discuss the Bamford Report and the theoretical confusion in the arts world in general. I will then outline Van Heusden's theory of cultural cognition and its main theoretical sources. The framework helps to define which skills can be addressed in cultural education, how these skills interrelate and how they are linked to the abilities that are developed in other types of education. The second chapter relates Van Heusden's theory to other theories in the cultural educational field. I will discuss the main similarities and differences between them and show how the theories can complement each other.

The second section explores how the metacognitive skills of young children develop, as these skills are central to cultural education. I will use existing insights from developmental psychology and relate them to Van Heusden's framework of cultural cognition. The first of these chapters is devoted to the *skills* of cultural consciousness in children. The next chapter explores how the *media* are used by children to express and shape their consciousness of themselves and others. I will propose a broader definition of metacognition than is commonly used, one that is not solely linked to language, and suggest that the medium of the artefact may in fact be the dominant means of reflection in early childhood. The two chapters are naturally interrelated but can also be read separately.

The empirical research carried out in, and together with, four primary schools in Groningen and Rotterdam is presented in the third and final part of my thesis. The aim of the research was to study if working with the Van Heusden framework provides teachers with a knowledge base that increases their understanding of cultural education. The levels of understanding of content, connection and cohesion in cultural education are studied for twelve teachers at different stages in the CiM project (chapter five). The data include an assessment of what the teachers say about their understanding of the theory, the process as a whole and the usefulness of the framework for their practice. The last chapter (six) provides a glimpse into some of the projects that were designed and executed by the teachers I worked with. It may serve as an illustration for those readers who are curious about what actually happened in the CiM project classrooms .

This thesis is part of a much larger project and as such also bound by the designs that were already formed by its many partners. The fact that this is a project in which academia and school practice come together has both its merits and its restrictions. I strongly believe

that in order to research a topic for the benefit of schools, one also needs to include the schools in that research. The input of the teachers I have worked with has been very insightful and useful, and although it was not always easy to bridge the gap in thinking, aims and practice between the scientific and the educational world, I feel that it was well worth the effort from both sides. My literature studies progressed in parallel with the projects in the schools, which meant that new information about the development of children was provided to the teachers along the way. Sometimes compromises had to be made on either the practical or the theoretical side to make a design process with such a highly theoretical framework feasible.

This book is only a very small step towards a truly scientifically based, high-quality cultural education rationale that not only answers the field's needs on a theoretical, but also on a practical level. My research does not answer any questions about the effects of working with the framework on the pupils, nor does it prove long-term effects on the teachers. The materials and instruments that have been developed during this project served mainly to allow the teachers to work with the theory so that its effects could be analyzed. They will need much refinement and testing before they can, if ever, become a practical tool independently of this research project. Likewise, the overview of the metacognitive development of the child is meant as a first exercise in exploring the potential of a different point of view on how children reflect on culture. The developmental part of my thesis offers many opportunities for further investigation and it would be very interesting to test some of my hypotheses in practice. Still, I believe that this thesis is an important first step in the right direction to improve, and better understand cultural education. I consider the exploratory nature of the research a necessary prerequisite for introducing a new type of thinking about childhood metacognition in general and cultural education in particular. Scientific research takes time and it can often not keep up with the fast pace of daily life. This is definitely also the case with the hectic and demanding world of the primary school. However, I hope that this book will be a source of inspiration for teachers, scientists, policy makers and others who are interested in cultural education and that it may aid their thinking about the mechanisms and value of our children's cultural consciousness.



PART ONE

CHAPTER 1: *Theoretical framework*

CHAPTER 2: *Theories in the cultural
education field*

Theory



Theoretical framework

§I BETWEEN THEORY AND PRACTICE: CULTURAL EDUCATION CONCERNS

I.1 THE AMBIGUITY OF THE ARTS

Before I became a PhD student, I studied World Art at the University of East Anglia in Norwich, Great Britain. One afternoon, I had a heated discussion with a biology student about Diane Arbus' photographs. He could not understand why they were considered art as he did not find them beautiful in any way. He claimed that people in photographs in museums should be beautiful and smiling and was very offended by the suggestion that Arbus' pictures could be works of art. A few months later I found myself in a similarly awkward position when I was working on an essay about *L'Origine du Monde* by Gustave Courbet at the kitchen table in my student flat. I had laid out several images of the painting on the big wooden table when a large group of my shy and quiet Taiwanese flat mates walked in. They were visibly shocked by the pictures and I hastened to sweep the pictures of *L'Origine's* genitalia under my writing pad. The event was followed by a muffled conversation and giggling among the girls. Apparently, studying arts and culture is not just 'looking at pretty pictures' as some people have said to me before. Art can be shocking, ugly, controversial, moving, dazzling and everything in between.

The debate about what the arts are is one that is likely to be familiar to any art lover or arts student. Most of us have encountered the deflated tourist in the modern art museum sighing at abstract pictures muttering 'my nephew of five can do this too'. An arts and culture student quickly becomes well-trained in dealing with skeptical interrogations by concerned and mystified family members, neighbours and acquaintances about what exactly it

is that they are doing at university. Usually this difficult and uncomfortable conversation ends with an exasperated: 'But then tell me what jobs you will get with it!'. The debate about the nature and value of culture in general and the arts in particular does not only take place in universities and museums. There is a more general confusion about the arts. Several developments in society have led to this uncertainty and have shaken the foundations of traditional art concepts. Additionally, the theoretical problem of defining what the arts are and what they are for has affected not only the art world but has also permeated the rest of society. Arts policy and cultural education are affected as well. The theoretical confusion has practical repercussions and as a result, today's cultural education lacks a clear foundation.

In the following sections I will explore several causes for the confusion about the arts and its effects on policy and cultural education. Next, I will propose an interdisciplinary perspective on culture and present Van Heusden's (2010) theoretical framework of cultural cognition. This framework offers a new and different outlook on the arts and culture and may shed light on some of its central questions. I want to use it to understand what cultural education is about and why. Van Heusden's theory and the scientific studies underlying it form the heart of this thesis and its main tenets will be outlined in this chapter.

1.2 CULTURAL CONFUSION

The erosion of the traditional artistic canon is caused by several developments within the art world and in society. In this section I will discuss some of these. A first shift is that some scholars argue that art should be regarded more as a *process* (something people *do*) than as an *object*. One of the main theorists who proposed this view on art is Alfred Gell. Gell developed an anthropological theory of art in which art functions like a person or social agent. "I view art as a system of action, intended to change the world rather than to encode symbolic propositions about it. The 'action'-centred approach to art is inherently more anthropological than the alternative semiotic approach because it is preoccupied with the practical mediatory role of art objects in the social process, rather than with the interpretation of objects 'as if' they were texts" (1998, 6). The art object is thus defined in terms of social interaction processes and has no intrinsic nature which makes it art (7). The term 'index' is borrowed by Gell from semiotics. An index is a natural sign that allows for causal inference, such as the well-known example of smoke indexing fire (13). An index in Gell's theory is the outcome of social agency and the agent is the one causing events to happen (16). Not only people can act as agents, but also objects like cars and dolls, and, most interesting to us: works of art (19). Gell distinguishes primary agents, which are intentional beings, from secondary agents, which are objects (20). One of Gell's best-known examples which illustrates how objects can act as agents is the case of Pol Pot's soldiers. Rather than viewing the soldiers' weapons as 'innocent' or neutral objects without agency, he argues that the weapons are very much part of the soldier and make the men become 'dangerous

men'. "Pol Pot's men were capable of being the kind of (very malign) agents that they were only because of the artefacts they had at their disposal, which, so to speak, turned them from mere men into devils with extraordinary powers" (21)². Thus, one could say that artworks too should be viewed as (secondary) agents rather than objects. "Humans realize their intentions, and thus exercise agency, through the medium of artifacts as 'secondary agents' which distribute their agency in the causal milieu" (Osborne and Tanner 2007, 2). Although Gell, rightly I believe, points out that art should not be treated as if it is language, he fails to clarify how the arts are embedded within other media and how the arts relate to other disciplines. Although the view of art as an agent is a refreshing one, it leaves many questions unanswered about its function and nature.

A second trend that has influenced the definition of art is the shifting of boundaries between the artistic media. This development challenges the traditional borders between the art disciplines. Arthur Danto has researched this development and identifies a major change in the art world in the Seventies. He argues that although the Seventies are sometimes seen as an uninteresting period in art history because there was no single, defining movement in art, it was in fact a golden age (Danto, Horowitz, and Huhn 1998, 125). Many artists felt that they did not need to adhere to traditional material standards of art, which led to an immense freedom in the work they produced. "...A lot of artists continued to accept the materialist ideal as that in which art essentially consisted, but felt that it no longer responded to anything they were interested in, and they pursued what they were interested in whether it was really art or not" (ibid.). New forms were created which combined different media such as installations, collage and performance. Traditional standards and ideas of beauty became less important "...the new kind of work being defined internally in terms of the interests of the artist and that or those of his or her intended audience" (Danto 1999, 139). The well-known Dutch art critic Anna Tilroe argues that Lyotard and his 'La condition postmoderne' gave the final push to open up new ways of creating and viewing art that were detached from a fixed, traditional canon (2010, 23).

Not only do the boundaries between the artistic disciplines blur, but people are also looking for artistic qualities in other, non-art disciplines. The autonomy of art erodes as there is more eye for art-like qualities in for example design and architecture. Even images from the natural sciences, such as pictures of our blood cells or photographs of the Earth from space, are sometimes viewed as if they were art. "What distinguishes art from anything else, if anything can be art? We are left with the not very consoling idea that just because anything *can* be art, it doesn't follow that anything *is* art" (Danto 2013, 26 original italics).

Furthermore, the distinction between art and entertainment has become more diffuse. On the one hand, this is due to a shift in power in the art world. Cultural institutions are forced to yield to the economically powerful who sponsor them. For new philanthropists, art is a means of status, money and pow-

² For more on the role of the artefact in cultural cognition, see chapter four

er (Tilroe 2010, 19). On the other hand, art is struggling to distinguish itself from other products. “Goaded by a worn-out notion of art, art whirls like a spin top and swallows everything that it encounters: fashion, design, games, pop culture, internet” (63).

Aside from the changes within the art world, several demographic and other social developments have influenced how people view culture. In the following section I will name a few of them. One of these changes is the aging of the population. The number of people in The Netherlands who are over 65 years of age has increased between 1980 and 2005 from 1.6 to 2.3 million people, while there is a decline in people under 20 (from 4.4 to 4 million) (Huysmans and Haan 2007, 43). Whereas the older generation is familiar with the traditional cultural canon, the younger generations may not be. Traditional art activities are more frequently visited by older people, while most of today’s population stays true to the pop culture they grew up with (Raad voor Cultuur 2014, 35). People also often mix up ‘high’ art and ‘low’ art and engage with them in different ways than previous generations. The museum visitor or book reader of today is much more of a *cultural omnivore*, whose upbringing does not dictate the kinds of cultural activities he or she engages with (ibid.). This is also due to growing individualization (Vuyk 2002). People are less bound by the social milieu they are born into and make their own cultural choices (Huysmans and Haan 2007, 51). The individualistic cultural omnivore wants to connect with like-minded people in different kinds of communities than the traditional societies of the older generations (Raad voor Cultuur 2014, 34).

The Dutch population has also become more diverse, emancipated and globalized. There has been an increase in non-Western ethnicities (from 0.5 million people in 1980 to 1.7 million in 2005) (Huysmans and Haan 2007, 45). Studies show that the non-Western ethnicities in The Netherlands (predominantly Turkish, Moroccan, Antillean and Surinam) participate far less in traditional cultural activities such as going to the theatre, listening to classical music or visiting a museum (Broek, Huysmans, and Haan 2005, 99). At the same time, both artists and public look across borders for cultural inspiration (Raad voor Cultuur 2014, 17). Increasing globalization breaks down traditional notions of art, while it can also lead to opposite trends of localization, which refers to the desire to define and confine the local identity (Huysmans and Haan 2007, 53). Studies show too that women are more engaged with culture than men in The Netherlands (Broek, Huysmans, and Haan 2005, 96). This goes mainly for the canonical art forms (such as theatre). The diversity of the Dutch population, globalization and the large number of female cultural participants are likely to counteract the traditional ‘white male art’ preferences of previous generations.

Another important demographic change is the growing number of more highly educated people. The democratisation of education has resulted in large numbers of people having received more and higher levels of education than their parents (Huysmans and Haan 2007, 46). Studies show that more highly educated people are more interested in culture than those who have received lower types of schooling (47). However, the increase

in more highly educated people has not resulted in an overall rise in traditional cultural appeal, which suggests that there would have been a decline in such cultural activities without the educational expansion (Broek, Huysmans, and Haan 2005, 100)³. Not only are the Dutch more highly educated than ever before, they are also more often alone and settle down later in life (Huysmans and Haan 2007, 47). They have less leisure time, but more money to spend on leisure activities (50). People are less restricted by traditional canons and can thus choose what they want to do in their free time: "...individualization implied that the cultural canon lost its halo. Culture was no longer something from another order, but came in direct competition with other types of leisure activities" (Broek, Huysmans, and Haan 2005, 103). When people have some time off, they want to have an *experience* (Huysmans and Haan 2007, 55)⁴. Thus, more activities that include more popular and less canonized arts, are undertaken in less time (Eijck 2015, 109).

A final important change that has influenced how people engage with culture is that of digitalization. The expansion of digital means has made artistic expressions widely available (Raad voor Cultuur 2014, 15). People have access to music, film, literature, images and sounds from across the globe. The roles of maker, amateur, public and expert erode as anyone can view and publish art (26). Digitalization also leads to more informatization. The public can access all kinds of information about an artwork or institute from home and can often even add to it. All these changes in society have decreased the use of and need for a traditional cultural canon. We are more flexible in the types of cultural activities we want to participate in. People are less bound by a fixed cultural preference that is dictated by birth; they choose their own cultural communities on a more individualistic basis. Traditional forms of culture become mixed with trends from popular culture and are all readily available. "The result of this is that the public of traditional cultural expressions ages and eventually shrinks. The public of the future, the Facebook generation, but also the new Dutch citizen, does not connect well with many canonized art forms or has never got around to it" (35).

The cultural confusion that is the result of these changes within the artistic field and in society in general shows that our relationship with traditional artistic canons has become more complicated. It also makes people engage differently with the arts. Often they choose to either focus on the *craft* of making art or on the *experience* that art generates (Heusden and Gielen 2015). However, neither approach truly offers a satisfying understanding of the arts. The focus on the craftsmanship alone does not solve the riddle of what defines art and how it differs from other cultural domains. The emphasis on experience can cause a feeling of 'anything goes' and may lead people to believe that an artwork can be almost anything that moves an audience. The quest for the function and use of art is probably as old as art itself. However, with the weakening status of the canon, it has become more difficult to evade.

3 This goes for traditional art forms only. There is no decline in the interest in popular culture (Broek, Huysmans, and Haan 2005, 100).

4 See also: *The society of the spectacle*, Debord (1994).

1.3 THE PRACTICAL REPERCUSSIONS: UNCERTAINTY IN CULTURAL EDUCATION

Interestingly, the confusion about the arts does not (as yet) seem to have lessened the conviction that art is good for you and that it should be part of a child's upbringing. UNESCO for example argues that:

“The benefits of introducing the arts and cultural practices into learning environments showcase a balanced intellectual, emotional and psychological development of individuals and societies. Such education not only strengthens cognitive development and the acquisition of life skills – innovative and creative thinking, critical reflection, communicational and inter-personal skills, etc. – but also enhances social adaptability and cultural awareness for individuals, enabling them to build personal and collective identities as well as tolerance and acceptance, appreciation of others”(UNESCO website Arts education).

These supposed benefits of arts education are very similar to the ones invoked by the Dutch government. In the Netherlands, the government stimulates primary schools to develop a vision and a policy on cultural education (which consists of arts and heritage education) and to put these into action. In practice, the governmental support comes down to allotted funds of €10.90 per child per year (Ministry of Education, Culture and Science, www.minocw.nl). In 2011, former state secretary of Culture, Halbe Zijlstra, outlined his plans for the main cultural infrastructure of 2013-2016. In this document he argued that: “Cultural education introduces children and adolescents to the richness of culture. It stimulates their creativity and increases their historical awareness. In an increasingly international world that demands more and more that we identify with other people, culture plays an important role”(Zijlstra 2011).

In policy documents, cultural education is often associated with creativity, self-expression and empathetic skills. However, at the same time, the *specific* characteristics and benefits of cultural schooling are difficult to find in governmental texts. This is very unlike other subjects taught at school. Language and maths for example have their own detailed reference points. Teachers, policy makers and parents know which levels are to be reached by which age and test results are compared between children, schools and even countries (e.g. the PISA scores). There seems to be less need for defending their usefulness or applicability in life. Cultural education is much less well-defined. Interestingly, ‘cultural education’ and ‘arts education’ are terms that are often used as synonyms in educational and policy texts, although they are also frequently and deliberately divided which leads to the phrase ‘arts and cultural education’, which suggests that we are dealing with two different things. This alone may be a sign of an underlying confusion about what exactly this kind of education is that we are talking about. It is unlikely that the theoretical confusion in the arts (some

even speak of the 'crisis of art') will not have an impact on policy as well. The lack of specifically established required benefits and outcomes of cultural educational programmes also points in this direction.

Both national and international arts education policy seems to suffer from a bad conscience. Although arts education is promoted, it is unclear why exactly. The *Organisation for Economic Co-operation and Development* (OECD) published a report in 2013 about the benefits of arts education (Winner, Goldstein, and Vincent-Lancrin). The study reviewed existing research from many different countries in order to assess the value of different types of cultural education. Much research on cultural education focuses on the benefits of the arts for other academic achievements (thus using the arts as a means). The report showed that there is only very little evidence that the fields of multi-arts education, music, theatre, visual arts and dance cause academic improvements (with the exception of some language benefits from music and theatre education). Likewise, there is no current conclusive proof that arts education improves creativity or problem-solving (18). Interestingly, this lack of evidence does not deter the authors from promoting art curricula: "We conclude by arguing that the value of the arts for human experience is a sufficient reason to justify its presence in school curricula whether or not transfer results from arts education" (249). Although the report clearly states that much more substantial research is needed and that a theoretical basis for cultural education is lacking (256 and 261), there is still a very strong belief that the arts are 'habits of the mind' and are part "...of what makes us human (...) it is difficult to imagine an education for better lives without arts education" (262). However, these 'habits of the mind' remain unspecified.

If the policy is lacking clarity, it is to be expected that this also transpires in the actual cultural education in schools. In 2007, Anne Bamford, an Australian scholar, evaluated the current state of affairs of cultural education in Dutch and Flemish schools. Her report showed that the Dutch cultural education system functions very well on many levels. The Dutch government has put different systems into place to facilitate cultural education both in schools and in cultural institutions such as theatres and museums (e.g. the 'Cultural Education with Quality' programme of 2013-2016). The governmental policy promotes both the intrinsic and extrinsic value of art and designates a fixed place for culture within school curricula. This concern for cultural education has allowed many children to engage in the arts, as is noted by Bamford (2007, 152). She also remarks that, "By world standards the quality of education outcomes in The Netherlands is relatively high" (19). The teachers involved in Bamford's research also generally showed a great drive to offer the pupils a high quality cultural education programme. It seems that all the necessary requirements for effective cultural education are present. Nonetheless, Bamford notes that: "...it could be said that The Netherlands has the policies, structures and intentions that should ensure high quality arts and cultural education for all children. However, in reality children receive a disjointed pattern of arts and cultural experiences of varying quality" (25).

According to Bamford, there are several reasons why the Dutch cultural education does not reach its full potential. Some of these are of a more practical nature rather than theoretical. One of these is that the government still uses an 'arm's length' approach when it comes to the arts. This may be a residue from the nineteenth century, when Thorbecke claimed that the government should not judge the arts (Winsemius 1999). This means that the government indirectly controls the schools through a large number of agencies and institutes. As a result, the schools have great freedom when designing their cultural education programme, as the governmental structures are very general. Schools feel left on their own and are unsure of how to act on these broad directions (Bamford 2007, 16). This would perhaps not be so problematic if the teachers had plenty of time and money to design their courses, but in comparison to many other European countries, the workload is already very high for Dutch teachers whereas the amount of money spent on education is low (21).

Considering that the schools have a high degree of autonomy and that there is a lack of direct control by the government, it is not surprising that the quality of the cultural programmes in schools varies greatly. The quality is mainly determined by the interests and the skills of the teacher. If a school happens to be lucky enough to have an inspiring and energetic teacher who has the expertise and does not mind spending considerable extra time to design a good cultural education course, then the quality of the course is usually high. However, most schools do not have this luxury and teachers are already so flooded with work that they frequently opt for safe choices that are already available (70). Moreover, the specially designed methods which are offered are not always very creative and often quite expensive.

Aside from these more practical hindrances, there are some major theoretical obstacles as well. Bamford notes that there is a lack of understanding of what cultural education is, what it can potentially do for the children and how it should be taught and evaluated. Like the government, schools distinguish between the intrinsic and extrinsic values of cultural education. The first can be defined as learning about culture for its own sake, while the latter deals with the benefits that cultural education may have outside its own field, like increasing problem solving skills or improving the school environment (117). According to the government, both should be present in the school curricula, but practice shows that this is often not the case.

This lack of understanding of the subject and nature of cultural education lies at the basis of the varying quality of cultural programmes. The teachers are not the only ones who do not exactly know what cultural education should offer and which goals can be reached with the children. The government itself does not sufficiently monitor the quality and the school inspectorate has no methods to examine how well a school is performing when it comes to the arts "...[T]he majority of teachers and artists interviewed were very unsure about assessment procedures. Interestingly, there was also the desire expressed by teacher educators, school directors and inspectors on guidance to assist with developing

methods for assessment, evaluation and impact measurement for arts and cultural education” (100-1)⁵. This lack of standards would be unthinkable in other subjects like maths or language. It should be made clear to the schools exactly what is expected of them and what the standards of good quality cultural education are. Only when there is more understanding of what cultural education actually is and what it can do for children can the implementation of the teaching material be addressed.

Bamford also noticed that besides the confusion about the content of cultural education, schools often do not know how to instruct the children about the arts. In primary schools the emphasis is often put on making art⁶, while the teaching in secondary schools is almost exclusively concerned with the reception of the arts. According to Bamford, this is the result of an uncertainty about the value of art in itself, which makes the school focus on the extrinsic value of art more: “The concept of cultural education as a platform for education through the arts has also removed a considerable amount of actual active making (...) in favour of models that encouraged the pupil to be more passive and to be spectators rather than creators” (31).

Furthermore, the cultural curriculum often appears not to be very well-structured. It happens regularly that schools take their pupils to a random cultural event and base their choice on practical considerations only. In practice this means that a child may go to a theatre one year and to a museum the next without a rationale behind it. Some years no excursions or projects are offered at all. Especially in the second, third and fourth years of secondary school it frequently happens that pupils receive no or very little cultural education (11). It may well be that the lack of appreciation for, or understanding of the value of cultural education contributes to its sometimes peripheral status within the school curriculum. It seems that schools are unsure of how to incorporate culture into the existing system, which means that the programmes on offer are often fragmented. Adding to this is the confusion over the relation between arts education and other types of cultural education such as media education and heritage education. It should be clear to schools how these subjects are linked together and how they can be best taught. Bamford argues for the development of learning lines which cover all education to ensure that there are clear linkages between the different years of study (166)⁷.

The fundamental difficulties which underlie cultural education in schools reveal a discrepancy between the ideals of the government and the actual daily practice. Some obstacles are practical and have to do with how cultural education is organized. However, the main problems appear to be due to a theoretical confusion about culture in general

5 Recently, a start has been made to develop new methods of assessing the quality of cultural education (Groenendijk et al. 2015).

6 As we shall see in chapter three, this is not surprising since the self-imagination is dominant in the young child

7 For some critical reviews of these and other Bamford studies on cultural education see: (Haanstra 2006; Haanstra 2009; Schönau 2007).

and the arts in particular, which seems to have penetrated policy and education. Teachers are often unsure about what 'culture' actually is and what cultural education can potentially do for the children. This is reflected in the disjointed arts and cultural programmes that are sometimes offered. Teachers may not always know which activities are most suitable and effective and why some courses work for a specific age group and others do not. Since there are few ways to assess what the pupils learn from the arts and which courses are of high quality, it is not surprising that curricular choices are often made on the basis of practical considerations, rather than on a clear set of (school or governmental) principles. The governmental policy is not working as it should: "There is the assumption that cultural education at a young age builds their potential as future cultural consumers. This, however, can only occur with active participation and the right cultural education" (39). If the theoretical basis underlying cultural policy and education does not become more substantial, it is unlikely that it will uphold the quality of the manifold cultural programmes that are offered today. There is even the risk that without a good theoretical foundation that explains the need for, and the benefits of cultural education, the motivation and care for bringing culture to our children will start to crumble as well. Funds and goodwill alone seem unlikely to safely secure culture as a logical and necessary part of our education. "The €10.90 allocated to primary school pupils in 2004 is claimed by 80 % of schools, however, around 50 % is spent on high quality programmes. The €10.90 becomes part of a lump sum and disappears because of lack of structural changes" (135).



§2 THE INTERDISCIPLINARY APPROACH

2.1 TWO CULTURES JOINING FORCES

The old cultural canon does not match today's society's needs and interests anymore. This lack of canon makes the understanding of the arts both more difficult and more pressing. Policy documents, the OECD Report

and the Bamford Study all point to a lack of theoretical understanding of the arts, which is affecting our cultural education. Culture has been studied for many centuries and in various disciplines: from philosophy to anthropology and social sciences to neuropsychology. However, it seems that the insights from these studies are not often integrated and that there may still be some separation between the so-called alpha and beta fields in research which may hinder our understanding of the subject. This division has been made famous by C.P. Snow who called this phenomenon 'the two cultures' in his 1959 *Rede Lecture*. Snow was originally a research scientist who became a novelist later in his career. As such, he had observed the practices of what he called the 'literary intellectuals' and the (physical) scientists. He found that these two groups operated in isolation from each other: "I believe the intellectual life of the whole of Western society is increasingly being split into two polar groups" (Snow and Collini 2012, note 87). According to Snow, scientists are optimistic and think things can be done until it is proven that they cannot (Snow, note 94). They lack imagination and have little interest in literature (note 110). The scientific culture can be seen as a real culture in the anthropological sense (note 100). The literary intellectuals are, however, also impoverished. While they think that their culture is all of culture, they lack basic scientific knowledge. The two cultures do not meet, which hinders progress: "The clashing point of two subjects, two disciplines, two cultures –of two galaxies, so far as that goes- ought to produce creative chances. In the history of mental activity that has been where some of the break-throughs came. The chances are there now. But they are there, as it were, in a vacuum, because those in the two cultures can't talk to each other" (note 115).

Stefan Collini wrote an introduction to the Cambridge edition of the Two Cultures Lecture (2012). He points out that the two cultures that Snow describes did not even exist until the nineteenth century. Around this time the word 'science' became a term that was just reserved for the natural and physical sciences (note 6). However, Collini also notes that the social and intellectual climate has changed since the Rede Lecture. More interdisciplinary and specialized research is carried out. One could argue just as well that, instead of two cultures, there are many cultures, or even that there is just one (note 44). Physics was seen as the most theoretical of the sciences at the time when Snow wrote his lecture. However, nowadays, physics allows for more open-endedness and imagination, making people

see more similarities between science and humanities. Still, the need for the humanities and natural sciences to communicate and share their knowledge remains: "...what is wanted is not to force potential physicists to read a bit of Dickens and potential literary critics to mug up some basic theorems. Rather, we need to encourage the growth of the intellectual equivalent of bilingualism, a capacity not only to exercise the language of our respective specialisms, but also to attend to, learn from, and eventually contribute to, wider cultural conversations" (note 61). The quest for a better scientific understanding of human culture seems to call for just such an interdisciplinary exchange. Where previous views and notions no longer suffice, doors need to be opened up between the academic disciplines so that knowledge can accumulate and new light can be shed on this matter.

2.2 UNDERSTANDING THE HUMAN UMWELT

A collaboration between research from both the humanities and the natural sciences may be particularly suitable for an understanding of culture because culture is part of human behaviour and as such is governed by the biological and neurological processes that we are endowed with as a species. In order to understand it, therefore, we would require insights from the various fields, from alpha and beta, which study our 'humanness'. Van Heusden has developed a theory of culture that combines many different academic fields. In the next sections I will provide an overview of some of the main theories behind this cultural theory. As we have seen in the previous parts of this chapter, understanding culture is no easy feat. Now that we have plumbed the depths of this problem, it is time to take a deep breath and slowly start to make our way back up to the surface.

At the basis of Van Heusden's theory of culture or cultural cognition lies the understanding of how humans engage with their world. An interesting idea in this regard is the notion of *Umwelt*. *Umwelt* is a concept developed by biologist Johannes von Uexküll, who argued that every living organism lives in a world which is defined by the particulars of its anatomy. This may seem like a philosophical proposition but is in fact a phenomenon caused by biological restrictions. How the world is experienced depends on the species' bodily limitations and possibilities: "In the world of a fly (...) we find only 'fly' things" (Uexküll in: Cassirer 1944, 23). For example, the way we humans perceive the world and can acquire knowledge about it depends on what our eyes are able to see, the sound frequencies our ears can detect and so on. If we want to understand the 'fly world', we can only study the anatomy of the fly and reconstruct its experiences the best we can. According to Von Uexküll, one can thus not speak of higher or lower forms of life (24).

The *Umwelt* is determined by the senses of the animal. The more complex the sensory apparatus of the animal, the more complex its *Umwelt*. Linguist Lakoff and philosopher Johnson showed in their book 'Metaphors We Live By' (2003) just how intertwined nature and culture can be by demonstrating how our *Umwelt* resonates in the language we use.

They have studied the use of metaphors and show how our biological engagement with the world affects the words we use. According to them, the use of these metaphors is “...pervasive in everyday life” (3). Our upright position for example generates a specific orientation to the world which leads to metaphors linked to the concepts of ‘up’ and ‘down’. Everyone can understand what is meant by ‘health is up’, ‘I’m feeling down’ and similar expressions. The same principle goes for notions like ‘hot’ and ‘cold’. These metaphors are often universal because they originate from our human experience with the world (Donald 2001, 283). They are both products of bodily experiences- which are thus universally human- and cultural influences: “...metaphors and schemas grow from bodily realities, but they are, ultimately, canons. They are interpretative modes that our culture teaches us, but that we can change” (Holland 1988, 114). We share an experience-base with other animals even though they cannot verbalize their experience. “Our dependency on metaphor exposes the vestigial mammalian cognitive system that drives our use of language” (Donald 2001, 283).

The grandson of Jacob von Uexküll, Thure von Uexküll, elaborated on his grandfather’s studies on the Umwelt. He outlines how the human Umwelt is somewhat different from that of other animals. For animals, there is nothing outside their Umwelt (1953, 30). Subject and object are one, since an object only has meaning for an animal when it is present in its Umwelt (i.e. the world it can perceive at that moment) (Uexküll 1984, 64). Von Uexküll in fact, makes a distinction between three levels of living:

1. *Leben* (to live), vegetative
2. *Erleben* (to experience), sensitive
3. *Erfahren* (to be aware), rational (1953, 236).

Humans have all three levels at their disposal to relate to the world around them, while animals only have the first two. *Erfahren* means that one can engage with the world through self-imposed designs (*Entwürfen*) and criteria (*Maßstäben*) which require self-awareness (229). These designs and criteria determine our behaviour and perception (230). *Erleben* consists of experiences such as hunger, thirst and sleep. A major difference between these phenomena and the designs of the *Erfahrung* is that one cannot free oneself from the first (ibid.). Von Uexküll writes about our *Erfahren*: “We are the ones who set the goals and make the designs that serve to realize our objectives. Here we also cast out our nets of designs. When we however catch something, we also always catch ourselves with that something” (231).⁸ Because we set our own standards, we can also free ourselves from our self-made designs and create new ones. One continually reshapes one’s designs so that they are most suitable for engaging with the world. As humans continually have to redesign their world one could thus even argue that they have no Umwelt at all (246). The only world

8 My translation of: “Hier sind wir es selbst, die Ziele wählen und Entwürfe aufstellen, welche der Verwirklichung unserer Ziele dienen sollen. Hier werfen wir also selber die Netze unserer Entwürfe aus. Wenn wir in ihnen jedoch etwas fangen, so fangen wir auch immer uns selbst mit diesem Etwas zusammen“ (von Uexküll 1953, 231).

that humans have to live in is the world they make themselves. Without the ability to design, a human must resort to his or her animal instincts, a phenomenon which can be observed in medicine and psychiatry (240).

The human ability to give meaning to the world around us by 'making designs' allows for a mental separation between object and subject. Objects in the human world have both their object-properties as well as a meaning that people attribute to them. The object thus becomes 'doubled': "...the journey of an object that has only object-properties to an object that also possesses a subject which mirrors the story of its incarnation"⁹ (1984, 64). Not only animals, but children too lack objects with a subject. For young children, object and subject are the same (ibid.). Piaget argues that the understanding of objects in children starts with the reflexes that a child is born with. The next step in development is when the child learns that objects can still exist when they are not directly present (for example that the mother does not disappear into nothingness when she is out of the room) (68). Piaget calls this 'object-permanence'. This awareness marks the beginning of the phase when objects can have subjective qualities for a child, starting around age two (ibid.). The sensorimotor world of the young child which is based on direct response to everything that can be seen, heard, felt, tasted or smelled loses its appeal. The new-found awareness that something can exist outside one's direct perception is like a Copernican turn in the world of the child (69). The child starts to learn to read clues that allow it to construct the invisible reality with its imagination (70).

2.3 DOUBLING REALITY: FROM NATURE TO CULTURE

The theories of Jacob and Thure von Uexküll form the biological grounds of Van Heusden's framework and give us insight into how humans interact with the world. Although both humans and animals have an Umwelt, humans are likely to be the only species that is aware of this (and one could thus also argue, as Thure von Uexküll does, that one can no longer speak of an Umwelt). We know that we are experiencing the world through our senses and that our experience is therefore necessarily limited; our world has its boundaries. This does not mean that the world of the animal is void of meaning. All animals have representations of their environment, not as images or in a semiotic way, but as patterns of neuronal sensory-motor activity which allow the animal to act (Heusden 2009b, 611). However, for the non-human animal, the environment is only meaningful when it is part of its Umwelt. It has to be recognizable and trigger the expected behaviour in the animal. The downside of this is that when something occurs that is not recognized, it is not represented and thus not acted upon. This can cause highly dangerous situations: "...the whole system works well only in a more or less stable environ-

⁹ My translation of: "...der Weg vom Object, das nur Objekteigenschaften hat, zu einem Object, das auch die Eigenschaft eines Gegenstandes besitzt die Geschichte der Menschwerdung widerspiegelt" (Uexküll 1984, 64).

ment. In the case of sudden changes, the organism stands with empty hands (or feet, tentacles, etc.), and can only hope that genetic variation will help the species out” (612).

Because humans are aware that there is something outside their Umwelt, they can experience the absence of meaning, of *not* recognizing something (614). This awareness is enabled by our ability to represent the world in our mind not once, but twice. We *double* reality. One representation is the representation of our memory: fixed patterns of things we already know and have stored in our brain, the other is the representation of the here and now, represented in terms of how it differs from what we already know (Heusden 2009a, 122). The difference between these two representations may even lead to anxiety and stress, because there is often a discrepancy between what one already knows about the world and how one encounters it at a particular moment. This makes it difficult to always know exactly how to act. Our human cognitive abilities can thus cause feelings of insecurity. As a result, we are constantly aiming to bring the two worlds together; to bridge the gap between subject (what we remember) and object (what we perceive). Thure von Uexküll writes: “Worldlessness and the need to world-design are therefore the fate of today’s people” (von Uexküll 1953, 246)¹⁰. However, the ability to differentiate ourselves from our environment, our memories from our actuality, also generates a significant evolutionary advantage over other animals. Because we can differentiate between what we know and what we perceive, we are able to take a step back and actively select those memories that suit a particular situation best. We can even anticipate things that may happen in the future.

One of the main researchers who studied this doubling phenomenon was the philosopher Ernst Cassirer, who had a very keen interest in biology and is another major influence on Van Heusden. He calls the use of signs to bridge the gap between memory and reality the ‘symbolic system’ (1944, 24). By this he means that, unlike animals, humans have this double representation of reality, which makes their world both physical and symbolic. “[Man] lives rather in the midst of imaginary emotions, in hopes and in fears, in illusions and disillusion, in his fantasies and dreams” (25). This idea of the symbolic system is based on the works of three important philosophers: Vico, Herder, and Rousseau. Vico found that ‘poetic characters’, imaginative universals, lay at the heart of all language. He also argued that to compare different cultures, one should use a common mental dictionary. These ideas form a kind of proto-symbolic theory (Paetzold 2000, 11). Herder claimed that the human mind uses ‘sensory types’ which are related to the senses. When these sensations are coded into words, meaning is generated. Herder emphasizes that “...moving within the linguistic dimension means to move within a structured field, a field, which relates the words to each other like an organism” (13). Rousseau argued that the identification with the other precedes exploration of the self. His ideas of the social contract and the general will are rooted in man’s solidarity and compassion which have led to the transition from animality to humanity. “Ethnology (...)

10 My translation of: “Weltlosigkeit und der Zwang zu Welt-Entwürfen sind also das Schicksal des heutigen Menschen“ (von Uexküll 1953, 246).

implies a junction between on one hand an identification with the other, the other culture, and an exploration of the 'I, the own culture on the other hand" (16).

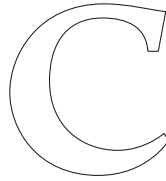
Cassirer often chooses to use the term 'symbol' or 'symbolic form' instead of 'sign', because 'sign' for him refers to the kinds of signs animals can use. For example, Pavlov's dogs were able to learn to recognize the sound of a bell ringing as the sign of 'food'. This type of sign has a fixed meaning and is a mere operator in contrast to the flexible designator 'symbol' (1944, 31). Symbolic forms are functional; they have a communicative task. A symbolic form can be seen as 'energy of the mind'; it is a combination of a concrete, sensory sign and a mental content (Paetzold 2000, 19). Every symbolic form carries a meaning and culture is the repository of all meaning. This meaning is then expressed in a particular form using different instruments. "Cognition, language, myth and art: none of them is a mere mirror, simply reflecting images of inward or outward data; they are not indifferent media, but rather the true sources of the light, the prerequisite of vision, and the wellsprings of all formation" (Cassirer and Manheim 1953, 93).

Von Uexküll and Cassirer's theories bring us closer to an understanding of what human culture is. Some authors (e.g. Richerson and Boyd 2005) have argued that culture is synonymous with learned behaviour (which is found in many species). However, Van Heusden points out that the mechanism that generates behaviour is the defining characteristic of human culture, not the behaviour as such. "One can learn a language, but one cannot learn to be linguistic. One can learn a culture, but one cannot learn to be cultural. Humans can learn a culture because they are cultural animals" (Heusden 2009b, 614). This mechanism is the double processing which allows us to use our memories as signs to give meaning to our environment. The sign in use mediates between the stable representations in our heads and the unstable, ever-changing world. "A sign is thus not a 'thing' but, rather, a particular way of processing information, of representation or cognition" (617). Culture in this sense is therefore best understood as *cultural cognition*. It is not defined by a set of objects or a particular way of conducting oneself in the world, but by the endeavour to *generate meaning in the void between knowing and not-knowing*¹¹.



¹¹ This can also be said to be the mechanism that is missing from Gell's theory as it explains the role that objects, like other signs, play in cultural cognition.

3.1 THE FOUR BASIC SKILLS OF CULTURE



Cultural cognition allows humans to use signs. It can therefore be characterized as *semiotic* cognition (617). The signs that we use to give meaning can be about things that we perceive or things that are invisible, they can be about what is present or about what is absent. We decide on which signs we want to use. One can choose a sound, an image, a gesture. We are constantly selecting those signs that suit our purposes best and that are most fitting to overcome the differences we encounter. “This is the basic motivation for culture: humans have to deal with the problems that arise in perception. And they will do so –in a variety of ways. But these problems also give them a certain freedom -the freedom of choice with respect to the memories available” (618).

According to Van Heusden, human culture consists of four ‘basic skills’ of cultural cognition which enable the double representation of our environment in four different modes (619). Cassirer’s studies show how the four basic skills can be distinguished from each other from a semiotic point of view. All cultural meaning starts with perception, but at the same time one only perceives what is meaningful: “[A]cquisition of the sign really constitutes a first and necessary step towards knowledge of the objective nature of the thing (...) because through it the constant flux of the contents of consciousness is for the first time halted, because in it something enduring is determined and emphasized”(Cassirer and Manheim 1953, 89). This means that the distinction between active perception and passive meaning has dissolved (Paetzold 1993, 43). These first types of signs are called ‘one-place’ because the signifier, the meaning of the sign and the perception are all one and the same thing. Take for example a rock. At this first stage, you perceive the rock as what it is; you recognize it as a rock because of the sensory information you receive (the colour, texture, shape etc.). However, as said before, human perception is ‘double’ which means that memory and actuality occur together, without ever fully coinciding. A second type of sign is that underlying imagination, or *mimesis*. At this point, signifier and meaning are still connected, but they start to diverge from perception. In the case of the rock this could mean that the rock is now used as a hammer. One still recognizes the rock as a rock, but at the same time one imagines how it could also be utilized in a different way (imagination is therefore also the basis of all invention and technology). The memories that have generated the original meaning of the perception (‘rock’) are manipulated and create a second, new meaning (‘hammer’). This type of sign is still one-place.

The third type of sign allows for conceptualization, which is enabled by language (51). Concepts are made by people who, amongst themselves, agree on a particular (arbitrary)

signifier to communicate more effectively. Concepts are therefore culture-specific. Because the signifier and meaning are now fully separate (two-place), one can refer more easily to different sets of events, concepts or categories. The word ‘rock’ allows one to quickly and effectively distinguish between for example a rock and a pebble or different kinds of rock and to communicate about this with other people. Language is a particularly efficient mode of communication, since one can make very subtle distinctions and it requires very little energy. All kinds of concrete specific memories can be bundled under a much more general concept. The last sign is the one relating to analysis. Cassirer calls this stage the ‘domain of knowing’ (52). A theory adds an abstract structure to the previous three categories which allows one to analyse phenomena. A theory is thus three-place (signifier- meaning-structure). Research on the physical and chemical properties of a particular rock would for example be part of this domain of human culture (see fig. 1).

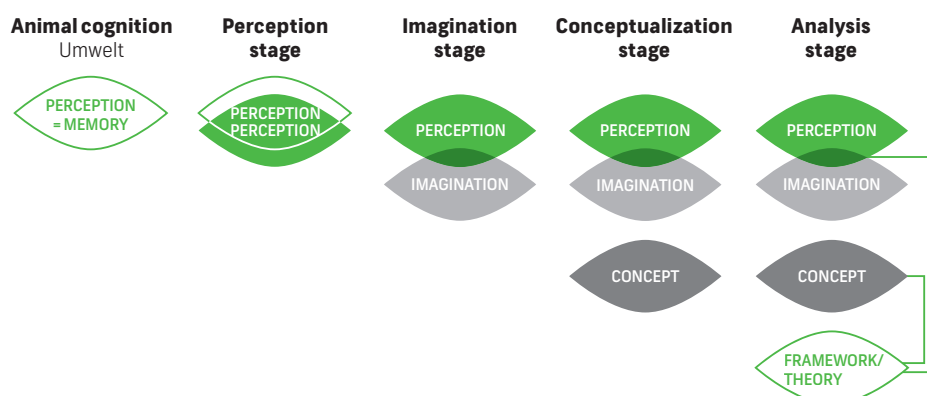


fig. 1: the four human cognitive skills: perception, imagination, conceptualization and analysis.

The four basic cultural-cognitive skills interrelate in a cumulative structure, which means that they build on each other and require the previous skills. Imagination starts from perception and then makes this into something new. Concepts could not exist without manipulation of reality first, because abstraction requires distancing oneself from actuality. The making or manipulation of things (imagination) therefore always precedes language. Likewise, theorizing or analysis cannot occur without the use of concepts (and therefore also of imagination and perception). The four skills could thus also be organized in a circular structure (fig. 2). The four semiotic-cognitive skills can be distinguished from each other not just on the basis of their different semiotic workings (those described by Cassirer), but also because they rely on two different cognitive ways of processing information. Piaget calls these accommodation and assimilation. Perception and analysis both *accommodate* to the environment, while imagination and conceptualization transform the environment and create something new (*assimilation*). One could also say that perception and analysis

are sensory ways of interacting with the world, while imagination and conceptualization are motor types of thinking. A further division can be added to then separate the two accommodative and assimilative skills. Perception and imagination are two concrete types of thinking (they maintain a sensory relation to the world) while conceptualization and analysis are much more detached from reality and are forms of abstract meaning making.

It is important to note that cultural cognition is always an active deed in the sense that we *actively* generate meaning. This is even the case for routine behaviours: “The fact that we can automatize our enormous repertoire of mental operations, including routines as diverse as driving, playing the piano, and speaking, is testimony to the power of human consciousness to supervise and install complex skill hierarchies in our brains. According to a long line of scientific research on human skill, one of the primary functions of conscious processing is the systematic refinement and automatization of action” (Donald 2001, 57). There are obviously also types of human behaviour that do not belong to cultural cognition but that are instinctive inborn acts. The cultural-cognitive skills, however basic they may be, are however always the result of an active selection of memories. The distinction that is often made in cultural education practice and policy between active and passive types of education is therefore not valid. One is always active when one perceives, imagines, conceptualizes or analyses; whether one is sitting down or dancing, whether one is watching a film or making a sculpture. There is no such thing as passive cultural cognition.

3.2 METACOGNITION

Humans do not just apply their cultural cognition to the world in general, but can also use it to reflect on themselves. “In, and as, a changing here and now, we are a difference to ourselves; we are a difference to be dealt with” (Heusden 2009b, 620). We use our cultural-cognitive skills to reflect on our cultural cognition: on the way we perceive, how we imagine, the concepts we use and our theorizing. This process of *semiotic recursion* (621) is called metacognition (cognition about cognition) and enables us to think about ourselves or other people. As always, the stable memories are the basis for interpreting culture. When cultural cognition is reflecting on its own cognitive processes, the four basic skills are called *self-perception*, *self-imagination*, *self-conceptualization* and *self-analysis*.

Self-perception can be regarded as the generation of a self-image; the way you see yourself

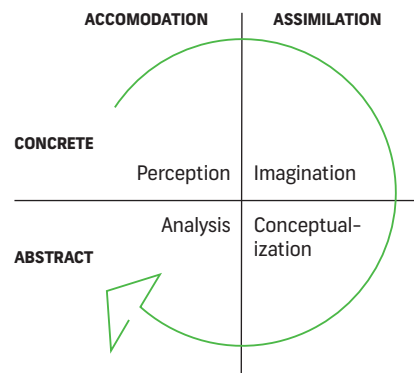


fig. 2: The cumulative structure of cultural cognition

or others. Self-imagination is most obvious in art where new forms are created to express ideas, thoughts and feelings about who we are as individuals or as a collective. Art is thus part of cultural cognition, or more specifically cultural metacognition. In this theory it is no longer a thing, but a way of assimilating our cultural environment by concrete manipulation of our memories by means of our self-imagination. It is thus something special in the sense that it is exemplary of our ability for self-imagination but likewise it is also one of the four metacognitive skills and as such embedded in a wider mechanism of metacognition which encompasses several other ways of reflection and thought. Each skill offers its own, unique outlook on the world and has its particular strengths. Self-conceptualization allows for religion and ideology as it offers the concepts, norms and values to position oneself in the world. Self-concepts enable you to categorize yourself as a Christian, a workaholic or a stay-at-home mum and to behave according to the conventions that go along with that label. The science of culture is part of the self-analysis domain and makes us see the cause and effects of what we do in a wider theoretical framework. “Thus, with all their inner diversity, the various products of culture -language, scientific knowledge, myth, art, religion- become part of a single great problem-complex: they become multiple efforts, all directed towards one goal of transforming the passive world of mere impressions, in which the spirit seems at first imprisoned, into a world that is pure expression of the human spirit” (Cassirer and Manheim 1953, 80-1).

The skills of cultural cognition and metacognition also require a medium. Van Heusden distinguishes four media groups: the body (e.g. movement, gestures), artefacts, language and graphic signs (e.g. drawings and writing) (2015). This means that cultural cognition and metacognition refer to the use of one or more basic skills to generate signs. The signs are expressed in one or more of the four media groups and mediate between one’s memory and one’s actuality¹². Signs of cultural cognition in general are about the world around us while metacognitive signs are about our culture and ourselves. The four metacognitive skills are equivalent ways to make sense of culture. The skill we use may depend on our cognitive abilities, the subject, the medium at hand or personal preferences. However, all are means to deal with the difference that we are. This definition of culture implies that if cultural education aims to educate children about culture, all cultural education programmes should be centred around the metacognitive processes – the skills and the media – of children, as these are the means to reflect on culture.

12 The exact nature of the interplay between medium and skill is up for discussion, especially concerning which of the two is the dominant factor. One of the advocates for a stronger media-centred approach is Régis Debray. He argues that the technical aspects of art are quickly overlooked, although they play a large role in how we perceive and use it (Debray 2000, 110).

Metacognition like cultural cognition in general is an active process and depends on consciousness:

“...this human capacity to alternate between various self-perspectives and various other-perspectives, a kind of zoom lens aimed at inner thoughts and impressions, constitutes a very remarkable evolutionary innovation. Mindreading skill is a conscious process, not in the representational sense that we explicitly notice and represent every impression but rather in the functional sense that real-time mindreading demands conscious capacity, usually occupying it to the full. Human social skills are too intricate, unpredictable, and, above all, treacherous to play them on automatic pilot”
(Donald 2001, 61).

3.3 THE EVOLUTION OF CULTURE

Although the cognitive-semiotic approach gives insight into how the four skills relate to each other on a logical level, it does not really specify how they function and how their uses correlate. This is evidently crucial if we want to apply the framework to cultural education. One needs to understand why we have these four skills and what kinds of problems they solve. The understanding of their purpose is the first step in assessing what their place is in a cultural education curriculum. An evolutionary point of view can be fruitful in this regard. As psychologist Katherine Nelson notes, brain size or neuronal structures alone do not explain cognitive behaviour. Often, a new skill develops out of an old system whose original function may bear no resemblance to the new cognitive function at all (Nelson 2005a, 119). Early human ancestors may not have had the metacognitive ability, but this might have little to do with brain size alone. “[F]ull human consciousness can be understood only in terms of both its evolutionary and developmental history” (116).

In his widely acclaimed book *Origins of the Modern Mind* (1991), evolutionary psychologist and cognitive neuroscientist Merlin Donald describes how human culture may have evolved. What is striking is that he divides this evolution in terms of three transitions that are closely related to Cassirer’s four types of signs. Because Donald describes these stages from a cognitive neuroscientist’s point of view, using data from evolutionary and neuroscientific sources, his insights may add to the structural understanding of Cassirer’s ‘symbolic forms’. Donald’s timeline starts with our ape-like ancestors and ends with the modern human. The four stages of development he distinguishes are: episodic, mimetic, mythic, and theoretic culture. One of the key points of Donald’s theory is that one type of culture can only arise out of the main mechanisms of the previous ones. This means, for instance, that mythic culture builds on the structures of mimetic and episodic culture.

In the episodic culture, memory cannot be voluntarily recalled and can thus be used only instrumentally and not reflectively (Donald 1991). Planning is therefore short-lived.

This all changed about two million years ago when the evolution of *Homo Erectus* marked a new phase. This period: the mimetic era, laid the foundations for our present day culture. The arrival of mimetic skills meant a definite split between human and ape and is still present in our modern ways of thinking (Donald 1991, 162). Because memory could now be separated from actuality and be recalled at will, skills like tool-making could be taught. At this point, Donald's theory is not entirely consistent with the previously discussed division between the four basic skills. In Donald's theory, the episodic phase does not encompass the ability to separate memory from reality, while the perception and imagination skills overlap in his mimetic period. Donald defines mimetic skill as the ability to produce conscious, self-initiated, representational acts (168). The first basic skill of (semiotic) perception would thus constitute a phase in between the episodic and mimetic phases as described by Donald, where actuality and memory can be separated, but there is no manipulation of reality yet. The distinction between accommodation and assimilation as previously described allows one to split the mimetic phase into perception (accommodation, sensory) and imagination (assimilation, motoric). This a distinction that Donald does not make¹³. What is also very important to notice is that in Donald's mimetic phase no language is involved in representation. Donald's theory and Cassirer's theory differ on this point. For Cassirer, language abilities are required for symbolic forms and reflection¹⁴.

Mimetic acts share several characteristics according to Donald: they are intentional, generative, communicative, reproducible and have the ability to model an unlimited number of objects (171). Mimetic skills are still widely used. Even people who do not know how to use language can make themselves understood if their mimetic brain centres are intact. "The emergence of mimesis was our first step toward evolving an effective distributed knowledge network, which could coordinate the actions of groups of people" (2001, 267). The basic form of mimetic expression is visual-motor driven. Especially facial expressions combined with vocal expressions play a key role in mimetic society (1991, 181). Mimetic skills created a direct advantage for *Homo Erectus* because it allowed for coordination, teaching, innovation and the sharing of knowledge (174). The brain played a major role in this development; the body and its movements were represented differently in the brain compared to primates. The foundations of the episodic mind with its records of past perceptions combined with new self-representations in the brain created the mimetic controller (190). To effectively represent something, one needs to be self-aware to get the message across. According to Don-

13 Interestingly, as we shall see in chapter three, the same phenomenon can be observed in the studies on the development of children where a mechanism similar to mimesis is sometimes called 'iconic thinking'.

14 While Donald argues that in the mimetic phase there was no symbolic language, even though *Homo erectus* was distinctively different from his ancestors and the great apes (167), Cassirer claims that: "Without symbolism the life of man would be like that of the prisoners in the cave of Plato's famous simile. Man's life would be confined within the limits of his biological needs and his practical interests; it could find no access to the ideal world which is opened to him from different sides by religion, art, philosophy, science" (1944, 41).

ald, the mimetic controller is not just located in one part of the brain, but is widely distributed. This makes mimetic skill very resilient to injury. Mimetic skill could be a defining human feature that distinguishes humans from other animals, even when they have no language. The emergence of language (which is the next transition) merely adds to the mimetic system. “Speech provided humans with a rapid, efficient means of constructing and transmitting verbal symbols; but what good would such an ability have done if there was not even the most rudimentary form of representation already in place?” (199).

Mythic culture started with *Homo Sapiens*, about 500,000 ago and added language to the mix of cognitive skills. Language structurally altered the human brain (201). Since *Homo Sapiens* was better at almost all tasks compared to *Homo Erectus*, language must have offered a significant advantage. It allowed for the creation of myths to help understand the universe. An advance in thought skills led humans to invent symbols to represent the mental models they created (225). The change in anatomical structures and development of new sensory receptors allowed for the invention of these symbols. Language is a very fast and efficient way to communicate and the human mind was now able to interpret the world in a more general and abstract way through myths, rather than from perception of the environment alone as was the case in episodic culture (268). Language is primarily used to bond as a group (2001, 253). However, there were already social communities in place that could now benefit from the emergence of language: “The great divide in human evolution was not language but the formation of cognitive communities in the first place. Symbolic cognition could not spontaneously self-generate until those communities were a reality. This reverses the standard order of succession, placing cultural evolution first and language second. It also suggests that human ancestors could not have evolved an ability to generate language unless they had already connected with another somehow in simple communities of mind” (254).

The final phase, that of theoretic culture, started about 40,000 years ago. Humans were now able to transfer their memories to external forms like graphics. The three major phenomena which characterize this stage are graphic invention, the emergence of external memory and the construction of theory (1991, 272). The graphic invention and theory construction are the results of new *technological*, rather than *biological* hardware (which was the case for the previous transitions). The ability to store memories outside the brain itself was based on technological changes. New media allowed humans to stock memories outside the human brain. By creating arbitrary external symbols, the representation and communication of mental states becomes even more effective, but it does require a lot of knowledge. “Rather than by modelling events by infusing them with meaning and linking them by analogy, theory dissects, analyzes, states laws and formulas, establishes principles and taxonomies, and determines procedures for the verification and analysis of information”(274-5). The emergence of theoretical knowledge or analysis through the use of external aids (graphic signs) shows how a medium cannot just work as a vessel for expressing

thought but how it can also enable a type of thinking to occur at all. Medium and skill cannot exist without each other and it is difficult to assess which of the two is the passive partner and which is the dominant one that triggers a thought or behaviour.

The succession of cultural skills does not imply that we only use analytical skills in today's society. Rather, unlike our ancestors, we usually have all four skills at our disposition. Which one we use depends on the type of difference we want to overcome, our nature, talents and on our cognitive development¹⁵. However, our society is dominated by the conceptual skill, which is favoured over the others:

“We have retained everything that works: a narrative tradition, mimesis, and the episodic cognitive foundations we inherited. Each serves its own function in society. We still have craft, custom, skill, and ritual, all mimetic in their roots. But myth has come to dominate ritual, and ultimately narrative has come to dominate and surround mimesis. There is no doubt where the power lies in traditional societies. It lies with language and the common cultural myths it generates” (2001, 297).

It is however important to remind ourselves that language can only exist and function effectively because of perception and imagination. Language cannot replace them because they are its roots (323).

One of the most important insights of Donald's theory for cultural education is the identification of the inherently cumulative structure of cultural cognition. By demonstrating how cultural forms have developed in evolution, we can understand these cultural expressions better. Donald shows how modern day culture is an elaboration of the cognitive processes of our ancestors. The product of this evolution is our culture as we know it, which is characterized by the distribution of the cognitive processes of culture: “Human culture is based on the sharing of mental representations, and we are tethered by that network” (2006, 14). The development of our brain, especially the motor regions and prefrontal cortex and expansion of memory has created a metacognitive field to reflect on these mental representations (16). By adding insights from evolutionary psychology to the field of semiotics, we can understand where the four basic skills come from and what they allow us to do. This enables us to use them as a reference point to assess which skills suit which type of cultural education best and how they are employed by children. The four skills of cultural cognition and cultural metacognition are not mere by-products of evolution; they are the basis of culture itself, and reflecting on them is nothing less than the feat of understanding who we are as human beings—the results of thousands of years of evolution.

¹⁵ See also chapters three and four

3.4 WHAT ABOUT AESTHETICS?

The foundations of Van Heusden's theory of cultural cognition as outlined above have been laid by Uexküll, Cassirer and Donald who demonstrate how cultural behaviour is anchored deeply in the roots of human cognition. These insights help us define culture and cultural consciousness and art's place in it. As we have seen, the theoretical framework implies that the defining feature of art is the mimetic ability to represent the tension between memory and actuality of our culture. However, where do aesthetics, one of the most frequently named features of art, come into play? It is clear that art purposefully employs our aesthetic preferences for certain shapes, colours, rhythms. In recent years, several neuroscientists have even studied which aesthetic likings are wired in our brain (e.g. Zeki 1999; Chatterjee 2014). Neuroscientist Vilayanur Ramachandran has found nine such preferences that he calls 'the nine laws of aesthetics' (2011). These laws are: grouping (of colours and shapes), peak shift (exaggerated stimuli), contrast, isolation, peekaboo (or: perceptual problem solving), abhorrence of coincidences, orderliness, symmetry and metaphor (200). However, we appreciate these shapes and compositions in practically everything we are surrounded by: from the architecture of our cities, to nature and the interior of our houses. In fact, animals use aesthetics too, for example to attract a mate. It can be said that there are some universal aesthetic preferences (that may even go beyond human universal aesthetics) that result in us liking to look at flowers or nicely coloured birds, even though their beauty is not intended for our pleasure (194). "Many principles of aesthetics are common to both humans and other creatures and therefore cannot be the result of culture" (193).

The artistic developments in the second half of the twentieth century question the role of aesthetics in art even further. The ready-mades were interesting works of art even though their aesthetics were not responsible for their artistic effect. "...it is (...) false to say that aesthetics is *the* point of visual art" (Danto 2009, 112, original italics). This implies that although aesthetics are part of art, they are not exclusive to art, nor do they define it. Elkins notes that aesthetics are also not suitable to link science and art: "I don't think that aesthetic concepts like beauty, delight, and elegance really are the workable bridges between art and science. Those words are too unfocused, too vague and ethereal, too well intentioned, emotionally pallid, sentimentally idealistic, formal, and slippery to yoke anything I recognize as science to anything I think of as art" (Elkins 2009, 37).

Kant made the well-known distinction between beauty and what he calls the 'dynamic sublime'. When we find something beautiful, the formal qualities of an object give us pleasure. These feelings are subjective and not based on concepts (Crowther 1989, 55). "The judgement of taste is an aesthetic judgement, which means a judgement that rests on subjective grounds and whose reasons are not a concept, and therefore not a concept of a certain goal" (Kant, de Visscher, and Rondas 1978, 67). The aesthetic judgements follow from the imagination that an object inspires (Crowther 1989, 53). The sublime goes beyond the beautiful and involves the feeling of the greatness of nature. "Art has a sublime

character if it represents nature in its chaotic and destroying power. Therefore, Kant calls products of art sublime merely in analogy to the sublimity of a nature which overwhelms us through its wildness” (Erp van 2011, 22). The beautiful is characterized by a sense of free play while the sublime generates feelings of awe (36). Aesthetics in Kant’s view is disinterested, which means that we like something without wanting something from it (Berk van den 2009, 125).

Kant already underlines that aesthetics are an important part of art and imagination. Danto too sees a key role for aesthetics in the way we view art: “Ontologically, aesthetics is not essential to art-but rhetorically, it is central. The artist uses aesthetics to transform or confirm attitudes” (Danto 2009, 116). However, while aesthetics (both in art as well as in other domains of life) serve to please our senses and give pleasure (Kant in: Loose 2011, 25), imagination has a different function. Imagination, or mimesis, bridges the gap between memory and actuality by forging something new.

“To be a correct representation (...) art must represent this tension: first, that of a changing actuality, and second, that between stable memories and actuality (often these two are difficult to disentangle). This causes what has been characterized as the ‘estrangement,’ the ‘life-likeness,’ the ‘newness,’ or the ‘disrupting force of art’. In order to be true to life, art must represent that which escapes from, or eludes, the stable system of memories. Art is thus not necessarily beautiful, as Aristotle perfectly knew” (Heusden 2007, 141).

The tension between memory and actuality which resonates in art sometimes disagrees with its aesthetic, harmonic qualities. The balance between these two may tip to either side, depending on whether a culture favours order and harmony or disorder and chaos (ibid.). As aesthetics are generally universal, it may be easier to appreciate aesthetic aspects of foreign art (such as the symmetry, colours and compositions) than its more culture-specific mimetic features.



§4 CULTURAL EDUCATION RECONSIDERED

The problems with Dutch cultural education that Anne Bamford pointed out in her report mainly originated from a lack of understanding of the content of cultural education. An interdisciplinary perspective on culture and the theory of cultural cognition as discussed above, shed a new light on these issues. They provide a wide-ranging framework in which culture is a natural and vital part of human cognition.

As humans we are aware of the limits of our cognition, which can be frightening and daunting, but which is also the birthplace of human creativity and inventiveness. The four semiotic- cognitive skills (the basic skills) that form our cultural cognition are designed to deal with these differences and are all provided by our ancestors: “Our modern minds are (...) hybridizations, highly plastic combinations of all previous elements in human cognitive evolution, permuted, combined and recombined” (Donald 1991, 356). Our metacognition is there to help us understand who we are as individuals, a society and a species. These metacognitive abilities of self-perception, self-imagination, self-conceptualization and self-analysis, combined with the media of the body, artefacts, language and graphic signs help to deal with the difference that we ourselves are. This type of understanding is what cultural education can potentially excel at. In cultural education, children may be invited to reflect on the cultural processes themselves through the wide range of means that cultural education has to offer; from music to dance and from theatre to poetry. Teachers can encourage pupils to use the metacognitive strategies that suit their needs and challenges best. At the same time, cultural education can benefit metacognition by increasing the storage of relevant memories that can be used to generate meaning. Cultural education should thus focus on both the production and reception of cultural cognition.

From Donald’s studies (1991) we gather that the metacognitive development, like the development of cultural cognition in general, is a cumulative process. Young children may accordingly be capable of a more basic type of metacognitive reflection, while older children who have more advanced cognitive structures might reflect in a more complex way. The metacognitive development of children is thus the backbone of all cultural education in primary schools. Consequently, an insight into this development will be the first step for teachers to generate a learning line that is based on this cumulative process. It will also help to indicate what type of cultural education suits which children best and to develop a custom-made programme that fits the capability and the memory-base of the child. A high quality curriculum in this sense would be one that guides the children in the metacognitive process and that maximizes their cultural-cognitive skills. The development of cultural consciousness in children aged four to ten will be addressed in chapter three¹⁶.

A second important consideration is that of the different expressions of cultural cognition. Research needs to be done into the possibilities and restrictions of the different

16 For the development of metacognition in the ages up to eighteen, see the studies of my fellow *Culture in the Mirror* PhDs students Welmoed Ekster and Emiel Copini

media when it comes to metacognitive reflection. Schools will need to know which types of media lend themselves best to which type of cognitive skill. There are probably many different media that cannot be restricted to one of the four types. Once there is a better understanding of how the different media are linked to the child's cognitive development, it will be easier for schools to determine what kind of activities suit which age best. Hence, when designing a cultural education curriculum, both the cognitive development and the medium that matches this development best need to be taken into account. The combination of both will hopefully resolve some of the theoretical confusion that surrounds this potentially very valuable school subject. A start on these issues will be made in chapter four where the development of media skills in young children is discussed. The value of cultural education lies not just in the enjoyment and appreciation of cultural products, but first and foremost in the development of those skills that help us to navigate our cultural environment.



Theories in the cultural education field

COMPARING THEORIES

The lack of an overarching scientific theory of culture as a foundation for cultural education was one of the main reasons why the *Culture in the Mirror* (CiM) project was initiated. However, it is obvious that this field is not without theories. For decades, researchers have studied phenomena that are related to cultural education practice such as the nature and function of the arts as well as children's development, and education itself. Although many of these studies were not specifically designed to directly impact the field of cultural education, several of them were adopted by teachers, schools and governments, either as inspirational rationales, or in a much more pragmatic form through science-based curricula (such as didactics based on Constructivism or Multiple Intelligences). It would therefore be wrong to think that there is no interaction between the cultural education field and the scientific world. Educationalists who are concerned with the cultural subjects have been receptive to scientific developments for a long time. Likewise, academics have deliberately aimed to contribute to the daily practice in schools before. The theory of culture developed by Van Heusden (see chapter one) is thus by no means the first scientifically-based theory to enter the classroom.

As the cultural education practice is not a blank slate and others have already shaped the way we think about cultural education today, it is necessary to take these existing perspectives into consideration. Not only because existing theories contribute to our understanding of the field, but also because a review of these present notions may explain what is lacking in order to support the cultural educational field (see chapter one). In this chapter I will therefore review the theories of Dewey, Piaget, Vygotsky, Egan, Bruner, Parsons, Kolb, and Gardner in the light of the theory of cultural cognition as discussed in the previous chapter. These theories have been selected because they are the ones often referred to by

the authorities in this area (Eisner 1993; Efland 2004; Haanstra 2011). By comparing the previously discussed theory of culture to other theories I aim to position it in relation to the existing cultural education traditions. Moreover, I will argue that the cultural cognition framework of this research project is not a completely new perspective in the field but that it could potentially integrate the various views that already exist. I will thus also use the theory as an analytical tool for a meta-analysis. The different theories will be compared and related within the framework of cultural cognition, thus revealing how they relate to each other and how the differences in perspective may be explained. Any discrepancies will be examined for they will provide interesting starting points for the discussion on the nature of cultural education. In doing so, I hope to strengthen the theoretical foundations of the field and outline how Van Heusden's cultural cognition framework can help in restructuring cultural education paradigms.



§I EXPERIENCE

“The moments when the creature is both most alive and most composed and concentrated are those of the fullest intercourse with the environment, in which sensuous material and relations are most completely merged. Art would not amplify experience if it withdrew the self into the self nor would the experience that results from such retirement be expressive” (Dewey 2005, 107).

1.1 JOHN DEWEY

In 1934, philosopher and educator John Dewey wrote his *Art as Experience*, a book propagating the role of perception and experience in art. His views on art are especially interesting in the light of Van Heusden's theory of cultural cognition for they start from a similar premise: art builds upon the human interaction with the environment. I will provide a brief overview of Dewey's work and outline how this theory relates to the theory of culture as elaborated on in the previous chapter.

Dewey starts his book by arguing that in order to understand a work of art one must always take into account the experience from which the work has arisen. Only when taking into account the cultural context of art, can we understand its aesthetics: “The sources of art in human experience will be learned by him who sees how the tense grace of the ball-player infects the onlooking crowd; who notes the delight of the housewife in tending her plants, and the intent interest of her goodman in tending the patch of green in front of the house; the zest of the spectator in poking the wood burning on the hearth and in watching the darting flames and crumbling coals” (3).

Art thus starts with a form of heightened activity in which one is actively interacting with the world: “...at its height it signifies complete interpenetration of self and the world of objects and events (...) because experience is the fulfilment of an organism in its struggles and achievements in a world of things, it is art in germ. Even in its rudimentary forms, it contains the promise of that delightful perception which is esthetic experience” (18-9). This quote is characteristic of the remarkable duality that often appears in discourse about art. On the one hand, the arts, and arts education are pushed to the margins of the curriculum (and are consequently allocated marginal finances) because it is regarded as something extra, something that is merely fun or entertaining. On the other hand, there are also those who take the opposite standpoint and argue that art is something almost divine and superior to other forms of culture. The latter position is characteristic of Dewey's texts, when he discusses how art ‘heightens’ ordinary experience. There does not seem to be a middle way between godlike and trivial when it comes to arts and arts education.

Experience in Dewey's view is more than merely a reaction to the environment; it is the participation of an organism in its environment, through which meaning arises (22). Art demonstrates that human beings can consciously expand this process of interacting,

using the senses, organs, brains and muscular systems: “Art is this living and concrete proof that man is capable of restoring consciously, and thus on the plane of meaning, the union of sense, need, impulse and action characteristic of the live creature” (26). In art, both nature and culture are combined in experience. Nature is after all our habitat and culture has arisen from our interaction with the environment. The same goes for aesthetics which are not exclusively tied to the arts, but which generate an intensified and often pleasurable experience, which can result from nature as well as from art (see also chapter one). Dewey argues that many rituals started from exactly this interaction between a human being and its environment and that they are a way to enhance life itself (30).

According to Dewey, the intellect works in similar ways as the arts. The difference, however, between art and intellect is that while art consists of materials that have aesthetic qualities, intellectual signs or symbols have no material qualities themselves. Moreover, intellectual endeavours, unlike art, may cumulate into some form of ‘truth’. This does not mean that thinking does not possess the power of satisfaction. Thinking can be very enjoyable because it triggers an internally integrated and organized movement. Therefore, aesthetics and intellect cannot be entirely separated from each other (40).

Art is also directly tied to the process of making something that can be enjoyed by the senses. The act of production even plays a role in the perception of art. What we surmise about the maker of an object and the purpose behind it determine how we experience it (50). Perception is therefore also crucial in art. The artist perceives when the artefact is good and is constantly reshaping, guided by the senses. And even the perceiver of the artistic artefact plays an active role and is not just a passive viewer. Perception arouses vivid consciousness, unlike recognition which is based upon schemes and stereotypes and does not involve much resistance between what is perceived and previous experiences. The beholder needs to surrender to the experience but must also actively create his or her own experience, reconstructing the object (56). “Experiencing like breathing is a rhythm of intakings and outgivings. Their succession is punctuated and made a rhythm by the existence of intervals, periods in which one phase is ceasing and the other is inchoate and preparing” (58). This *recreation* of the work of art is required for the work to be seen as art.

The expression of meaning by a work of art always requires a medium: “The connection between a medium and the act of expression is intrinsic. An act of expression always employs natural material, though it may be natural in the sense of habitual as well as in that of primitive or native” (66). Emotion plays a key role in the selection of a suitable material for expression. Although emotion is not art in itself, it may lead to the impulse to find a material to express one’s mood. Similarly, merely selecting material and ordering it is not art either, for the material itself is not synonymous with what is expressed: “Without emotion, there may be craftsmanship, but not art; it may be present and be intense, but if it is directly manifested the result is also not art” (72). The inner mental processes and the outer material that lead to art are always part of the same operation:

“As the writer composes in his medium of words what he wants to say, his idea takes on for himself perceptible form (...) the physical process develops imagination, while imagination is conceived in terms of concrete material. Only by progressive organization of ‘inner’ and ‘outer’ material in organic connection with each other can anything be produced that is not a learned document or an illustration of something familiar” (78).

An artefact can therefore not be seen as separate from the process of production¹⁷.

According to Dewey, art is representative. This does not mean that it is a literal copy of the world or that it bears a symbolic meaning (like a signboard). It implies that art conveys something to the beholders about their own experiences “...it presents the world in a new experience which they undergo” (86). The self and the environment are, in this sense, interacting. The self integrates the world we experience, while we are a part of that world as well. Experience can therefore be seen as cumulative. Art then clarifies and amplifies this experience. Hence, experience is not located solely within us, nor in artefacts alone. “The expressiveness of the object is the report and celebration of the complete fusion of what we undergo and what our activity of attentive perception brings into what we receive by means of the senses” (107). The major role of perception in art is also stressed by the emphasis on rhythm that is found both in nature and in art. However, a work of art purposefully distorts ordinary connections and may even use ugly things to enhance its aesthetics. In this process the spectator perceives matters that usually remain unnoticed in experience because of habituation (177).

This view of art implies an active role for the perceiver of a work of art, for he or she needs to ‘solve’ the tension posed by the work to appreciate it as something new; a new experience. Therefore, both artist and audience require a rich background and what Dewey calls ‘vital interest’ (277). Imagination then is the process in which the old and the familiar are combined into a new experience. “When the new is created, the far and strange become the most natural inevitable things in the world. There is always some measure of adventure in the meeting of mind and universe, and this adventure is, in its measure, imagination” (278). In this sense, imagination and art on the one hand and philosophy on the other can be regarded as opposites. Philosophy starts from wonder and aims for understanding, while art departs from what we understand and turns this to wonder (281).

The connections between Dewey’s and Van Heusden’s ideas are striking. Dewey’s main premise is his focus on the continuous interaction between the self and the environment, which is also key in Van Heusden’s theory of culture. Art is seen as a way to enhance this experience and to make us aware of this process. This involves an act of creation by the artist in which meaning is generated by a process in which emotion and the selection of materials are combined. The spectator needs

¹⁷ For a further elaboration on the relationship between artefacts and imagination, see chapter four.

to relieve the tension that the artwork presents him or her with and can thus gain a new experience. Art in this sense is a way to reflect on the human process of perception and imagination, by means of experience itself which is thus cumulative. According to Dewey, art is unique in this respect: “Imaginative experience exemplifies more fully than any other kind of experience what experience itself is in its very movement and structure (...) art is the fusion in one experience of the pressure upon the self of necessary conditions and the spontaneity and novelty of individuality” (293).

The emphasis that Dewey puts on experience is an interesting one. In Van Heusden, experience is regarded as broader than perception alone. Dewey’s definition of experience seems to combine perception and imagination and fuses them into the iconic or concrete mode of thinking as opposed to abstract cognition. In the cultural cognition framework this would imply that art is located in the upper half of the skills model (see p. 37). Dewey emphasizes how perception and imagination are interrelated and how art and imagination can make us aware of our experience. The vital role that Dewey assigns to individuality, creation, production and emotions in this process fits this explanation perfectly. Creation and production are examples of motoric processes and would thus specifically point to imagination rather than perception. Art in Van Heusden’s theory of culture is also characterized by the manipulation of experience and by producing new forms or shapes. Moreover, Dewey makes us aware of the interrelation between the self (mental states) and the material (the medium) that is required for this process to take place. They mutually influence each other, giving rise to a new experience and thus creating a cumulative structure in which old and new spiral out.

The close relationship between perception and imagination that Dewey outlines also provides an interesting viewpoint when thinking about education. In his theory, imagination serves a vital purpose in generating new insights into the way we interact with our environment and gain experiences. Dewey’s theory may give us an idea of how self-perception and self-imagination may be combined in experience and what this amplification of experience may mean for education and children’s development¹⁸. The role of the medium and creativity in this process also serves as an interesting perspective on how reflection on the self may occur and on the specificity of cognitive skills in generating this type of reflection.



18 The role of self-perception and self-imagination in childhood cognition is further explored in chapter three.

§2 IMAGINATION

“The instrument best able to ensure the transformation from codes to living knowledge is the imagination” (Egan 1999, 51).

Imagination is often associated with childhood and various authors have written about the imaginative skills of children. I will outline the theories of three of them: Kieran Egan, Howard Gardner and Michael Parsons, for all of them have inspired types of cultural education, albeit on different scales. I will analyse their views on imagination and how these ideas fit Van Heusden's theory of culture and to what extent they may contribute to it.

2.1 HOWARD GARDNER

Developmental psychologist Howard Gardner is one of the theorists who specifically aims at changing the way we look at our children's education. Children's education is a controversial topic. As children spend a significant period of time at school during some of the most crucial stages of their cognitive development, it is not surprising that parents, policy makers and society as a whole are highly concerned with the quality of education. After all, all children will someday be the people who shape our culture. One of the key words that keeps popping up in the discussions about education is that of 'intelligence'. During development, children are often tested to see how well they perform compared to their classmates. These tests determine their future schooling and possibly even their professional careers and should therefore not be taken lightly. However, according to the famous psychologist and educator Howard Gardner, the type of intelligence that is usually focused on in these types of tests is a very narrow one (Gardner 2006, 67). According to him, there are at least eight different types of intelligence that children display, and all should be considered equally important.

Gardner's theory of multiple intelligences (MI) has become one of the most influential models in education of the last decades. The art educational field especially has been affected by MI theory. Many schools, all over the world, have incorporated Gardner's ideas into their curricula. The overarching research group Project Zero at Harvard University was co-founded by Gardner and has conducted over fifty research projects that all aim at improving education in the arts. One of these projects is *Project Spectrum*, which is centred on preschool and primary education and was carried out between 1984 and 1993. In this section, I want to compare the MI theory to the theory of cultural cognition and highlight the similarities and differences between the two. Furthermore, I want to explore how the findings of Project Spectrum can benefit the Culture in the Mirror project in the future.

According to Gardner, the mind transforms information, which means that we all have

mental models that we employ to make sense of the world. However, not everyone has the same type of mind. “It is fundamentally misleading to think about a single mind, a single intelligence, a single problem-solving capacity (...) the mind/brain consists of many modules/organs/intelligences, each of which operates according to its own rules in relative autonomy from the others” (92). Gardner argues that there are at least eight different types of intelligences: linguistic intelligence, logical-mathematic intelligence, spatial intelligence, musical intelligence, bodily-kinesthetic intelligence, interpersonal intelligence, intrapersonal intelligence and naturalist intelligence (49-50). These intelligences rely on different parts of the brain, and every person has a specific mix of them. In today’s educational system, the linguistic and logical-mathematic intelligences are valued most, while the others are often neglected. MI theory wants to show that every child has different cognitive strengths that need to be taken into account. The teacher should therefore assess the nature of the intelligence of a child and take this into consideration when designing a curriculum. The cognitive abilities of the child can then be fully developed: “If we can mobilize the spectrum of human abilities, not only will people feel better about themselves and feel more competent; it is even possible that they will also feel more engaged and more readily able to join with the rest of the world community in working for the broader good” (53).

Starting from these basic outlines of what good education should be, Project Spectrum wanted to find out if children in school displayed domain-specific and domain-general cognitive strengths, whether performances on different types of tasks correlated, and if the researchers identified other strengths in the children than the teachers did (Chen and others 1998, 24). A framework was designed to assess the cognitive abilities of the children involved in the project. A child does not need to become proficient in all intelligences but can instead gain confidence from its specific talent. The children in Project Spectrum would see that no one can be good at everything and would be less focused on linguistic or mathematical abilities alone (44).

The emphasis on different types of cognitive strategies is also shared by Van Heusden. The skills of conceptualization and analysis are very dominant in our culture. Perception and imagination are sometimes forgotten even though they are two fundamental modes of thought. A second striking parallel between the two studies is the role of one’s memory in utilizing the different skills or intelligences. Van Heusden shows how the difference between personal or collective memory and actuality makes one apply one of the cognitive skills. Likewise, Gardner claims that all learning starts from a perceived discrepancy or gap that results from a comparison between what one knows and what one encounters (2006, 115).

In addition to a clear overlap between some of their basic suppositions, the two theories differ in several fundamental ways. One of the main differences is the role of content in the two approaches. Van Heusden’s theory of culture demonstrates that any of the four basic skills can be used to bridge the gap between existing knowledge (the information that is stored in one’s memory) and new experiences. All skills have a different character and

differ in their level of abstraction, but their use is not necessarily directly tied to a specific content or problem. Some people may be more proficient in one specific skill than in another, which could be due to for example their age, personal preferences or environment. According to the MI theory, an intelligence is deduced from a specific content (56). This implies that a particular type of problem calls for a specific type of intelligence. By assessing how well children are able to solve a particular type of problem, one can determine their level of a specific intelligence.

A second difference between MI and theory of culture is that, from the perspective of the CiM approach, the eight intelligences are not all of the same kind. As mentioned before, according to the matrix which Van Heusden developed, the four skills can be expressed in four main media categories. One can use one's body, an artefact, language or a graphic sign to express one of the cognitive strategies¹⁹. The medium that is used to convey a mental representation is thus of a different kind than the cognitive process itself, even though in practice the two cannot be separated. If we go back to the eight intelligences, most of them seem to relate to an aptitude for a specific medium (e.g. linguistic intelligence) and not to a cognitive strategy as such. The three exceptions are interpersonal intelligence, intrapersonal intelligence and naturalist intelligence. The latter is very much content-bound and is defined by Gardner as "...the individual who is able readily to recognize flora and fauna, to make other consequential distinctions in the natural world, and to use this ability productively (in hunting, in farming, in biological science) (...)" (58). From the perspective of cultural cognition, interpersonal and intrapersonal intelligence are two very interesting types. As discussed before, there are two levels of cultural cognition. The first refers to the cultural cognitive processes we employ to make sense of the world (cultural cognition as a whole). The second layer is the reflection on these cultural processes, which means that the cultural cognition of ourselves or of others itself becomes the object of thought. This cultural awareness can also be called metacognition and seems to be directly tied to Gardner's two intelligences referred to above. This would imply that people with high levels of interpersonal or intrapersonal intelligence are very skilled at reflecting on a metacognitive level. Cooperation is an example of interpersonal communication, which is a type of reflection that is focused on others, using all skills. Interpersonal and intrapersonal intelligence cannot be tied to one of the four skills of culture, for it is not the cognitive skill as such that characterizes this intelligence but the metacognitive nature of it and its object of reflection.

During the Project Spectrum research, it was found that teachers who used MI theory started to pay more attention to the individual differences between children and that they organized their lessons in a different way (Chen and others 1998, p. 133). Even though Project Spectrum is directly focused on the child and CiM is aimed at the teachers, the experiences of Project Spectrum can still be

¹⁹ Although, as we shall see in chapter four, the dominant skill at a certain age may affect the medium that is used and they are interlinked in a more fundamental way. The combination of a skill and a medium is therefore not necessarily a random one.

very useful for the CiM project. One of the problems that was encountered is that teachers may be too quick to label a child²⁰. This can be dangerous, since intelligences can still develop and are not as clear-cut as they may seem. “Intelligences’ are a scientific construct, not a physical reality”(144). Likewise, the four skills are not isolated identities. Even though they have clearly defined characteristics, in practice one will find that they are often used in a mixture of different cognitive strategies.

Despite the fact that the Gardner’s MI-theory is in some respects very different from the theory of culture, it is important to recognize its impact on cultural education and what this implies for educational practice today. Regardless of the different outlook on cognitive processes, there are also some similarities that are interesting to explore in more detail. The main strength of MI theory for the CiM research is the emphasis on the individuality of children and the warnings against a uniform approach. To what extent these differences are mainly due to a difference in cognitive skill or merely denote a striking proficiency with a particular medium needs to be investigated more fully. However, the shared aim of the two projects is such an important one that the possible exchange between them should not be ignored: “...whether the course be history or physics or dance, we should try to teach individuals in ways that are consonant with, or that stretch, their current mental representations. Equally, we should give individuals the opportunity to exhibit their understandings by means of media and representations that make sense to them” (p. 77). However, although Gardner’s work is based on literature from psychology and neurosciences, the intelligences lack empirical support. Waterhouse is one of the scholars who has addressed this issue (2006). New neurological data actually seems to point away from the idea of multiple intelligences rather than towards it. Further research thus needs to be conducted to find out whether the intelligences are a truly scientifically based model or more of a conceptual system.

2.2 KIERAN EGAN

Howard Gardner is not the only scholar stressing the importance of being aware of the existence of different cognitive modes. One of Egan’s key arguments is that our highly literate and theoretical society has a significant impact on children and their education. He argues that the ideas of Plato about rationality and irrationality are still very dominant today. The same goes for developmental theories, where childhood is associated with *doxa* (collective beliefs) and adulthood with *episteme* (true knowledge). Moreover, societies are thought to evolve from irrational to rational. “The mental life of children has commonly

20 It would be interesting to find out if teachers do indeed tend to quickly categorize children and if so, where this labelling of children comes from. Labelling is a typically conceptual way of understanding. If teachers are used to approaching their pupils in a conceptual way, knowledge of the theory of cultural cognition could perhaps open up new ways to look at children, for example in terms of perception or action.

been represented in terms influenced by this rational/irrational distinction. Children are assumed to begin life in irrational confusion and ignorance, and education is regarded as the process of inculcating both rationality and knowledge” (Egan 1999, 5). However, the idea of a clear temporal succession between these two different modes of thought is challenged because both are found in the same society and even in the same person.

This does not imply that adults and children have the same modes of thinking. Some argue that the difference between adult and child cognition has to do with literacy. There are even many different ways to use language. “The economy of the mind inclines us towards using mental strategies in oral cultures – in which what one knows is what one remembers – and towards using some different mental strategies in literate cultures – in which various mental operations can be enormously enhanced by visual access to organized bodies of knowledge” (6)²¹. However, not everyone agrees that literacy restructures cognition. Egan argues that the way children think strongly resembles the cognitive modes of *oral* traditions, while adult thinking is more literal. The key is then to think about what this means for education: “Central to this discussion is a reconsideration of what the foundations of education are when literacy and rationality are conceived as growing out of, rather than displacing, the oral culture of early childhood” (9). Similarly, we should think about the role these oral functions play in the interaction between the child and its social and cultural environment. “Education in oral cultures is largely a matter of constantly immersing the young in enchanting patterns of sound until their minds resonate to them, until they become in tune with the institutions of their culture” (11). Thus, in this sense, one of the main tasks of education is the memorization of the main messages of a culture, so that they can be passed on. Because these memories are so important, it is vital that those techniques that aid the retention of memories are promoted. This focus on the role of memory coincides with the emphasis of Van Heusden’s theory on memories as a means of making sense of one’s natural and cultural environment.

The role of language in cognition has been studied extensively over the years. According to Egan, it is vital to understand exactly how language is used by children and what this tells us about their ways of thinking. Luria’s famous studies about the difference in thinking between literate and illiterate people did not so much show a difference in cognition as in the social uses of a mental capacity. In oral cultures, in contrast to literate culture, world and experience are closely tied together. This means that the past only makes sense in terms of the present. As the mind needs to preserve memories, those experiences that are similar are focused on. New inventions only put a strain on the memory and thus imitation and repetition are important. Although there is some variation amongst oral cultures, the pressure to avoid change in order to maintain stability and ensure intellectual security is shared. “A major difference between oral cultures and our own lies not in their incapacity for abstraction, but in our dissociation from

21 The different uses of language by children are also discussed in chapter four

the life world. This kind of dissociation is a product of the techniques of writing, not some property that some human minds possess and others lack.” (23).

One of the main means of classification in oral cultures lies in the use of binary oppositions. Binary oppositions are part of what Egan calls the ‘primitive cognitive tools’ (Egan 2005, 2-6). These tools are: story, metaphor, binary oppositions, rhyme, humour, mental imagery, gossip, play, mystery and embryonic tools of literacy. The tools are characteristic for children until the age of seven or eight and are part of their oral culture²². The difference between Western adults and those in oral cultures is only the cultural environment which involves the use of certain thinking techniques. The techniques of oral culture do not disappear in literate societies, but remain mostly hidden. The characteristics of orality help us to understand the oral culture of Western children. According to Egan, a child is not a *tabula rasa* and the focus on what children lack undermines their abilities. Moreover, the value of orality in contrast to literacy may be illuminated by looking at children. Oral cultures have particular techniques, such as storytelling, to retain memories. Since children think differently depending on their age, it would be advisable to ensure the fullest possible development of orality in education. Furthermore, education must recognize that Western children live in a literate culture and must prepare them for the types of thinking required in this kind of society (e.g. scientific thinking).

“Stimulating orality is not incompatible with the early stages of acquiring the skills of literacy – indeed a sensitive program of instruction will use the child’s oral cultural capacities to make reading and writing engaging and meaningful. I think one can plausibly argue that Western schools’ relatively poor achievement in teaching literacy is due in significant part to the failure to recognize and stimulate the development of a rich orality in the first place, and then to use the capacities of orality to teach literacy” (30).

According to Egan, the oral foundations of science, logic, philosophy, etc. should be the starting point when educating children. When it comes to science, the inquiry into nature should come first. Likewise, humour may be the beginning of a philosophical or logical understanding and storytelling should be central to teaching. These stories should preferably include binary oppositions. The lessons can be evaluated by looking at how well children understand the content within the story and how they use it in their own stories. Children’s thinking is sophisticated, but very different from that of adults. Literacy must rest on something in order to work: “Stimulating children’s imaginations, metaphoric fluency, and narrative sophistication can become a more prominent aim of early education. Such a view might help to resolve what is often seen as a conflict in early education between the need to establish the ‘skills’ of literacy and rational thought and the wish to encourage more var-

²² See also chapters three and four

ied experience and imaginative development” (33).

It is often argued that children can only think in terms of the concrete and struggle with abstractions. Egan argues that this is not necessarily the case and that children also use abstractions in their use of language, albeit in a different and less explicit way (1997, 57). In children’s stories, many abstractions such as ‘good’, ‘evil’, ‘safety’, and ‘oppression’ are used and perfectly understood by children, even though a young child may not be able to articulate these concepts by itself. “Abstractions become conscious, become concepts, as a result of the mind’s reflecting on itself. The formation of abstract concepts, then, is not the outcome of some conscious process, but rather the discovery of something that already has guided the mind’s operations” (48). According to Egan, these abstractions are already there but are not reflected upon by young children. Moreover, Egan points out that metaphor and logic are both uses of language and that they are therefore not opposites. He argues, like Lakoff and Johnson (2003) that metaphor can be seen as imaginative rationality. This metaphoric capacity declines as children grow older and is replaced by a more literate style of thinking (56).

Starting around age seven or eight, the so-called ‘mythic mind’ (the mind employing cognitive tools from oral tradition) becomes what Egan calls a ‘romantic’ mind. Romanticism refers to “...delight in the exotic, emphasis on individualism, revolt against conventional forms, stress on the importance of imagination, intense inquiry about the self, resistance to order and reason, glorification of transcendent human qualities and so on” (1999, 42). Imagination plays a key role in Romanticism too, albeit in a different and more conceptual form. “One way to simplify what we see happening between 5 and 10 (...) is to say that with literacy we begin to focus on what we come to call reality” (45). For example, magic is not questioned by young children as long as it does not hinder the story.

Egan’s studies suggest that imagination may be regarded as a continuum of cognitive modes that slowly transform during a child’s development. Egan starts from a Vygotskian perspective rather than a Piagetian one, stressing the importance of the cultural environment of the child in adopting new cognitive tools. This may also explain the emphasis on language in his view on development. By drawing the analogy between oral traditions and the child’s mental modules, one can see how imagination is at first still very much influenced by perception (e.g. the focus on repetition and imitation and the way past and present coincide) and how it is more and more affected by language as the child grows older. If there is indeed an analogy between oral cultures and a young child’s cognitive tools, this is a significant contribution to our understanding of how perception shifts to imagination and how imagination in turn becomes increasingly conceptual. These issues will be addressed in chapter three.

One of the main problems with Egan’s views on education is that it is difficult to see what their scientific validation is. Egan is influenced by other theories such as Donald’s but does

not offer much theoretic backing for his ideas. The approach and development that Egan describes is an inspiring one which could well enhance our understanding of cultural education. However, it will need some empirical back up to support it. Geary says that: “Egan argues that any such scientific testing is meaningless with regard to educational processes, including his recommended approach, because of the complexities of teaching/learning. But without a means to independently evaluate his proposals, it is difficult to know whether or not there are any better than the methods he so effectively dismantled”(Geary 2006, 313).

Egan’s transition from mythic to romantic culture seems to mimic the transition from self-imagination to self-conceptualization in Van Heusden’s model. However, an important difference is the emphasis Egan puts on the medium of language. In Van Heusden, although language is an important medium in our culture today, it is just one of the four medium groups. Even though Egan is clearly influenced by Donald, I think the analogy he draws between his mythic culture and Donald’s is debatable²³. I think that Egan’s mythic stage resembles Van Heusden’s self-imagination stage more closely than Donald’s mythic stage. This would also explain why Egan’s Romantic culture falls in between Donald’s mythic and theoretic culture. However, the value of Egan’s views on the more imaginative and bodily features of language which he so clearly outlines may be very valuable in understanding how young children make the dominant medium of their culture work for them.

2.3 MICHAEL PARSONS

A fourth author who is often referred to when it comes to cultural education, or more specifically, art education, is Michael Parsons. In his study *How we understand art* (1987), he investigated how children look at artworks (in this case paintings by various artists and in various styles). Parsons argues that the understanding of a painting develops according to a developmental sequence, meaning that children transition from one stage to the other as they mature (4-5). However, the stages are not directly tied to one particular age, for the understanding of art is closely tied to one’s experience with works of art (12). Only young children show a more or less consistent stage-like development that is connected to their age. “In practice, virtually all preschool children use stage one ideas. Most elementary school children use stage two ideas. Many, but fewer, adolescents use (at times) ideas from stage three. After that, circumstances become more important than age” (12).

According to Parsons, art may be regarded as an articulation of one’s inner life. “We have a continuing and complex inner response to the external world, composed of various needs, emotions, thoughts, both fleeting and long-term. This inner life is not transparent to us, not self-interpreting; if we are to understand it we must give it some more perceptual shapes, and then examine the shapes. Art is one way of doing this” (13). Parsons also stresses the public character of art; an artwork may be interpreted differently than the artist had

²³ See also chapter four

intended. The judgements of an artwork can, however, be classified objectively. The interpretations of an artwork may be more or less defensible and more or less adequate (p. 14). The developmental sequence that Parsons describes can therefore be seen as the succession of an increasing ability to grasp the expressive nature of a piece.

Parsons distinguishes between five different stages of art appreciation. Every stage is characterized by a central new insight into art (16). The main trend is one from dependence to autonomy, which is, according to Parsons, central to development: “We earn our freedom from the domination of biological impulse by becoming good members of society; and freedom from the domination of society by constructing some viewpoint independent from society” (21). At stage one, the child is still more a biological than a social creature. It cannot take more than one perspective at a time and is mainly pre-linguistic. Parsons refers to stage one as the stage of favouritism (22). Children of this age (preschool) are attracted to paintings on an intuitive basis and are mainly focused on the colours. Their response to paintings is strong, but may not be compared to the aesthetic appreciation of art of more experienced people. Insights into art need to be developed through education (27). Young children rarely dislike a work of art “They naturally take delight in appearances, a delight that is aesthetic in character” (26)²⁴.

Parsons argues that the clear link between the appreciation of an artwork and the colours is a sign of the child’s egocentrism. The child stresses its favourite colours and does not refer to properties of the painting that are more general and not tied to personal pleasure (30). According to Winner, a child can see a painting as a representation from age two onwards. Young children at stage one often talk about the subject of a painting in a free and associative way, where one painting can be interpreted differently at different times (31). The child does not take into account other viewers who may not grasp the child’s imaginative interpretation of the piece.

At elementary school, children enter stage two. Stage two is characterized by a focus on the subject matter instead of just the colours. Little attention is paid to the style of painting. “A painting is best if it is about beautiful things and if it pictures them realistically” (39). The things that we find beautiful in real life, we also like in paintings. When the subject is considered beautiful, then the painting is regarded as a good work of art. Following Piaget’s stages, this reference to realism appears to be an important criterion from age six onwards (48). There are different ways to look for realism in a work of art. At stage two, the child first understands paintings schematically, and only later does it do so photographically. Schematic realism means that things are correct (e.g. that a hand has five fingers), photographic realism requires that things look as if they are photographs (50). The child is better able to think about the intentions and feelings of the artist behind the painting, but

24 This quote affirms that aesthetics are pre-semiotic. There is no added sign and thus no duplication of reality. Animals may likewise also experience something that can be compared to aesthetics even when they have no means of experiencing the world in a semiotic sense. See also chapter one on aesthetics.

this understanding is still very general (64)²⁵.

Stage three is the stage of expressiveness. This means that the focus shifts from the subject matter of a painting to the emotions and intentions behind it. Although the stage two child is also aware of the person behind the artwork, only when the child matures can it really specify this expressive nature. Subjectivity plays a much larger role for children around age twelve than for the elementary school child. "Paintings are not about concrete objects so much as about what can be thought and felt and must be apprehended inwardly. They express aspects of experience, states of mind, meanings, emotions; subjective things" (70). The success of a painting then lies with the experience we get out of it and which we can use for introspection (71). It is difficult to express the subjectivity of a painting, for it is so personal and closely tied to feelings. This definition of expressiveness seems to have a very limited connection to imagination as such. It seems that Parsons is more concerned with a sense of art that is characterized by free association and empathy than with tying this stage to a particular cognitive ability.

At roughly undergraduate age, people seem to look for the medium, form and style of a particular painting. The style, medium and form of a painting can be connected to that of other paintings. The context of a work of art is now considered much more carefully. People take into account the historical, social and ideological relationships that have shaped the work (87). Parsons argues that stage four art appreciation is only reached by very few. According to him, this is due to the lack of serious art education to foster aesthetic development. He therefore pleads for a type of education that is more focused on development that stimulates this type of stage four understanding (117).

The last stage is the 'post-conventional stage'. Judgements based on tradition or authority are no longer accepted but rather replaced by one's own judgements (121). People at stage five do take into account other people's opinions on art and display much more self-awareness. At stage five, judgements of a work of art are made with other people's opinions in mind. The public no longer follows conventions but decides for itself (121). Although conventions are also taken into account at stage four, they are not criticized (122). "At the post-conventional level we can distinguish judgement from interpretation because we can question the ideals used in the interpretative phase. In this way, judgement becomes fully explicit and individually responsible" (123). At stage four, our judgements depend on our cultural ideals (143). The history of art plays a role in the judgement of art but is seen as something that is finished and not as a dynamic context (147).

The self plays a large role at stage five, as personal judgements are now articulated and discussed. The aesthetic experience at this level is therefore also very social and based around dialogue (150).

25 For a further description of the development of drawing and painting, see chapter four.

“At stage five, in short, our experience needs constant reinterpretation if we are to avoid mistakes about our needs and feelings. Otherwise we will take for granted old perceptions and interpretations of them. Art helps us to get clear about our experience, and ourself, as well as we ever can. In the end its function is to make our inner nature transparent, both to ourselves and to others” (150). “...the experience of art at the postconventional level is a constant exploration of our experience, a trying-out of the self that we might be, and a continuing conversation with others about both” (152).

The stages that Parsons outlines are closely connected to the stage theory of Jean Piaget. The stages one to five can also be quite easily connected to the four basic skills of cultural cognition. Stage one can be seen as a ‘pre-stage’ in which representation and object are still quite closely connected. Stage two ties in with Van Heusden’s self-perception phase as the emphasis on subject and schematic interpretation of the works denotes an understanding of art in a perceptive way. Sign, meaning and object are not yet clearly distinguished and there seems to be a close connection between what is pleasing to the senses in everyday life and what is pleasurable to look at in art. Stage three then relates to the imaginative skill in which subjectivity and the role of the producer of the artwork is considered. Recognition of the feelings and intentions of the artist imply the ability to imagine the thoughts of another person. The subjectivity of the expression fits the skill of imagination well for the latter is the skill that allows for the most divergent thinking. By manipulating and constructing new images, thoughts and feelings can take shape in an endless variety of externalizations. Stage four however is much more focused on the objective side of paintings and considers the medium and style of art. By placing an artwork in an art historical context one is in fact conceptualizing the work. Categorizing and labelling based on ‘objective’ criteria is a conceptual way of understanding that is very different from the focus on imagination. The final stage is a means to overcome the ‘fixed’ and conventional mode of aesthetic appreciation of stage four. It is much more analytical and searches for a way to hypothesize about art. Parsons attaches this analytical point of view to increasing self-awareness, just as Piaget does (Piaget 1977a). This would mean that the other skills are less prone to reflection. This hypothesis would have significant implications for the cultural cognition theory and especially its implementation in young children’s education in the sense that metacognition and thus cultural education would be a rather fruitless activity for the lower grades of education if this is truly the case.

One of the main disadvantages of Parsons’ study is that it is relatively small scale and has not been carried out on a longitudinal basis. The artworks seem to have been chosen on an intuitive basis and the sample is extremely small (eight paintings in total). The method of this research makes it very difficult to generalize about children’s development of art appreciation. Parsons himself too notes the methodological limitations of his studies (1987, 12). A further difficulty is the lack of theory behind his taxonomy of stages. Although

Parsons links his findings to Piaget, this linkage is not structural. A stronger theoretical framework would strengthen Parsons' ideas and make it easier to see his work as an elaboration of existing views on child development. Although Parsons indicates that the first stages of aesthetic development are more or less constant while the latter require education and experience, he does not demonstrate exactly how these transitions take place and how educators may facilitate this process. The clear similarities between Parsons' stages and the skills of cultural cognition are certainly thought-provoking. Parsons' work suggests a development in the reception of art that fits the cumulative nature of the cultural skills. However, due to the lack of strong empirical backup at this point, these studies cannot serve as scientific evidence for cultural theory and are thus primarily intriguing inklings of how the cultural skills may influence the way the reception of paintings develops. Van Heusden's theory could provide a grounding of these findings, and the findings could function as empirical proof to the theory.



§3 CONCEPTUALIZATION

“The internalization of socially rooted and historically developed activities is the distinguishing feature of human psychology, the basis of the qualitative leap from animal to human psychology. As yet, the barest outline of this process is known”
(Vygotsky 1978, 57).

3.1 LEV VYGOTSKY

Human psychology has been an object of study for some time. However, the specifics of child development have not been extensively researched until the early twentieth century, when Jean Piaget and Lev Vygotsky developed their distinctive and ground-braking theories. They are considered to be the founding fathers of what has now become an extensive academic field and their research remains omnipresent in today’s developmental psychology (see also chapter three). The emphasis that psychologist Lev Vygotsky puts on the role of communication and social interaction in the development of children is still the basis of many educational theories and practices (e.g. *Ontwikkelingsgericht Onderwijs*, or Developmental Education, Oers 2012). His theory is mainly centred around a general view on child development and the child is explicitly seen as part of a wider social context. Specific didactic practices in particular educational fields that may follow from this approach are less prominent in his studies. Although the research carried out by Vygotsky and his followers is very different in aim and background from the CiM project, it would be wrong to conclude that the two are mutually exclusive.

One of the key characteristics of Vygotsky’s theory is the role attributed to language. For Vygotsky, language is not merely a medium that expresses thought, but thought actually becomes intertwined with language in early childhood (inner speech). “The relation of thought to word is not a thing but a process, a continual movement back and forth from thought to word and from word to thought. In that process the relation of thought to word undergoes changes which themselves may be regarded as development in the functional sense. Thought is not merely expressed in words; it comes into existence through them” (Vygotsky, Hanfmann, and Vakar 1965, 125). This internalization drives development rather than following from it. Language naturally also plays a large role in the communication between children and adults which is so central to the ideas of Vygotsky. In contrast to Piaget’s theory where cognitive development follows from the child’s own exploration of the world, Vygotsky argues that the co-construction of the child’s knowledge and its social and cultural environment is leading. In terms of Van Heusden, one could say that conceptualization lies at the heart of the Vygotskian views. “Words play a central part not only in the development of thought but in the historical growth of consciousness as a whole. A word is

a microcosm of human consciousness” (153).

In more recent years, the views of Vygotsky have been elaborated upon by the neo-Vygotskians. One of their most important adaptations is the adding of Piaget’s views on the role of active exploration in development to Vygotsky’s original ideas. This has led to what is known as the ‘activity theory’ (Karpov 2005, 73). The main idea behind this theory is that in every developmental phase and culture, there is one leading activity that is driven by a leading motive. However, the child is not yet able to perform this activity by itself and requires assistance from an adult. This interaction between child and adult is known as ‘joint activity’ (El’Konin 2001). Through this ‘mediation’ of joint activity, the child learns to master new psychological tools which subsequently lead to new mental processes. These mental processes will eventually allow the child to perform the leading activity by itself, which will in turn cause a new leading activity to emerge. In this cycle, Vygotsky’s views on the importance of mediation by an adult and Piaget’s research on activity as a key feature in child development are combined.

The activity theory describes what the leading activities of children are, at a certain age. For children between three and six this is play. In contrast to Piaget, who argued that children engage in play to escape from rules and social pressure, Vygotsky claimed the opposite. He indicated that children from three years onwards are very interested in social relations and want to be part of the adult world. Because they cannot yet be part of this world, they start to imitate it. This imitation phase closely resembles the perception phase of culture, for in both cases, the direct perception of the world serves as the main determinant for thought and behaviour. This type of imitative play slowly develops into pretend or socio-dramatic play, and imagination is used to create a fantasy world. The direct perception of how things are is now slowly abandoned in favour of a new, manipulated image of oneself or the world in general. This marks the beginning of what I would refer to as the skill of imagination. One could thus say that play is also an intermediate phase between the stage of perception and that of imagination (Bugrimenko 2001, 34).

Although research has shown the importance of play for emotional, intellectual and cognitive development, social competence, and self-regulation (Karpov 2005, 160), ninety per cent of U.S. teachers do not regard play as important for children’s learning (142). From the perspective of Vygotsky and the neo-Vygotskians, this is surprising to say the least, since engagement in play as a leading activity prepares children for a new dominant activity, that of ‘learning at school’. Between the ages of six and twelve, children become dissatisfied with their pseudo-access to the adult world and want to go to school. At school, they need to replace their spontaneous concepts (those concepts that they have formed on the basis of their own experience) by scientific concepts. These concepts also require imaginative skills, for they do not rely on direct perception or the child’s own experience. Within the school environment, the child learns how to use these new concepts (e.g. inductive and deductive reasoning) and will then later on be able to apply them outside the school

environment as well. The self-regulation that the child has learned through play can help it adjust to an environment of rules and regulations (165). This transition in leading activities corresponds with the dominance shift from self-imagination to self-conceptualization in middle childhood as we shall see in chapter three.

The activity theory seems to fit well within the idea of age-specific skills and modes of thinking. It provides an explanation for the question why certain types of activities may be dominant at a given age and how they change over time and with development. Insight into this mechanism can contribute considerably to Van Heusden's theory of culture and thus to the improvement of cultural education. The importance of a certain skill (e.g. imagination) for the development of the next one (e.g. conceptualization) is emphasized by both theories. This insight may provide an important and interesting new outlook on cultural education practice. The views of Vygotsky and the neo-Vygotskians will be outlined further in chapter three.

3.2 JEROME BRUNER

The role of communication and social relations in a child's development is also emphasized by psychologist Jerome Bruner. His theories are influenced by both Vygotsky and Piaget. The focus on the notion of narrative is one of his main contributions to the understanding of child development as well as his theories on the different modes of representation children use. Like Vygotsky he stresses the importance of language in cognitive development.

Bruner distinguishes between two modes of cognitive functioning which are irreducible to each other: the paradigmatic mode and the narrative mode (Bruner 2006b; Bruner 1985). The paradigmatic or logico-scientific mode aims at scientific truth and operates on the basis of observable facts and hypotheses (2006b, 117). The narrative mode on the other hand is not focused on universal truths but aims to produce value-laden 'good stories'. Narratives function as myths and as templates and are part of all cultures (p. 118). The paradigmatic mode of thinking is more abstract and would fit into the analytical quarter of the cultural skills model (see p. 37). The narrative fits better into the right half, although it has a much stronger linguistic foundation than the cultural skill of imagination necessitates. One would tend to locate it halfway between imagination and conceptualization (language).

According to Bruner, cognitive growth occurs from the outside in, as well as from the inside out. Like the theory of cultural cognition, Bruner underlines the techniques that humans use to represent their environment in order to make sense of it. There are three ways in which humans construct mental models of the world: through action, through imagery and through language (2006a, 67). According to Bruner, we think and move more according to techniques than on the basis of nervous wiring. For representation, we rely on those tools that have been shaped by evolution: "...man can be described as a species that has

become specialized by the use of technological implements. His selection and survival have depended upon a morphology and set of capacities that could be linked with the alloplastic devices that have made his later evolution possible” (68). The value and benefits of technology and artefacts for the development of children will be further explored in chapter four.

Although children can perform many adult acts, adults are capable of combining processes. Higher skills require the combination of operations. As we mature, we learn to act in our environment using patterned acts. With development, one learns more and more patterns. In order to benefit from the regularity of the recurrent structure of our environment, it has to be represented: “...memory is not storage of past experience, but rather the retrieval of what is relevant in some usable form” (ibid.). An experience must thus be coded and processed: this is called representation. There are three modes of representation, each depending on the previous one, but all remaining present throughout life:

- ▶ Enactive representation: reacting through the appropriate motor response
- ▶ Iconic representation: percepts and images are selected and organized. The images stand for a perceptual event
- ▶ Symbolic representation: arbitrary and remote design features (e.g. language).

Enactive representation is already used by very young children and refers to the way our motor systems respond to our environment. Many physical acts that we perform (e.g. cycling or driving) are based on this type of representation where our bodies know what to do without requiring to construct an image of those events (69).

Iconic representation does require the use of images that ‘stand for’ the object represented. The object and the image are still closely connected in iconic representation and are not the type of arbitrary symbols characteristic of language. Studies show that children who use iconic representation focus most on spatial-qualitative features when ordering objects rather than on organizing principles (73). Although they do use language to complete ordering tasks, this type of language is insufficient for ordering based on principles. This means that these children can reproduce acts, but are not capable of thinking of new structures using the same rule. Iconic representation is thus very much bound to perceptual information. It differs however from earlier stages because it is not directly connected to an action. While perceptive representation dominates, it is very difficult to use higher order concepts. Language is a way to free representation from this type of immediacy (87).²⁶

Like Van Heusden, Bruner demonstrates how humans can use representation to actively engage in and transform their environment, through play and language. Humans can literally change their habitat through culture. Some animals, such as chimpanzees, have been shown to use tools too and engage in types of play. It is however not always clear if these types of play are the same types of play seen in humans, especially when it comes to pretend play.

²⁶ For more on iconic thinking in young children, see chapter three.

While the human child is constantly experimenting with language, the chimpanzee is perceptually tied to action (151). “To summarize, then, though language springs from and aids action, it quickly becomes self-contained and free of the context of action. It is a device, moreover, that frees its possessor from the immediacy of the environment not only by pre-emption of attention during language use but by its capacity to direct attention toward those aspects of the environment that are singled out by language” (152). Because language in humans can be decontextualized, it is a prime medium for passing on knowledge. Written language has enhanced this function even more (153).

Like Vygotsky, Bruner also emphasizes the importance of the social environment of the child and the role of language. He uses a similar line of thought to Van Heusden, starting from the human interaction with the environment. He too indicates a cumulative transition which moves representation increasingly further away from direct perception. Enactive representation is a bodily type of acting in one’s environment which does not make use of a sign which is detached from reality. Iconic representation is the intermediate phase in which an image is placed between perception and meaning. Symbolic understanding then develops when the child is able to use arbitrary signs. In language and symbolic play, this uniquely human ability is nurtured as the child learns about the nature of symbols and their relationship to reality. Like the framework of cultural cognition, Bruner argues that each of these types of representation requires the previous one for development but once in existence they remain present throughout life. The same goes for the four basic skills which develop in succession but remain in use even when they have been succeeded by more advanced cognitive modes.

What is obviously lacking from these three types of representation is the skill of analysis. This is surprising, especially in the light of Bruner’s comments on the role of technology as prime locus of cognitive development. Donald argues that the interplay between technological advancement and cognition is especially relevant when it comes to analysis. The medium of graphic signs, rather than our neuronal wiring, has generated our theoretical abilities (1991). Although analysis makes use of symbols, just as language does, it is a different type of interacting with one’s environment. When we analyze, we become aware of the patterns and structures that govern us and our environment and in doing so we overcome the conventions and arbitrariness of symbolic systems. Bruner does not explicitly distinguish this type of understanding. However, his theory about the role of language and narrative is still very interesting from the perspective of child development and cultural education. By highlighting the role of narrative in play and language one can grasp more easily how the transition from the imaginative skill to that of conceptualization may be made by a child²⁷. It also explains the dominance of play or language related activities of children. When looking at these acts as a means to get acquainted with the types of symbols and conventions that are so preva-

²⁷ This transition is further explored in chapter four.

lent in our type of society, they suddenly obtain a very profound meaning and function. Naturally, this then has important implications for the role of these types of activities in (cultural) education.

What is also surprisingly absent in Bruner's analysis is the role of self-imagination and of art in our thinking. Bruner seems very focused on the literary side of culture and jumps from play to symbols, seemingly overlooking the skill of imagination as an autonomous cognitive mode. Even his writing reflects the dominance of conceptual ways of thinking. His theory is very much built around opposites such as the paradigmatic versus the narrative, or the iconic versus symbolic thinking. This type of reasoning coincides with a conceptual outlook on the world in which things are labelled in an often dichotomous fashion. This is very different from Van Heusden's theory of cultural cognition that is more concerned with the interrelations between the four media and skills and their co-dependence. Also, as we shall see in chapters three and four, a language-oriented view on childhood cognition may overlook some key characteristics of the way children use media. Bruner's views on the use of tools and technology are, however, thought-provoking and give us some clues on how to understand the interaction between the media of culture and human (meta) cognitive skills.



§4 ANALYSIS

“We suggest that the equilibrium between assimilation and accommodation which is brought about by logico-mathematical structures constitutes a state –mobile and dynamic and, at the same time, stable– aspired to unsuccessfully by the succession of forms, at least where behavior forms are concerned, throughout the course of the evolution of organized creatures. Whereas this evolution is characterized by an uninterrupted succession of disequilibria and of re-equilibrations, logico-mathematical structures do, in fact, attain permanent equilibration despite the constantly renewed constructions which characterize their own evolution” (Piaget 1977b, 849).

4.1 JEAN PIAGET

Jean Piaget is probably one of the most influential developmental psychologists of our time. His theories have been widely adopted in various fields of knowledge. Piaget’s model offers an explanation of how cognitive structures process information through processes of assimilation and accommodation and shows a development of these structures in a stage-like succession.

In early development, there is a shift from a stage in which the objects are centred around the self (without there being a real sense of self, however) and a stage in which the self is centred in a more or less stable world independent from personal activity (Piaget 1977a, 273). This development is made possible by an increase in intelligence. “Intelligence progresses from a state in which accommodation to the environment is undifferentiated from the assimilation of things to the subject’s schemata to a state in which the accommodation of multiple schemata is distinguished from their respective and reciprocal assimilation” (273). Babies confuse the external world with the self. The next stage is characterized by a disintegration of the self from the world. The self is seen as a cause amongst other causes. Accommodation and assimilation follow from a chaotic undifferentiation and thus always go hand in hand.

Assimilation and accommodation engage in an ongoing dynamic. “The more the schemata are differentiated, the smaller the gap between the new and the familiar becomes, so that novelty, instead of constituting an annoyance avoided by the subject, becomes a problem and invites searching” (275). Assimilation and accommodation have a mutually dependent structure:

“On the one hand, the reciprocal assimilation of schemata and the multiple accommodations which stem from them favour their differentiation and consequently their accommodation; on the other hand, the accommodation to novelties is extended sooner or later into assimilation, because, interest in the new being simultaneously the

function of resemblances and of differences in relation to the familiar, it is a matter of conserving new acquisitions and of reconciling them with the old ones”(275).

According to Piaget, there is a difference between knowledge of the external world, which is immediately utilized, and knowledge of the self which is restricted by the knowledge of interaction between the self and the external world (e.g. knowing the difference between the two). All knowledge is both accommodation to the object and assimilation to the subject (276). At the age of eighteen to twenty-four months, something important happens: the ability to represent something develops (which marks the end of the sensory-motor period).

For infants, signifier and signified are one and the same thing (Piaget and Inhelder 1977b, 489). Symbolic play is the first sign of a separation between signifier and signified and is unknown at the sensory-motor level. The drawing of graphic images bridges symbolic play and mental images (which rarely occurs before the age of two and a half years) (490). The mental image can be regarded as an internalized imitation. Later, the child can verbalize something not present at the time. The child also uses symbols in symbolic play. Symbolic play can be seen as an extreme form of assimilating the external world to the self (Piaget 1977a, 280). “These symbols are borrowed from imitation as instruments, but not used to accurately picture external reality. Rather, imitation serves as a means of evocation to achieve playful assimilation. Thus, symbolic play is not merely an assimilation of reality to the self, as is play in general, but an assimilation made possible (and reinforced) by symbolic ‘language’ that is developed by the self and is capable of being modified according to its needs” (Piaget and Inhelder 1977b, 493). Symbolic play is usually displayed between three and six years of age. The development of drawing displays similar cognitive mechanisms: “Drawing is a form of the semiotic function which should be considered as being halfway between symbolic play and the mental image. It is like symbolic play and the mental image in its effort at imitating the real” (495). According to Piaget, the development of drawing is a stage-like transition towards realism.

Between the ages of seven to eleven, a child can only apply logic to concrete and observable objects. It cannot think about something beyond the empirically given (1977a, 443). This is also displayed in the type of language the child uses, for the development of language is structured by the logic of the child. The coordination of actions that develops (through stages) structures (verbal) thought until the logico-mathematical operations stage (1977b, 507). The logico-operations stage, which starts around the ages of eleven to fourteen marks the beginning of analytical thinking. The adolescent can make hypotheses and build theories. This kind of analytical thinking is not seen in children, who engage only in spontaneous thought which may be more or less systematic (1977a, 437). This is also due to the lack of self-reflection in children: “...the child has no powers of reflection- i.e., no second-order thoughts which deal critically with his own thinking. No theory can be built without such reflection” (ibid.). Piaget argues that the kind of intellectual abilities required

for analytical thinking are spontaneously developed by children at the beginning of adolescence and need to be stimulated by education (Piaget 1977c, 705).

If analysis is so directly tied to self-awareness, this would imply that young children have no means to reflect on their culture and thus cultural education would be a pointless exercise in primary schools. This is one of the major differences between Piaget and Van Heusden. In the latter, all four basic skills can be applied recursively to reflect on one's cultural behaviour or that of others. It does not promote analysis or self-analysis as the endpoint of development or as superior to the other skills. Piaget's stage theory offers an interesting model in which different cognitive modes follow out of each other; however, it presupposes a development in which one skill replaces another skill. The newly developed skill is regarded as more advanced and therefore more suitable for processing information. If the development of skills does have a hierarchical structure, this would have significant consequences for the way we regard the culture of children or other societies in which analysis is not the dominant mode of cognition. From the viewpoint of Van Heusden's cultural cognition theory this would not only be a dangerous reasoning, but also an unjust one. The evolutionary context of the four skills shows that although the skills require the others to arise, they do not fully replace each other. Moreover, the first developing skills remain pervasive in our thinking and acting and are only supplemented by more complex or advanced modes. If we follow Piaget's line of reasoning, this would imply that for example sensory-motor skills are still applied at the logico-mathematical stage. The rigid succession of skills that Piaget outlines and the connection of the analytical stage to self-consciousness are thus not compatible with the cultural cognition framework. It is conceivable that Piaget's biological background resonates in the highly analytical and stage-like perspective on development he proposes. His work is full of diagrams, models and tables and he presents his data with a theoretical precision that is very unlike the work of the previous authors I have presented here. Piaget's theory and style of argument is almost exclusively conceptual and analytical. This is interesting, for like Bruner, there seems to be a parallel between his mode of thinking and the object of contemplation. In short, he appears to analytically highlight the analytical aspects of development and does not seem equally sensitive to the perceptive or imaginative aspects of childhood nor does he adopt a more subjective and personal style of interpretation like for example Egan does. The strong focus on abstract cognition may have limited his perspective on children.

Despite the differences between Piaget's model and that of Van Heusden, there still remain many similarities. The main one is the division of assimilation and accommodation as the two ways of generating meaning, which has been borrowed from the work of Piaget and incorporated into the theory of Van Heusden. In the framework of cultural cognition, accommodation can be found on the left side of the model (it includes perception and analysis) and assimilation belongs on the right side (incorporating imagination and conceptualization). This distinction is crucial for it signifies that some skills are used to adapt one's mental

modes to the environment and that others aim at making the environment fit one's thoughts. Piaget also indicates how assimilation and accommodation mutually influence each other and thus enhance development. The role of the environment and its interaction with our cognition is vital if we want to better understand our cultural behaviour and that of children. It can serve as a thought-provoking division of different types of thinking that may aid our understanding of how cultural behaviour develops and how they can be characterized.



§5 THE ODD ONE OUT

“To follow the learning way is to embrace fully the life force of learning in every one of us. The recursive, ongoing spiraling process of self-making makes each living moment an opportunity for new beginnings and creations, fueling the awareness of ourselves as learning beings. Knowing that we are born to learn is at the core of a learning self-identity” (Kolb and Kolb 2009, 312-2).

5.1 DAVID KOLB

The learning theory of educationalist David Kolb could not be incorporated into one of the previous sections. This is because learning styles and cognitive modes are not synonymous. This makes it difficult to link

Kolb’s theory to one or more of the basic skills of culture alone. However, Kolb’s theory is a widely applied model in the educational field and therefore should not be ignored in this comparison. In the Learning Style Inventory (LSI) he has developed outlines four basic types of ‘learners’. These categories denote how people learn and approach problems. This theory, although partially based on developmental psychology, is not necessarily tied to children or even education. Since the publication of the main book about this theory called *Experiential Learning* in 1984, people have applied the LSI to students, businesses, children and organizational structures (see e.g. Boyatzis and Kolb 1995; Joy and Kolb 2009; Raschick, Maypole, and Day 1998). Because of the wide range of applications, it is not surprising that the LSI has also found its way into cultural education. One example is the book *De leertheorie van David Kolb in het museum (The learning style theory of David Kolb in the museum)*. This book is meant to serve as a guideline for curators, directors and educators in museums to help them design exhibitions that appeal to all types of visitors. Because of the continuing appeal of the LSI, I would like to study its possible relation to the cultural cognition framework.

David Kolb was inspired by three influential theorists: Dewey, Piaget and Lewin. Lewin developed a model of action research and laboratory training (fig.1). This model con-

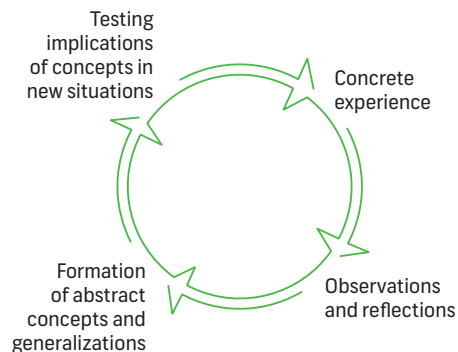


fig. 1. Lewin’s model of action research

sists of a learning cycle. The first step in this cycle is a 'here-and-now' experience which is followed by observations and collection of data. These are then assimilated into an abstract theory which is tested in a new situation. This again leads to a concrete experience. "This information feedback provides the basis for a continuous process of goal-directed action and evaluation of the consequences of that action" (Kolb 1984, 22).

Dewey's model is strikingly similar to that of Lewin. However, the model is not so much circular, but more spiral-shaped (fig. 2). Dewey argues that experiences create new impulses, and thus lead to development. Learning is seen as a dialectic process where both experience versus concepts and action versus observation have their place. By putting these oppositions into a feedback loop, just as Lewin does, Dewey shows how direct experience and higher order functions interact in the learning process.

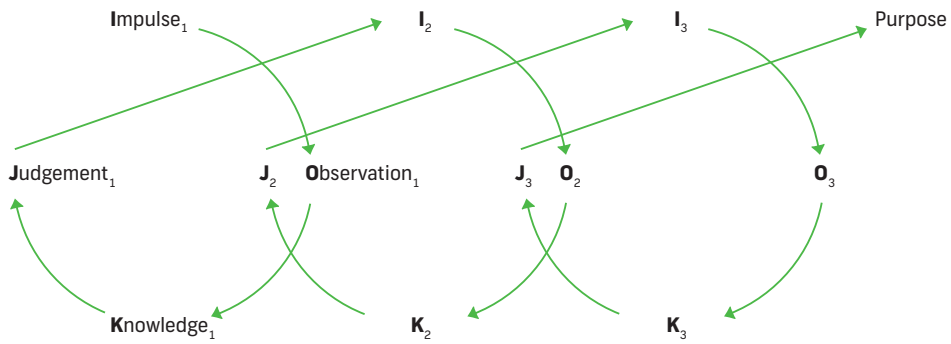


fig. 2 Dewey's model of experiential learning (23)

Piaget is also important in Kolb's theory. As noted before, one of the main oppositions in Piaget's developmental theory is that of accommodation versus assimilation. "In Piaget's terms, the key to learning lies in the mutual interaction of the process of accommodation of concepts or schemas to experience in the world and the process of assimilation of events and experiences from the world into existing concepts and schemas" (23). These assimilation and accommodation processes allow for a new style of reasoning to surface. Piaget is best-known for his stage theory in which he distinguishes different developmental stages as discussed above. These stages can also be organized into a circular model with concrete phenomenalism and abstract constructionism at both ends of the vertical axis and active egocentrism and internalized reflection on the extremes of the horizontal axis.

Kolb's LSI is a mixture of these three theoretical traditions that are combined into a diagram (fig. 3). The three main characteristics of the experiential learning theory state firstly that learning is a process, which means that ideas are not fixed and that thought is always altered by experience. Because learning is considered a process, it cannot be defined by out-

comes alone. Learning is also continuous; there is interplay between expectation and experience, which implies that all learning is also relearning. Education is no exception to this and old ideas need to be remodelled (28). The last characteristic is that learning refers to the resolution of opposing ways of dealing with the world. There is always a conflict between the four modes of thought as presented in the model. "...complexity and the integration of dialectic conflicts among the adaptive modes are the hallmarks of true creativity and growth" (31).

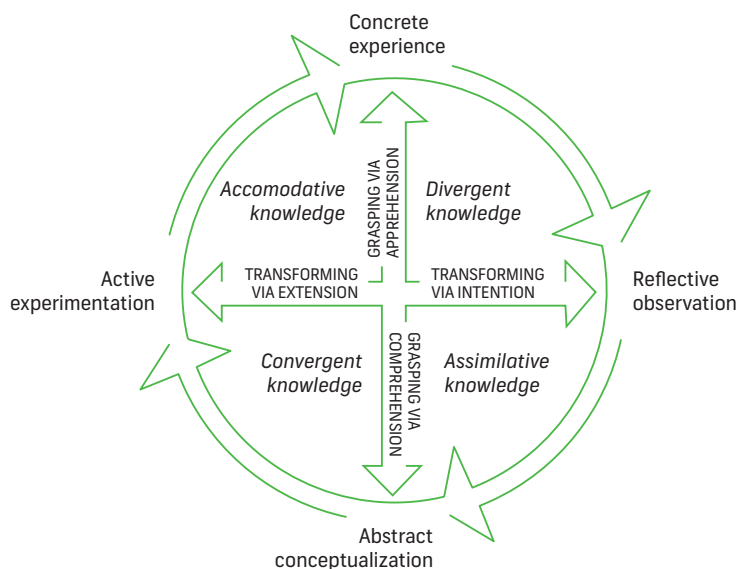


fig. 3. Kolb's Learning Style Inventory (www.emeraldinsight.com)

Apart from these three main characteristics, the experiential learning theory presupposes a transaction between social (objective accumulation of human cultural experience) and personal knowledge (individual life experience). Furthermore, learning is governed by an interaction of the individual and the environment. These assumptions as well as the three characteristics mentioned above coincide well with the theory of cultural cognition. Like Kolb, Van Heusden stresses the importance of social or shared knowledge and regards cultural cognition as a process that results from a confrontation between the person and the environment (2009a). Judging by the basic presuppositions of the two theories, a combination of the LSI and Van Heusden's cultural cognition theory thus appears to be feasible. However, when taking a closer look at the model that Kolb designed (fig. 3) and became so well known for, there seem to be some serious discrepancies between Kolb's learning styles and the basic skills of culture.

The two main axes represent, respectively, the opposition between intention and extension and comprehension versus apprehension. The combination of these lead to the four main types of knowledge: accommodative, divergent, assimilative and convergent.

As Kolb himself notes: experiential learning suggests “...a typology of different knowledge systems that results from the way the dialectic conflicts between adaptive modes of concrete experience and abstract conceptualization and the modes of active experimentation and reflective observation are characteristically resolved in different fields of inquiry” (Kolb 1984, 37-8). The distinction between accommodation and assimilation can also be found in Van Heusden’s model. The basic skills of perception and analysis are examples of accommodation while imagination and conceptualisation are assimilative skills. This implies that, if we wanted to combine the skills model and Kolb’s cycle, perception and analysis should be located where ‘concrete experience’ and ‘active experimentation’ are found in the model, while imagination and conceptualization should be positioned at the ‘reflective observation’ and ‘abstract conceptualization’ angle.

In a more recent article, Kolb outlines the characteristics of the four learning styles (Kolb and Kolb 2009). Like many researchers have done before him, he simplifies the styles and refers to them as the experiencing, reflecting, thinking and acting style. These refer to concrete experience (CE), reflective observation (RO), abstract conceptualization (AC) and active experimentation (AE). A combination of two of these leaning styles results in four more styles: the diverging style (CE and RO), the assimilating style (AC and RO), the converging style (AC and AE) and the accommodating style (CE and AE). A summary of the main characteristics of these styles can be made as following:

- ▶ Experiencing style: emphasis on feeling while reflecting and acting. People with this style are good with people, engage in new experiences easily while also stepping back and reflecting. They are sometimes disorganized and lack plans and theories.
- ▶ Reflecting style: emphasis on reflection while balancing acting and feeling. People with this style have the ability to put creative ideas into a logical form. They think mainly about feelings and not actions and sometimes fail to put ideas into action.
- ▶ Thinking style: emphasis on thinking while balancing acting and reflecting. People with this style have the ability to inductively develop a concept and deductively test it in real life. They like models that can be tested and are sometimes unemotional.
- ▶ Acting style: emphasis on acting while balancing thinking and feeling. People with this style have the ability to solve problems by technical analysis. They learn best by hands-on experience but are sometimes too focused on their ideas because of a lack of reflection.
- ▶ Diverging style: learn through feeling and reflecting. People with this style like exploring many different points of view of a concrete situation. They are observers that like working in groups.
- ▶ Assimilating style: learn though thinking and reflecting. People with this style like to group information into a logical form. Logic is more important than practicality. They do not make quick decisions.

- ▶ Converging style: learn through thinking and acting. People with this style enjoy finding practical uses for theories and ideas. Technical tasks are preferred over social issues.
- ▶ Accommodating style: learning through acting and feeling. People with this style can cope well in ambiguous situations and learn from hands-on experience. They like to work with others and rely on intuition.
- ▶ Balancing style: balance abstract-concrete and action-reflection. People with this style are good at seeing different perspectives and dealing with different styles. They have trouble making decisions. They can adopt the style that a certain task requires (316-8).

Looking at these descriptions, none of them seems directly tied to one of the basic skills. There are some that appear to be more connected to perception (such as the experiencing style and accommodating style) or conceptualization (the thinking style and assimilating style), but none of them is exclusively tied to that one basic skill alone. The main problem could be the combination of Piaget's developmental theory with Dewey and Levin's learning models. The latter two describe a circular process of feedback in which acting and reflecting are integral parts, whereas Piaget points out a developmental succession of different stages in which reflection becomes increasingly dominant. According to Kolb, one can have one well-developed style, without requiring the others (Kolb 1984,138). He does argue that in the later stages of life integration of all four styles is preferred, but that in our society, specialization is often encouraged²⁸. In the learning cycles of Lewin and Dewey, an isolation like that of one style would hardly be possible, because each step of the cycle is enabled by the previous one. Their theories explain how knowledge can be acquired through a feedback loop which allows for development. By connecting learning styles to each quadrant it seems as if not all steps are necessary. This could possibly be the result of combining a developmental theory which addresses a process that takes place over the course of several years and the learning cycles that have a much more diverse and flexible timespan.

A further problem is the lack of differentiation between the natural and cultural aspects of a style. In the descriptions of the four (or eight) styles, both natural and cultural features of cognition are mentioned, without explaining the relationship between them. Moreover, in the case of cultural cognition, the process of integrating experience, memory and meaning is vital to discern between the learning styles. This aspect is not, however, addressed by Kolb, which makes the learning styles difficult to compare to the basic skills of cultural cognition.

The last, but probably most important difficulty with the LSI is the distinction between reflecting and acting. In Kolb's theory, these can be separated and some learning styles seem to exist without reflection (e.g. the acting style). This would point to a difference between what Van Heusden calls cultural

²⁸ Kolb distinguishes four main developmental steps in the path towards increasing complexity in the four skills. The first step is acquisition, next is specialization and the highest level is integration (Kolb 1984,141).

cognition (culture in general) and metacognition (cultural consciousness) (2009b). However, when studying the definitions of the learning styles, it seems that a more suitable comparison would be the difference between production and reception. According to Van Heusden's theory of cultural cognition, all cultural cognition is active, for it always involves bridging memory and actuality. Nevertheless, this process can take place through production or reception. Both of these processes can be reflective or non-reflective. If we replaced the active experimentation-reflective observation axis with a productive-receptive one, many of the features of LSI would fit much better into the framework of cultural cognition. If we maintained the difference between concrete and abstract modes of thought, this would mean that the skills of perception and imagination would fit into the upper half of the circle and conceptualization and analysis into the bottom half. Since reception and production are not directly tied to a skill, the circle would become divided in half, instead of in quarters. The various research that has been carried out to fit for example academic disciplines into Kolb's model (e.g. Kolb 1984, 126-7) would make more sense from Van Heusden's perspective with this alteration in mind.

All in all the LSI theory and Van Heusden's cultural cognition theory are not a likely combination. They differ in many respects that are difficult to reconcile. One of the reasons for this mismatch may be the combination of the works of Piaget and those of Dewey and Lewin. The different natures of these theories seem to cause friction. However, LSI does share some basic assumptions with the theory of cultural cognition about the relationship between person and environment and the process of learning. Nonetheless, Van Heusden's cultural cognition theory is not a theory about learning. This makes a direct comparison difficult. The learning styles are not directly relatable to the basic skills, although some seem to share a few characteristics. This is probably because of a shared distinction between concrete modes of thought and abstract ones and the influence of Piaget's accommodation and assimilation on both views. The main discrepancy is caused by the horizontal axis in the experiential learning cycle. The separation between active and reflective in this sense does not work from a cultural cognitive perspective. A possibly more fruitful distinction would be a differentiation between production and reception. This approach would make the learning cycle more appealing for cultural cognition. It could provide an interesting point of view on the relationship between production and reception in the learning process. The link between cultural cognition and metacognition can possibly also be studied from this perspective. However, Dewey and Lewin's theories alone may prove to be more suitable for this than the adaptations of Kolb integrating Piaget as well.



DIFFERENT PERSPECTIVES

The theories I have discussed in this chapter all fit some aspects of the cultural cognition theory. They all highlight different aspects of cultural cognition: Dewey, Egan, Parsons and Gardner focus on the iconic, imaginative and perceptive side of consciousness, while Bruner, Vygotsky and Piaget have a more conceptual and analytical understanding of behaviour and cognition. The main difference between these theories and the theory of culture of Van Heusden is probably their nature and scope. The cultural cognition framework is an overarching model that is not focused on propagating a specific view on culture, but more a way of integrating different phenomena that belong to the cultural spectrum. In this sense, it is not surprising that all of the theories mentioned above fit into one or more corners of the skill and/or media scheme. This highlights the integrative potential that the cultural cognition theory has. It does not need to replace any of the existing views but can strengthen these by combining them in a theoretical structure.

The only 'theory' that poses a serious difficulty when it comes to integrating these different notions is Kolb's work. As I have argued, this may be due to a questionable combination of different theories that seems to cause a logical obstacle. However, Kolb's theory is explicitly designed as a learning theory and not a theory about cognition in general, which already makes any direct comparison fabricated and inconsistent.

A striking phenomenon that emerged from this analysis is the correlation between the aspect of cultural behaviour that is emphasized in the different analyses and the nature of the analysis itself. Dewey's work is very poetic and full of metaphors. Almost all of his statements are accompanied by illustrations and scenes of daily life. When reading Dewey's *Art as Experience* one is taken on a journey through his own experience of the world rather than on a trip to a laboratory. The study of the role of experience and imagination in art and cognition are thus matched by an imaginative style of writing. Egan, Garner and Parsons too are very different in some respects, but do share common goals: they all highlight the role of the imagination. Egan and Gardner especially stress the importance of different modes of thinking that may not all be literate or logical. They also share an accessible style of writing in which appealing anecdotes of classrooms and children are presented. The empirical basis of these theories is less evident and certainly not as prominent as in the studies of for example Piaget. The more imaginative approach has a number of downsides in that it raises some questions about methods and scientific bases. The upside of this is that it seems to embrace a more divergent style of understanding cognition which results (especially in the case of Egan and Gardner) in a very new and outside-the-box manner of looking at child development, both in content as well as in approach.

Bruner, Vygotsky and Piaget are much more based in the lower half of the cultural skills model. They all start from a more conceptual understanding of child development and culture and present their work in a more straight-forward manner than the authors mentioned above. Piaget especially has mastered the ability to describe development in a math-

emational and highly theoretical manner, leaving no room for discussion or subjectivity. The result is a very clear and thus also attractive stage model that presents child development as a straightforward enterprise of succeeding stages, all leading up to the most complex and advanced skill: that of analysis. Bruner and Vygotsky highlight the importance of language and narrative and the social context in which development occurs. They too seem to adopt the style of reasoning they emphasize. The many dichotomies in especially Bruner's texts reveal a conceptual perspective which could explain the lack of concern for the arts and imagination in his theory.

The authors' background and style and their different views on culture and child development appear to coincide. Van Heusden's cultural framework may thus not only help us to better understand how these views may complement each other, but also explain the differences between them. A specific style of reasoning seemingly affects the object of analysis as well. A model that wishes to take a true meta-perspective thus needs to overcome this bias. This is not only a challenge for education, or cultural education in particular, but for science in general. Being aware of all these different views and how they may benefit from each other, what they contribute specifically to understanding which aspect of culture thus means taking a bird-eye view.

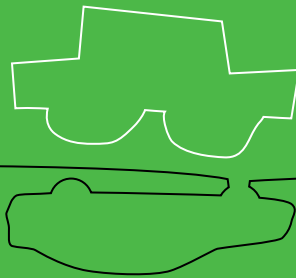


PART TWO

CHAPTER 3: *Self-imagination in childhood
and the development of
metacognitive skills*

CHAPTER 4: *Artefacts in childhood and the
development of media skills*

Development



Self-imagination in childhood and the development of metacognitive skills

INTRODUCTION

In chapter one, we established that Van Heusden's framework could be used to target the content, connection and cohesion of cultural education. The content has to do with the topic; it addresses the particular aspect of culture that the pupils are reflecting on. Cohesion entails questioning how the cultural education curriculum fits into the rest of the school activities, both horizontally (across different subjects) and vertically (across different school years). The connection, however, is about how cultural education can relate to the culture and the *development* of the child. This chapter assesses which cognitive developments in children aged four to ten are relevant to cultural education and can thus be seen as an elaboration or specification of Van Heusden's theory for this specific age group.

In chapter one we ascertained that cultural education is education in metacognition. This metacognition or cultural consciousness is however not static or fixed and develops as the child matures. We thus need to find out what the metacognition of the young child looks like and which mental tools it possesses to reflect on culture. What we understand as the 'connection' of cultural education consists of two intertwined, but theoretically discernible entities: the media and the skills. The media are the means by which metacognition is expressed. They can be gestures, crafted things, words, diagrams. The skills are the semiotic-cognitive devices that allow us to bridge the gap between the memory and the actuality of our cultural environment by means of our cultural consciousness or metacognition. The media as used by the child between ages four to ten will be discussed in chapter four. In this chapter the focus lies on the development of the metacognitive skills of the young child.

Much has been written about child development in the last decades. It is not my intention to add to the extensive literature about how children think, feel and act. Rather, I aim to use Van Heusden's framework as a looking glass to explore what has been researched by others. In doing so, I hope to shed new light on the development of the cultural, viz. the metacognitive abilities of children. The foundations of today's developmental psychology have been shaped by Piaget and Vygotsky, so they will be the starting point of our journey²⁹. One of the key questions is when one can actually speak of cultural consciousness. Does it not start a long time before a child enters any type of classroom but when it is still lying in its crib, examining its hands and feet and smiling at its parents? Or not until the adolescent has developed a more sophisticated brain that can process complex analytical ways of thought? What does it mean to be culturally conscious? Furthermore, one may not think about the differences between boys and girls before they enter puberty, but does gender not play a role as well in how the young child acts and thinks?

In Van Heusden's theory, cultural consciousness or metacognition can be achieved by four types of skills: self-perception, self-imagination, self-conceptualization and self-analysis. Which of these types is typical for the way a child between the ages of four and ten reflects on culture and does this change as the child matures? It is also important to question why these skills are beneficial for the child and for its interaction with the world around it. Lastly, I will address what these insights from developmental psychology imply for cultural education. This overview is by no means representative of all there is to read and discover about childhood cognition. I merely hope to provide a glimpse into how the metacognitive skills of young children develop and the opportunities that may be opened up by looking at this development from a different point of view.



²⁹ See also chapter two for a comparison between Van Heusden, Vygotsky and Piaget.

I.I. PIAGET PIAGET

The founding fathers of developmental psychology are Jean Piaget and Lev Vygotsky. Even though they published their research many decades ago, their ideas, -albeit in a revised and updated form-, still permeate the

way we think about child development today. For Piaget, the driving force behind development is that of acting on the world. Knowledge is not acquired passively but attained through *active* interaction with the world (Vasta, Haith, and Miller 1999, 29). As a biologist and zoologist he regarded adaptation to the environment as one of the key functions that drive development. This adaptation can take the following two shapes: assimilation or accommodation. “Assimilation and accommodation are (...) the two poles of an interaction between the organism and the environment, which is the condition for all biological and intellectual operation, and such an interaction presupposes from the point of departure an equilibrium between the two tendencies of opposite poles” (Piaget 1977a, 274). A child’s cognitive structures (also called schemes) are used to either assimilate new experiences into existing knowledge or to accommodate the way we view the world to new encounters. There is interplay between accommodation and assimilation so that the child can shape its experience in such a way that it can survive (Vasta, Haith, and Miller 1999).

“The more the schemata are differentiated, the smaller the gap between the new and the familiar becomes, so that novelty, instead of constituting an annoyance avoided by the subject, becomes a problem and invites searching. Thereafter and to the same extent, assimilation and accommodation enter into relations of mutual dependence. On the one hand, the reciprocal assimilation of schemata and the multiple accommodations which stem from them favour their differentiation and consequently their accommodation; on the other hand, the accommodation to novelties is extended sooner or later into assimilation, because, interest in the new being simultaneously the function of resemblances and of differences in relation to the familiar, it is a matter of conserving new acquisitions and of reconciling them with the old ones ” (Piaget 1977a, 275).

Piaget’s theory is what is called a ‘stage theory’. Piaget argued that all children go through a series of developmental stages that are prefixed and that succeed each other as the child matures. Infancy is characterized by the sensory-motor period (0-2 years of life), childhood is split into a preoperational period (2-6 years) and the stage of concrete operations (ages 6-11). In adolescence people start to form formal operations (Vasta, Haith, and Miller 1999).

The stages lead up to an increasingly abstract and logical way of thinking. The first step in this process is the ability of the child to form representations in the preoperational phase. This is called the 'symbolic function' by Piaget. The use of symbols in the Piagetian sense is most clearly seen in play where children can make one thing stand for something else. In middle childhood one enters the concrete operational stage where children become more skilled at using logic to solve problems (*ibid.*). However, this logic is still of a limited type as the child can only apply logic to concrete and observable objects. It cannot think about something beyond the empirically given (Piaget 1977a, 443).

Despite the fact that young children can be very skilled and accomplished at solving their everyday problems, Piaget regarded the earlier stages of development mainly in terms of a lack of abstract and logical thinking (Vasta, Haith, and Miller 1999, 262). Since the publishing of Piaget's research, some difficulties with the theory have been discovered. Some studies found evidence for more domain specific developments rather than the domain general structure Piaget proposed. Also, training was proved to increase the performance on a number of tasks and not all the stages appeared to be universal. People in some cultures do not reach the formal operation stage even in adulthood (Schneider and Bullock 2009, 173-4). In the years after Piaget, three lines of research were explored that had been previously neglected: intellectual competence in childhood, linguistic competence and social cognition. In the nineteen seventies and nineteen eighties, many neo-Piagetian theories were developed. The postulates of these theories were very similar:

- ▶ There are three or four levels of structure in development
- ▶ Lower structures are included into the higher ones
- ▶ Each structure at each level is assembled independently, depending on the context and the child's experience with that context
- ▶ There are many individual differences between children
- ▶ There is a limit to the level that children can reach at a certain age
- ▶ Working memory plays a large role in determining the upper bound of children's functioning and the processing speed (Case and Bruchkowsky 1992, 11-2).

The first neo-Piagetian theories had two core notions: structural change is local, not general (depending on experience and context) and structural assembly is dependent on a general development constraint. This constraint determines the amount of information a child can process. Neo-Piagetian scholar Robbie Case argues that all executive control structures undergo a similar set of transformations and develop from sensory-motor to interrelational to dimensional and vectorial thought. "Structures at higher stages are assembled by the intercoordination of two well consolidated but qualitatively different structures from the previous stage" (Case and Bruchkowsky 1992, 34). This view largely corresponds to Mascolo and Fischer's studies (1998), who also see development as a set of four stages, each

of which has its own dominant style of representation. Each stage is further divided into sub-stages of sets, mappings and systems. Fischer and Mascolo tried to combine Piaget and Skinner's behaviourism. They also argue that the social environment is more important than Piaget thought. A skill according to Fischer and Mascolo is the ability to act in an organized way in a specific context. Action and environment thus interact. Consequently, the environment has to be supportive for a skill to be fully developed. If the environment is heterogeneous, the skills will also develop unevenly. The optimal level that the child can achieve on its own can be extended through scaffolding by a more skilled person. Skills therefore change depending on the environment. They also self-organize: they change when other skills change. "Although there is substantial variability in skills (and thus development) both between and within individuals, skills nonetheless develop in a step-by-step sequence of ten hierarchical levels, with these levels being grouped into three tiers (sensory-motor, representational, and abstract)" (Bjorklund 2005, 107).

According to Fischer, a child is not at a specific level at a specific age. The tiers refer to the optimal level a child can achieve. The skills are also dependent on the domain they are applied to and thus not all children will progress through the skills in the same way. Mascolo and Fischer's research shows that from 24 months onwards children have sensory motor reflex systems which allow for single representations (children can for example control categories of nice and mean by letting a doll hit another doll) (342). By age four, they can coordinate two or more single representations into a representational mapping, which is the ability to control relations among representations (making a doll act meanly or nicely in response to another doll's mean/nice action) (ibid.). Around the age of six or seven a child can then organize two mappings in a representational system, where a doll can be both mean and nice in response to the mean or nice behaviour of another doll. At ten to thirteen years of age, single abstractions which lie outside concrete actions, like responsibility or intentionality, are constructed. As knowledge structures become increasingly integrated, intellectual development can be seen as a cumulative learning process. The neo-Piagetian view also leaves more room for individual differences between children in comparison to Piaget's more rigid original stage theory.

"...children should show different patterns of development as a function of a variety of specific factors such as the culture or subculture in which they are raised, the particular problems they encounter within that culture most frequently, and the models the culture provides for successful problem solution. The theory also implies that children's development should vary as a function of a variety of specific motivational or socio-emotional factors, which have their effect by influencing the goals children pursue most frequently, and the methods they find most attractive for achieving those goals" (Case and Bruchkowsky 1992, 344).

1.2. VYGOTSKY

Lev Vygotsky's theory also starts from the human interaction with the environment. However, in this theory a major role in interaction is played by so-called 'psychological tools'. Humans systematically use tools and their mental processes are mediated by them. These tools can for example be language or symbols. "The development of higher mental processes of a human child, rather than being predetermined, is the result of his or her mastery of psychological tools that represent the history of human culture into which the child is born" (Karpov 2005). As children get older, they learn to internalize their previously external operations. "The internalization of socially rooted and historically developed activities is the distinguishing feature of human psychology, the basis of the qualitative leap from animal to human psychology. As yet, the barest outline of this process is known" (Karpov 2005, 57). In contrast to Piaget, who thought that the child learns by individual exploration of the environment, Vygotsky argues that the child learns from those who represent his or her culture. Higher mental processes thus start to develop out of interpersonal communication with adults. Mediation as such is thus a two-component process where the adult mediates the acquisition of new psychological tools. These are then internalized by the child and start to mediate its mental processes (ibid.).

Vygotsky distinguishes between two levels of development: the actual level of development (mental functions that are the result of completed developmental cycles) and the level of potential development, which is the use of a psychological tool with the help of an adult. The distance between these is called the zone of proximal development (ZPD). To assess the level of a child's mental development, not only the actual development has to be looked at, but also the ZPD. For Piaget, instruction should follow the mental maturation of the child. Vygotsky, however, regarded instruction as the major avenue for mediation in middle childhood. Accordingly, in this case instruction leads to development and not the other way around. "Thus, according to Vygotsky, instruction should be organized in accordance with general principles of mediation. It should lead development through targeting the level of potential development of the child's mental processes. Such instruction 'awakens and rouses to life those processes that are ready to develop, that are in the zone of proximal development'" (Karpov 2005, 39).

Another important feature of the Vygotskian theory is that of motives. Children need to be motivated in order to learn through instruction. As children mature and interact with others, they develop new motives. The motives of a child are characteristic of the cognition of the child at that specific stage. The social interaction and mediation with an adult play a key role in the development of new motives: "...the forces moving the child's development at one age or another inevitably lead to rejection and disruption of the base of development of the whole age, with internal necessity determining the annulment of the social situation of development, the termination of the given period of development, and a transition to the following, or higher age level" (Vygotsky in: Karpov 2005, 43). Although Vygotsky did

stress the importance of motives for cognitive development he did not elaborate on exactly how this process takes shape. The neo-Vygotskians have developed this idea further, combining the Piagetian idea of active learning and the Vygotskian views on mediation. They deduced that the leading activity for three to six-year olds is 'socio-dramatic play'. As the child grows older and masters more psychological tools, it will develop a new motive and 'learning at school' becomes the new leading activity in middle childhood.

The development of motives did not play a role in Piaget's theory. It does in the view of Vygotsky, but he did not explain the mechanism behind it. Neo-Vygotskians added the notion of leading activities. These are driven by the most important motive at that time. The child cannot perform this kind of activity by itself, and requires mediation. "As an outcome of mediation in the context of children's leading activity, the goal of one of the actions within this activity converts into a motive, which becomes the children's new leading motive, propelling them to become engaged in the new activity" (231). Mediation also creates new psychological tools, which in turn aid the development of new mental processes. These mental processes allow the child to independently perform the activity and outgrow the leading activity. This combination of theories provides an explanation for the transition from one developmental stage to the next.

1.3. VYGOTSKY, PIAGET; LOOKING AHEAD

Vygotskian and Piagetian ideas permeate much of the current developmental psychology studies even today. However, the two theories differ in several key areas. Vygotsky stresses the role of the cultural environment of the child and its function in development. The child is surrounded by more knowledgeable and experienced members of its culture who, through interaction, aid the development of the child. The advancement in cognitive skills thus follows from social interaction. This also naturally means that development is very much culture-bound. Piaget however, starts from the individual child who, through a series of stages, masters new knowledge by exploration of the world around it. Learning therefore follows from cognitive maturation of the individual child. Children's development is seen as universal and follows a fixed succession of stages.

Although the emphases of the Piagetian and Vygotskian views are different (mainly in terms of individual activity versus social mediation), the neo-versions of the two theories seem to come to a closer agreement on how we can understand child development. Many developmental theories nowadays propose a sequence of stages that are characteristic for general development but that also leave room for individual differences, the role of the social context of the child and domain specific accomplishments. The 'natural' development of the individual child who explores and discovers the world cannot be seen as separate from its social and cultural environment in which other members of its culture aid more complex and increasingly abstract thought. Rogoff is one of the scholars who proposes a

'sociocultural' view on development and argues that the social world cannot be separated from the individual child: "Thus, efforts to understand individual cognitive development must consider the social roots of both the tools for thinking that children are learning to use and the social interactions that guide children in their use"(1998, 682). In social interaction, other members of the child's culture can direct the child towards what is important and valuable in their culture. At the same time, this interaction also shapes new ideas and concepts. The social interaction between people thus elaborates on the intellectual tools that have been provided by the social and cultural context of the child (700).

In terms of Van Heusden, it makes sense to look at development as being guided on the one hand by the structures in the brain that are a legacy of our human evolution and that allow for increasingly complex ways of thinking as the child matures (following the line of Donald and Piaget). At the same time, the memory of the child is nourished by not only individual exploration but also the interactions with other members of its culture that instil it with the values and needs of its culture (the Vygotskian contribution). Much of our memory is a collectively shared reference base and therefore I think it is only just that we look at development as a largely social and cultural enterprise³⁰. The Piagetian view offers great insight into the mechanisms of development and into how the child is able to combine and structure increasingly complex cognitive skills. This perspective will therefore be more prominent in the following chapter. Vygotsky however, has described in great detail how the child is able to use the tools of its culture to guide and develop its thinking and engage with the world around it, which is of great use in understanding how the media aid and shape cognition (the next chapter). It thus looks like we will need both the Piagetian and the Vygotskian tradition in order to truly understand how the child thinks and acts.



³⁰ See also chapter two on how different theories in the cultural education field can be used complementarily

§2 THE DEVELOPMENT OF SELF

2.1 THE AWAKENING OF METACOGNITION

The general development of the child is obviously important for education as a whole. As we have seen in chapter one, cultural education in particular necessitates for one to focus on a specific type of cultural cognition which is *metacognition*. In order to assess how cultural education can match the development of the child one needs to know how the child can think about itself, its culture, other people and other cultures. The development of self and of social cognition follows from the general cognitive development of the child which allows for increasingly complex and sophisticated modes of thought. In the following section I will outline some current research on self- and other awareness in childhood.

It is difficult to pinpoint the beginning of metacognition in development. According to Van Heusden (2009b), cultural cognition in general starts with the human ability to separate one's memory from actuality. This means that we as humans know that we are not living in our past and that we can actively select our memories to make sense of our experiences in daily life. This also enables us to have a second order representation of the world. Metcalfe and Kober (Terrace and Metcalfe 2005, 57) also stress the importance of the separation between memory and actuality as they define metacognition as "...the reflection of the self upon its own thoughts, memories, mental processes, and other possible worlds, including the ability to mentally project oneself outside the boundaries of one's immediate stimulus environment and thereby entertain counterfactuals". Therefore, metacognition in this sense cannot occur before one is able to collect, store and retrieve personal memories and is able to separate these from actuality. Although this ability is considered uniquely human, it is debatable whether it is already present at birth. In infancy, experience is extremely private. The only awareness infants have of a boundary between themselves and the outside world is a physical one (Nelson 2005a, 127). The infant cannot share thoughts with other people. The world around it is exceptionally unpredictable, because everything is new. In fact, it has been argued for a long time that young children, like animals, are stuck in the here and now. This means that they can only respond to what is directly in front of them, without being able to reflect on it (Hoerl 2008, 490). However, even when applying this view to animals, this idea is problematic. Think of, for example, a squirrel that hides a nut in a tree and is able to find it the next day. Does this ability not imply that it has a memory? Many examples can be thought of that seem to complicate a straightforward but equally broad definition of cultural cognition as a simultaneous presence of past and present.

A helpful distinction in this regard is the separation between three types of consciousness: *anoetic consciousness*, *noetic consciousness* and *autonoetic consciousness* (Vandekerckhove 2009). Anoetic consciousness refers to a procedural and affective type of consciousness which is always present when awake. This means that we can act upon our anoetic

consciousness without being aware of this. It may thus make us avoid or approach certain things without us being aware of why we do so (14). It does not involve self-awareness and merely denotes an experience of the self in a social and physical reality where the self responds to stimuli.

A more complex level of consciousness arises with the emergence of noetic consciousness or semantic memory. Knowledge is now stored in a more advanced way in memory and allows access to the past.³¹ However, this access is merely factual and not personal. This means that noetic consciousness implies knowing about the past and not the ‘remembering’ of a specific personally experienced event. It is “...a factual understanding of things and a noetic consciousness of the self and the world. Thinking about the ‘facts of the world’ means being noetically aware of what one is thinking, as well as being aware of such awareness” (16). In the preschool years, many memories are stored as routines or scripts, which are part of the semantic memory system. Hence, young children struggle to remember specific events over a long period of time, since the memories are overwritten by general scripts of that event (Feldman 2003, 236; Goswami 2008, 265). Studies show that semantic knowledge is reflected in the semantic competency. Semantic competency does develop with age (Robertson and Köhler 2007, 3185). This is because experience with the world expands the knowledge base. Semantic competency has a significant effect on recognition memory tasks. Even though children have less semantic knowledge than adults and fewer processing capacities, the systems work in similar ways (3180). Semantic knowledge also makes up the factual knowledge that is shared by a community, and thus plays a large role in culture in general.

Noetic consciousness naturally corresponds with a specific kind of self-image. Between the ages of eight and twelve months, an infant is able to distinguish some categorical features of the self, engage in joint activity and starts to locate objects. However, the first recognition of the self as an autonomous individual starts when the infant is able to pass the rouge test at the age of about 24 months: “...reflective self-recognition arises at the moment the child becomes aware at a knowing level that the recognition of the image belongs to him- or herself, not just to someone” (Vandekerckhove 2009, 6). This factual knowledge of the self marks the beginning of a noetic consciousness.

31 Semantic memory refers to a general knowledge base or “context-free facts of the world” (Vandekerckhove 2009, 5). This means that facts are stored that can be retrieved at will, but that are not specifically tied to the ‘experiencing I’ (Nelson and Fivush 2004). The symbolic encoding indicates an abstract system of encoding information in for example language, gestures, models, pictures and maps that allow children to store memories in such a way that they can be retrieved later (Goswami 2008).

2.2 AUTONOETIC CONSCIOUSNESS AND AUTOBIOGRAPHICAL MEMORY

The most interesting type of consciousness for cultural consciousness is the so-called *auto-noetic consciousness* or *episodic memory*. I believe this to mark the beginning of the self-perception stage and of true cultural metacognitive abilities, as auto-noetic consciousness allows us to store specific, personal memories of our past. “Episodic memory is a past-oriented context-embedded neurocognitive memory system representing events of one’s past” and involves “...the encoding of specific information of a particular occasion within a context and its reactivation and explicit representation on a subsequent occasion represented in ‘time-travelling’ and the experience of subjective time or chronesthesia” (16). This means that the sense of self alters when employing one’s auto-noetic consciousness. Between three and six years of age, children start to be able to remember happenings as personally experienced events. Before the age of four, children usually have no auto-noetic consciousness. It is difficult to distinguish between noetic consciousness and auto-noetic consciousness in young children. “At least we can state that it is not until children can reflect upon their experiences in the past, the present and the future that they can experience the past episodically (...) The lack of remembering in an episodic way is related with the phenomenon of infantile amnesia before the age of 3 or 4” (10)³². Sometimes, however, children under the age of five can remember something when an event was special or new.

Many developmental psychologists argue that episodic memory has evolved out of semantic memory which is a possible explanation for the fact that the two share so many characteristics (Terrace and Metcalfe 2005). Neither semantic memory nor episodic memory depends on language, but they do both benefit from it (Terrace and Metcalfe 2005). This is because language allows for a narrative to be formed that can be easily shared amongst individuals. Reinstatement of memories through social interaction helps to retain them. Language allows for this reinstatement without having to repeat the experience. This reinstatement can also occur through reminiscing (Hoerl 2007, 622). The sharing of memories is obviously very important for a community, as a narrative structure helps to develop a causal understanding between both an individual and a collective past and present.

Even though semantic memory and episodic memory are closely connected, they rely on different parts of the brain. “Episodic recollection is an advanced, late-appearing (both evolutionary and ontogenetically) mnemonic capacity that relies on coordination across multiple brain systems and can be selectively affected by brain damage” (Levine 2004, 55). Thus, episodic memory relies on both anoetic and noetic consciousness for its existence, while semantic memory only requires noetic consciousness. It is important to realize that once all three levels of consciousness are acquired, all three of them are used. Adults still rely heavily on their anoetic and noetic consciousness in their daily activities. The differ-

³² For more about the memory of children and adults, see also the work of Douwe Draaisma, e.g. *Why life speeds up as you get older: how memory shapes our past* (2004).

ence between semantic and episodic memory is an important one for the understanding of cultural cognition for it explains how the squirrel I mentioned earlier can find its nut (relying on semantic memory) while actual cultural consciousness requires a reflective sense of self and thus calls for auto-noetic consciousness.³³

Auto-noetic consciousness is closely related to autobiographical memory. For some developmental psychologists, there can be both episodic and semantic autobiographical memory (e.g. Vandekerckhove 2009), while others see auto-noesis specifically as autobiographical memory (e.g. Siegler, DeLoache, and Eisenberg 2006; Nelson and Fivush 2004). In their widely acclaimed article, Nelson and Fivush define autobiographical memory as “...an explicit memory of an event that occurred in a specific time and place in one’s personal past...” (2004, 468).

The emergence of autobiographical memory has profound implications for the child’s cultural awareness. For the first time, the child can start to reflect (albeit on a basic level) on itself and its cultural surroundings. The mechanism that enables this reflection is the ability to keep two different representations in mind at the same time (Bjorklund 2005). This capability allows the child to compare a personal memory to the world as it encounters it. The child at this stage of development can be regarded as a ‘representational agent’ (Gergely 2007). “...school age children endow themselves and other people with enduring personality traits, come to understand second as well as first order beliefs (i.e., beliefs about beliefs), and show numerous metacognitive acquisitions, such as knowledge about memory and memory strategies” (Flavell and others 1995, 2-3). The ability to compare representations marks the beginning of two of the most well-known developments in early childhood: passing the *Theory of Mind* test and the *False Belief* test (Goswami 2008). *Theory of Mind* refers to the ability to think about the mental states of others. *False Belief* tests examine if the child understands that beliefs derive from experience. Leslie calls the types of representations required for such thinking ‘metarepresentations’, which are the signs used to refer to hidden mental states (Friedman and Leslie 2007, 108). Increasing awareness of the impact of sources of information on thought and behaviour, better understanding of others’ minds and the representational sense of self all contribute to what is called a ‘life story’ (Nelson 2000, 183). A life story can be regarded as a narrative in which the self is placed in a sequence of events. “Autobiographical memories include information about one’s goals, intentions, emotions, and reactions relative to these events. These memories are strung together into a more or less coherent narrative about one’s life” (Siegler, DeLoache, and Eisenberg 2006, 150). This life narrative is not only the outcome of a specific cognitive development, but also influences future (cultural) cognitive processes: “...we need to account for the emergence of

33 In Merlin Donald’s theory, the episodic phase is not the same as Van Heusden’s self-perception phase. In *Origins of the Modern Mind* (1991), Donald states that in the episodic phase one is not yet able to voluntarily recall one’s memories. Also Katherine Nelson (1996) speaks of a more basic type of event representations at this first level. Even though these two theories serve as a basis for Van Heusden’s theory, the self-perception and self-imagination stage are defined slightly differently.

autobiographical memory in childhood as the outcome of a social cultural cognitive system, wherein different components are being opened to experience over time and context, and wherein individual histories determine how social and cognitive sources are combined in varying ways”(Nelson and Fivush 2004, 487).

Autonoesis enables a young child to construct its own personal past and the increasing representational skills help it to reflect on this past. “...narrative, autobiographical memory (stories of the self) and self-concept are interdependent in development” (Nelson 2005a, 134). To be able to store and retrieve personal memories is vital for the development of metacognition, because one can only make sense of the (cultural) world on the basis of previous experiences with that world (Nelson 2007, 225). To be culturally conscious thus means to be able to store and retrieve *personal* and *specific* memories of the past and use them to reflect on the current and future self. It also implies the ability to think about the minds of others: their ideas, thoughts and beliefs. It is exciting to think about the fact that just when these skills start to properly sprout, children take their first steps into primary school³⁴.

2.3 GENDER DIFFERENCES IN CHILDHOOD

The sense of self in childhood is not only influenced by brain and social development but also by gender. Gender development is thought to start with hormones in the womb which create biases in boys and girls for sex-typed behaviour (Pasterski, Golombok, and Hines 2010, 293). Parents also often treat boys and girls differently which enhances these biases. Biological and social pressures thus influence the way young boys and girls see themselves and others. These factors permeate the more general metacognitive development in childhood and will be discussed in the next sections.

There are many differences between the behaviour of girls and boys which influence the way they see themselves and how they interact with their peers and adults. During the preschool period, boys and girls usually have different activity preferences. Girls are more likely to engage in boy-typical behaviour than the other way around. Gender segregation also occurs in this period as children prefer to play with children of the same sex. This segregation remains quite strong throughout childhood. Girls usually play in closer proximity to adults. Boys’ play often involves dominance and leadership, while girls stress equal participation (580).

From birth, adults often treat boys and girls very differently (580-2). Boys will imitate male behaviour while girls will tend to imitate both male and female behaviour. Mothers are usually the main caregivers, while the fathers play more with the child. Fathers engage more in physical play while the mother is more involved with pretend play with children (584). Mothers usually treat boys and girls alike in the preschool period, while fathers focus more on the masculine behaviours of

³⁴ In The Netherlands, primary school starts around age four to five.

their sons and the feminine behaviours of their daughters (ibid.).

The stage model of gender-role development suggests that children first have an understanding of *gender identity* (knowing whether they are a boy or a girl), then develop a sense of *gender stability* (knowing that a boy grows up to be a man and a girl to be a woman) and lastly become aware of *gender constancy* (knowing that gender is a fixed part of who you are and that it cannot be changed) (574). Boys and girls reach these levels of awareness around the same ages (585). This development is universal although in some cultures the stages start later than in Western societies. Preschool children develop gender stability and can tell the gender of another person. However, they base their judgement on physical appearance solely which displays their strong self-perception. This perception-dominated view also influences their gender stability as they tend to think that if a boy wears a dress he becomes a girl (Pasterski, Golombok, and Hines 2010, 282). Girls and boys of this age often have already gender-specific toy preferences.

Gender segregation appears to be universal and usually starts around age two. It is most common when the children themselves can choose who they want to play with. Young boys like to play active rough games with large groups outdoors while girls prefer indoor play with two or three children (ibid.). By age five, children have an awareness of sex-stereotyped social behaviour. Before this age they already have an understanding of sex-stereotyped objects (Vasta, Haith, and Miller 1999, 586). Children reach gender constancy (closely related to Piaget's conservation stage) around age five. Children between the ages of five and seven still prefer gender-specific toys. A study showed that they even prefer neutral objects when told they were something that boys or girls like (Pasterski, Golombok, and Hines 2010, 283). In the preschool years children often have rigid ideas about gender (this fits Piaget's preoperational thinking phase) and see cross-sex behaviours as a violation of social standards which fits their strong self-perception skills. By middle childhood children start to see that gender roles are socially determined and that they can be broken without serious consequences. In secondary school the gender stereotypes become more strict again (Vasta, Haith, and Miller 1999, 586). Children's preference for sex-type toys remains in middle childhood and even increases until the age of eight (Pasterski, Golombok, and Hines 2010, 284)³⁵.

35 Another approach in the study of gender development is provided by the information-processing models which focus on the development of a gender schema. According to this view, a child develops a schema (which is the result of an inborn tendency to organize information and the cultural emphasis on gender cues such as clothes or names) for 'boy' or 'girl' early in life. This schema makes the child more attentive towards information associated with its gender, leads to self-regulated behaviour (e.g. playing with gender-typical toys) and lastly may stimulate the child to make inferences

(e.g. a truck driver is likely to be a man) (Vasta, Haith, and Miller 1999, 575). A third way to look at this development is the gender-script approach. "A gender script is a cognitive representation of a familiar routine or activity that is generally associated with only one gender. According to this model, a child acquires such a script as a whole and then gradually learns to use it in more flexible ways, such as by replacing elements of it with new objects or behaviours. The gender-script approach to gender-role development is, in a sense, the opposite of the gender-schema approach" (576).

The way children play is also influenced by gender. Interestingly, boys explore more when their mothers do not interfere, while girls do the opposite. Girls are usually better at hiding their emotions than boys (Vasta, Haith, and Miller 1999, 595). Boys are more likely to solve a conflict with violence while girls seek compromise and want to resolve the conflict by talking. This is unsurprising as boys are usually significantly more violent than girls (ibid.).

Although the differences in behaviour and thinking between the genders become more prominent during puberty, it is unlikely that they have no effect on the way even the young child thinks and acts. Cultural education, just like other types of education should take into account the different preferences and styles of behaviour boys and girls may display. In middle childhood, when increasingly self-conceptual ways of reflecting on the self start to emerge -as we shall see later in this chapter-, children are also more and more aware of the social significance of gender. However, even young children have a sense of what it means to be a boy or a girl, although their ideas about gender are influenced by the dominant metacognitive skill of that time. The succession of dominant skills in early and middle childhood will be discussed in the next sections.

2.4 THE YOUNG SELF: SELF-PERCEPTION

The self-image of a young child is built up of relative simple features such as external traits or preferences (Siegler, DeLoache, and Eisenberg 2006). This shows that the self-image of a pre-school child is very much perception-dominated as it often consists of concrete, observable characteristics of the self. A child may describe itself in terms of preferences (“I like spaghetti”), possessions (“I have a blue bike”) or physical characteristics (“I have brown eyes”) (Harter 1999, 37). Damon and Hart claim that the young child has physical (or material) self-schemes (“I live in a big house”), active self-schemes (“I play tennis”), social self-schemes (“I am friends with Mike”) and psychological self-schemes (“I am a happy kid”) which are separated from each other. They call these types of self-descriptions ‘categorical identifications’ (Damon and Hart 1988, 59). The dominance of self-perception can also be seen in the way young children view others. Selman argues that children know that thoughts can control actions. However, inner thoughts are thought to be directly represented in outward appearance. This implies that a self can be known by merely observing someone (Vasta, Haith, and Miller 1999, 489). Young children also do not compare themselves much with others. They can sometimes compare themselves with their younger self (“I can do this better than when I was four”) (Jacobs, Bleeker, and Constantino 2003). Self-perception (e.g. a focus on personal appearance) and emerging autobiographical abilities are clearly visible in this self-image. The self-image of pre-school children is sometimes expanded with abstract concepts. Concepts in this age group are usually isolated from each other. Something can for example be beautiful or ugly, but not both at the same time.

When self-concepts are used, they have a strong perceptual support. A child may say: “I am strong” while lifting a chair (Harter 1999, 37).

Basic analytical abilities that young children have at this stage serve their perceptual orientation. Children can construct basic causal relations in familiar situations. Various events may be structured in a script-like fashion which includes simple relations between two events (McKeough 1992; Case and Bruchkowsky 1992, 344). This shapes not only the personal narrative of the child, but also influences the stories children start to tell. In these stories, the different events are loosely connected and children have much difficulty attributing an emotion to an event that is linked to previous events (McKeough 1992, 192). Analytical skills that are employed to connect events add to the construction of a more elaborate self which is located in a simple time-line.

However, not only the personal experience of the child itself gives rise to its life story; the cultural context in which the child is raised plays a crucial role well. Parents can aid the child’s formation of a life story by talking to it and asking questions about events that happened in the past. Language can help the child reflect on its own life as well as confront it with different views and perspectives.

“Situating these stories in particular temporal and cultural locations (e.g. school, trips, etc.) provides an ordered record through one’s own temporal life space with a beginning at birth and an undefined open-ended future. Cultural time as well as cultural artifacts, places, people and institutions all enter into, indeed are essential to, the personal histories that begin to be built up during the preschool years. The self-concept is constructed from these elements, but by the nature of its constitution, it is constructed collaboratively with others –parents, teachers, peers- who share one’s cultural world as well as one’s personal experiences” (Nelson 2000, 194).

Even though the self-perception skill appears around the fourth or fifth year, it continues to develop throughout childhood. As children get older, they learn that what people think depends on the perceptual information they have. “In addition, school age children endow themselves and other people with enduring personality traits, come to understand second as well as first order beliefs (i.e., beliefs about beliefs), and show numerous metacognitive acquisitions, such as knowledge about memory and memory strategies” (Flavell and others 1995, 2-3). Developmental psychologists refer to several developmental factors that contribute to the increasing complexity of this skill. Flavell (Levin 2004, 29) argues that the understanding of the sources of knowledge helps children to better understand the information provided. The ability to reflect on conflicting information also increases between the ages of six and eleven. Others indicate that the auto-noetic consciousness for recap periods increases with age and that a more developed executive function helps to spontaneously recall these memories (Picard et al. 2009, 10). Symbolic encoding of infor-

mation is also enhanced as children get older, aiding their memory skills. Experience with different types of media helps the child to use symbolic systems for memory and learning tasks; however, social support is still crucial for this to be fully effective (Goswami 2008). The improved sense of self as a unique individual with personal memories allows the child to think about him- or herself and the world around him or her. It also guides behaviours and helps to set personal goals (Jacobs, Bleeker, and Constantino 2003, 34). The self-image that is thus created can be described as the: "... sum of attributes, abilities, attitudes, values that an individual believes describe who he or she is" (35).

Ferrari and Sternberg stress that the self is not something that emerges at some point in development but rather that "...the individual consists of a series of weakly connected control systems that represent and regulate different aspects of self" (Ferrari and Sternberg 1998, 332). The development of representational systems or mappings as briefly outlined in the previous section is thus very important for a sense of self for it is required for knowledge acquisition in general. New knowledge often differs from existing knowledge (the difference between memory and actuality) and needs to be integrated into the existing information. Representation management is therefore vital, because new knowledge often does not need to entirely replace the existing one (e.g. when learning a new meaning for a word you already know) (Lucariello and Nelson 2004, 36). Lucariello describes the development of Theory of Mind in terms of an advance from a 'metarepresentational' to a 'perspectival' to a 'dialectical' Theory of Mind. The metarepresentational Theory of Mind starts at five years of age and considers contrastive representations of the self and of others. However, the child cannot manage more than one representation at a time. Something is either true or false (Lucariello and Nelson 2004, 36). Papalia, Old and Feldman (2009) have found children displaying this kind of behaviour already at age four. The single representations they use are isolated and one-dimensional and children at this age, therefore, cannot distinguish between the real self and the ideal self (280). Young children tend to overestimate their abilities as they do not differentiate between their real self and their ideal self (Harter 1999, 38). Furthermore, because abilities change so rapidly, young children think that if they are not able to do something now, they will be able to in a few months or years which leads them to overestimate what they can actually do.

2.5 FROM SELF-PERCEPTION TO SELF-IMAGINATION

Children aged five to seven, like their younger selves, are usually generally positive about themselves (42). However, as children get older, they become increasingly aware of how well they perform in comparison to peers (Vasta, Haith, and Miller 1999, 509). The self-image becomes more complex as the brain is increasingly able to connect the different aspects of the self involved in self-perception. In early and middle childhood (age five to eight), children start to link isolated aspects of the self into representational sets (for example sets

of competencies). Children at this age still struggle to incorporate opposite traits, although these opposites (e.g. mean and nice) are noticed: “Thus, although children in this period of development can construct representational sets to describe their own traits and emotions, they cannot yet integrate these opposing attributes” (Jacobs, Bleeker, and Constantino 2003, 39). Children of this age struggle to see that they can experience both positive and negative emotions simultaneously and may have good and bad characteristics. This may lead them to overextend these attributes and claim that something is all bad or all good (Harter 1999, 43). Children between age five and seven have moved beyond the more private world of the perceptive self but have not yet mastered true abstract thinking required for self-conceptual thought. This intermediate phase is very important and characteristic for the young child’s cultural cognition: the age of the imagination. The self-imagination of the child is further explored in the next section.



3.1 THE AGE OF SELF-IMAGINATION

Self-imagination is the main metacognitive skill of early childhood. It is particularly strong around the ages five to seven and builds on the cognitive mechanisms that self-perception has put into place. Self-imagination is characterized by the manipulation of memories. New combinations of memories can be made in order to create different representations. By manipulating memories and combining them, a wide array of mental activities can arise. A child can, for example, start to think about the future, plan, deceive or engage in pretend play (e.g. Scarlett 2004). It is therefore not surprising that children's play becomes increasingly fantastical between the ages of four and six. Simple pretend acts (e.g. pretending a piece of wood is a toy car) start to develop into elaborate stories (see also chapter four). The cultural world is now no longer a *fixed* point of reference: a child can start to create its own.

The distinction between self-perception and self-imagination is not a clear-cut one. Rather, perception mechanisms slowly develop into imaginative skills. The auto-noetic consciousness that I have taken as the prime characteristic of the self-perception skill does not only allow access to a personal past, but also to a personal future. Semantic memory (noetic consciousness) can make one contemplate the future, but only in a general, factual sense. Auto-noesis makes it possible for humans to plan their personal future (Levine 2004, 55). This type of planning opens up a whole new range of possible interactions with the world. In evolution, auto-noesis changed the relationship with nature; possible problems could be anticipated and solutions provided. Later evolutionary stages of ritual and myth also relied on the ability to think about the future. Humans can act on and anticipate things to come: "Future-oriented consciousness (proscopic chronesthesia) made possible a feat that had no precedence anywhere in nature: individuals intentionally, voluntarily, consciously taking action in response to something that did not exist in the physical world. As a consequence, humans were able to create a world to fit them, rather than live in one into which they had to fit" (Terrace and Metcalfe 2005, 22). This meant that, for example, agriculture and animal husbandry could emerge.

The blurring of the boundaries between self-perception and self-imagination also occurs when considering the acts of pretend play in young children. Pretend play has been studied extensively and provides a good basis for the understanding of the imagination skill. Imagination involves the manipulation of perception and the corresponding sign with its attached meaning. Cassirer (1953) gives the example of the branch of wood that can be seen just as it is (perception) but which can also be looked at as a spear (imagina-

tion). This act involves not only the active recall of memories, but also the ability to move away from concrete perception to an already more abstract level of information processing. According to Lillard, pretend play consists of seven things: a pretender, a reality, a mental representation, a projection of the mental representation onto the reality, awareness of the actual and non-actual situation, intentional projection of the representation and optionally an external manifestation (Mitchell 2002, 104). Goldman argues that imagination always needs to include the engendering of a set of primary and secondary representations (which may make the primary ones the object of reflection) and the marking and retaining of a distinction between the two (Goldman 1998, 6). Social pretence occurs from two years onwards (imagination), but, as discussed before, an awareness of the mind as the locus of representation (required for self-imagination) does not appear before the age of four (ibid.).

3.2 DEFINING IMAGINATION

Vygotsky argues that the basis of creativity is the ability to combine elements of previous experience into a new form. Imagination thus always builds on reality (and is therefore not completely detached from it) (Vygotsky 2004, 13).

“Now we can induce the first and most important law governing the operation of the imagination. This law may be formulated as follows: the creative activity of the imagination depends directly on the richness and variety of a person’s previous experience because this experience provides the material from which the products of fantasy are constructed. The richer a person’s experience, the richer is the material his imagination has access to. This is why a child has a less rich imagination than an adult, because his experience has not been as rich” (14-5).

This view fits Van Heusden’s theory as it stresses the role of memories in the imaginative meaning-making process as well as the assimilative rather than the accommodative nature of imagination. “Fantasy is not the opposite of memory, but depends on it and utilizes its contents in ever new combinations” (15-6).

A key characteristic of imagination is that it allows for a much more flexible interaction with our environment than perception does. This ability can materialize in new inventions, art and technology which could never have been created through the use of perceptual skills alone. In turn, our environment may present us with such challenges that they almost naturally trigger our imaginative skills. Vygotsky too describes this two-way process between human and environment:

“If life surrounding him does not present challenges to an individual, if his usual and inherent reactions are in complete equilibrium with the world around him, then there

will be no basis for him to exercise creativity. A creature that is perfectly adapted to its environment, would not want anything, would not have anything to strive for, and, of course, would not be able to create anything. Thus, creation is always based on lack of adaptation, which gives rise to needs, motives, and desires” (28-9).

This quote of Vygotsky’s makes one wonder whether this is one of the reasons why children in particular are so prone to imagination. As they see, hear, smell, feel and taste new things on a daily basis, they probably need to bridge the difference between their memories and actuality far more frequently than the average adult. It could be that in order to adapt itself to the bewildering environment, the child is constantly creating, shaping and crafting to make sense of it all. It is important to note this key difference between perception and imagination. While some types of human activity involve reproduction of experience, others create new images or actions. Efland argues that: “Imagination is the act or power of forming mental images of what is not actually present to the senses of what has not actually been experienced. It is also the act or power of creating new ideas or images through the combination and reorganization of previous experiences” (2002, 133). The manipulation of memories is central to imagination and creates a very specific relationship to reality: one that is *made*. According to Efland imagination and creativity are both praised and regarded with scepticism for exactly this reason. Still, almost everything that humans have made or created involved an act of imagination. In sum, imagination can be defined as *a concrete mode of thought (building on existing sensory information) which employs motoric skills (to make or do something with existing memories, internally or externally) to assimilate our environment*. For self-imagination this then reads as:

a concrete mode of thought (building on existing sensory information) which employs motoric skills (to make or do something with existing memories, internally or externally) to assimilate our cultural environment (ourselves and others).

The new images, sounds, thoughts, actions or shapes that result from imagination neither completely coincide with the reality as we encounter it (perception) nor are they completely detached from it (symbolic concepts). Self-imagination is thus a concrete, motoric, assimilative way to reflect on ourselves and others, which is very typical for the childhood period. “...children do not simply operate on an objective stable world of people, actions, and events. Instead, they actively construct their own phenomenological reality-interpreting events within a framework of their own making” (Schutz and Werner in: Engel 2013, 215).

The increasing dominance of self-imagination over self-perception can be seen in the way children start to stress their competencies rather than their material of physical attributes, as they did when they were younger. Children may stress their accomplishments at school or at home when describing themselves (41). This shows a shift in focus from

the directly perceived reality to ways of doing or making something. The motoric and assimilating way of interacting with the world seems to become a focal point. Rather than stressing concrete aspects that you can see about the self (e.g. that I have blue eyes), the self-imaginative child will emphasize those things that he or she can do or make. Doing and creating are still concrete ways of interacting with the world, but have moved beyond what can be readily accommodated to how the world can be transformed and acted upon. This transformation can differ only a little from the world as we perceive it, but can also diverge far from it. Vygotsky says that children like exaggerations because they correspond to their internal states (e.g. in fairy tales, or: 'I want 1000 little rabbits!'). Interestingly, this characteristic of imagination as a derivative of reality which can mould this reality into a more amplified form is also very common in art (2004, 28).

Between the child's third and fourth year, imitation starts to develop into real imagination. Children are now increasingly able to separate their perception from their pretence (Namy 2005, 81). The child who pretends that a banana is a telephone is a famous example³⁶. This is also the period in which children start to tell simple narratives (Scarlett 2004, 62). The developing imaginative skill involves an increasing complexity of thought, and a detachment from perception. The great developments of Theory of Mind (ToM) and False Belief skills around age four and five contribute significantly to the enhanced complexity of imaginative skills in children. It also allows them to talk about pretence on a meta-level and thus to reflect on the act of imagination itself (81). Around this time, children start to include more fantastic scenes in their (self)-narratives (62). Both ToM and False Belief rely on the ability to hold multiple representations in mind. Imagination, as indicated before, can only exist when the representation of perception is separated from the representation of the imagined signifier and its meaning. For young children it is difficult to keep these two representations in mind and not to focus only on either the perception or the signifier: "Thus to achieve dual representation, children must avoid capture by the symbolic object itself; they must psychologically distance themselves from it" (Namy 2005, 51). Imagination can only occur when the child is sufficiently developed to employ these more advanced cognitive processes. "Imagination is a new psychological process for the child; it is not present in the consciousness of the very young child, it is totally absent in animals, and represents a specifically human form of conscious activity" (Vygotsky 1978, 93).

36 Tomasello calls this stage the *perspectival stage* and makes a similar distinction between:

- ▶ Emulation in the first year (0-9 months): infants focus only on the results of the actions they produce.
- ▶ Imitation in the second year (12 months - 2 years): child reproduces actions and shadows how the action was produced
- ▶ Simulation from 3 years of age (3 years ->): child reenacts motives or attitudes of the agent that produced the action. Physic projection of the mind of others that lead to the action and its consequences (possibility to feign and pretence) (Namy 2005, 40).

3.3 ICONIC MODES OF THOUGHT

A term that is often mentioned in relation to imagination is that of iconic thinking. Jerome Bruner is one of the scholars who elaborated on this type of cognition. He makes a distinction between different modes of representation which help us to understand how children make sense of their world. Bruner claims that these types are stages that are not necessarily tied to an age, as the child's environment may slow down or speed up a certain development (Bruner 1966, 27). Also, they may occur in spurts or rests rather than displaying a gradual transition. The first stage is a stage of action (the *enactive* phase). No words or imagery are available. "Knowing is principally knowing how to do, and there is minimal reflection" (ibid.). The second stage is called *iconic* and is based on sensory organization (11). The high point of this stage is usually around age five to seven (27). The third and final stage is the *symbolic* stage which is characterized by the use of arbitrary symbols to make sense of the world. The use of language becomes very important in adolescent thought, although it is unclear whether hormonal factors play a role in this (28). The similarities between these stages and Van Heusden's cognitive skills are not difficult to identify. The symbolic stage can be seen as the phase in which (self-) conceptualization is most prominent while the enactive stage resembles both Donald's episodic culture as well as a pre-perceptive phase of cultural cognition. The iconic phase seems to tie in well with Donald's mimetic stage. Donald states that as children develop, their gestures become more complex and start to include iconic gestures. This is a type of abstraction that developed late in evolution, at the end of the mimetic culture (2001, 265). "The emergence of mimesis was our first step toward evolving an effective distributed knowledge network, which could coordinate the actions of groups of people" (267). Donald claims that there are four main elements that define mimetic cognition: skill, mime, imitation and gesture (269).

When we translate the mimetic and iconic stage in terms of Van Heusden's model, this means that perception and imagination are here grouped into one stage rather than viewed as distinct modes of thought. The iconic mode of thought includes both perceptual organization as well as the imaginative manipulation of this perceptual information (Bruner 1966, 11). Piaget's developmental research enables one to separate between these two types of representation by distinguishing between assimilative and accommodative modes of knowing the world. By doing so, a clear difference becomes visible between (self-) perception which fits new information into existing cognitive schemata and (self-) imagination which allows one to shape and manipulate one's ideas and memories. As we have seen in previous sections of this chapter, self-perception and self-imagination develop closely together in early childhood and both characterize the thought of the pre-school child. This makes the integration of these two types of thought both understandable and logical. However, I would argue that as children mature, their self-imagination gets the upper hand in how they interact with the world. I would thus define childhood in general as the period dominated not by iconic thinking in general but by imagination in particular.

3.4 THE BENEFITS OF (SELF-) IMAGINATION

Harris observes how imagination is so common in children all over the world that it is highly likely to be an important and ‘normal’ part of childhood cognition (2000, 6). In fact, when children lack imaginative abilities this is often one of the characteristics of autism. The ability to imagine is an important feature of the way children think and act and it serves many functions. One of the benefits for a child is that it can use its imagination to express emotions and desires in a playful way.

“...make-believe play seems, then, to support young children’s emotional development by helping them put symbols between their impulses and actions. Rather than acting out their impulses, they can, in their make-believe play, express them symbolically. This is an enormous step forward. The important point is not that make-believe allows children to express emotions; they can express emotions in their actions. What matters most is that make-believe play allows children to express emotions symbolically” (Scarlett 2004, 58).

Vygotsky argues along these same lines that with imagination, a child can act in contrast to what it sees (and thus frees itself from perception alone). “Action in an imaginary situation teaches the child to guide her behavior not only by immediate perception of objects or by the situation immediately affecting her but also by the meaning of this situation” (Vygotsky 1978, 97).

Many developmental psychologists agree that children employ their imagination to start communicating what they think and experience: “... it is a form of personal externalization, an expression of oneself, a visible projection of thoughts and feelings” (Ahn and Filipenko 2007, 280). Through expression of self-imagination in different media, children can create a life story in which past experiences and future possibilities are explored. The more private and closed reflection of self-perception is slowly opened up by the new modes of communication that imagination offers. Cassirer argues that, while language and science tend to simplify reality, art intensifies it (Verene 2011, 99). Self-imagination may allow the child to engage with the world around it and to learn about itself and others by exaggerating and intensifying reality in the shape of pretence, art, (day)dreams and other expressions that suit this type of cognition well.

Paul Harris is one of the scholars who researches imagination in children. He argues that children use their imagination for three things:

- ▶ To become absorbed into a make believe world (this world still maintains many causalities of the real world)
- ▶ To compare actual outcomes and alternatives that could have happened
- ▶ To explore the impossible and the magical (2000, 161).

This make-believe world that children create thus helps them to better understand the actual world (Engel 2013, 216). As discussed before, Vygotsky sees a direct link between the need to adapt to one's environment and the act of creation. The world of the child is increasingly expanding as the child matures and requires constant adaptation and thus is likely to inspire creativity. Different scenarios and possibilities can be explored in play, drawings, drama, stories, music and other media that lend themselves well to imaginative expression. It is important to note however, that despite the fact that (self-) imagination allows for many types of enjoyable and pleasurable thoughts and activities, it also has a dark side. One can not only imagine wonderful things, but also vividly picture all kinds of horrors happening to one. Adams points out that the world of the child is therefore not only light and joyful but sometimes also frightening and dark and that children often suffer from nightmares (2010, 13). Imagination may not be as much fun anymore if you picture a monster lying under your bed or see the shape of a witch in the folds of your curtains.

Imagination, both in children and in adults, often triggers a strong emotional response. Think about when you are reading a scary book or watching a sad film. Harris explores the possible explanations for this phenomenon. One is that by emotionally reacting to an imagined event, one can make better decisions and avoid risks. "Had we not evolved a decision-making system in which the contemplation of possible lives and possible futures engaged our emotions at a somatic level, we would be less prone to spend as many hours as we do absorbed in fictional worlds"(Harris 2000, 88).

Piaget argued that imagination disappears in the operational stage in middle childhood and is thus characteristic only of younger children. Other scholars claim that imagination does not vanish as children get older but merely becomes more submerged (Singer and Singer 1990). Adams argues that parents often accept and even encourage children's fantasy worlds in preschool and nursery and less so in the later years, which is also how education is designed. Often, when children get older, they are increasingly aware of what is acceptable and what is not and inhibit their behaviours more (2010, 21). The abundance of self-imagination in early childhood may thus become less obvious in middle childhood because of a variety of factors. Both the brain and the environment of the child change, and children develop different wants and needs that suit another type of metacognition better. However, which of the two is leading in this transition may be debatable. Nonetheless, it is thought that make-believe remains present throughout life, whether publicly displayed or otherwise.

3.5 THE IMPORTANCE OF (SELF-)IMAGINATION FOR EDUCATION

The fact that imagination is so characteristic of the childhood period has great benefits for education. Vygotsky highlights this relationship and claims that imagination is very important for learning and teaching, because one's imagination can be directed by other people's experiences rather than one's own.

“In this sense imagination takes on a very important function in human behavior and human development. It becomes the means by which a person’s experience is broadened, because he can imagine what he has not seen, can conceptualize something from another person’s narration and description of what he himself has never directly experienced. He is not limited to the narrow circle and narrow boundaries of his own experience but can venture far beyond these boundaries, assimilating, with the help of his imagination someone else’s historical or social experience” (2004, 17).

Imagination and experience thus mutually influence each other: imagination requires experience but experience can also follow from imagination (as is the case when learning from others). Since children have only limited first-hand experiences, they have a great need for others to provide them with knowledge. The processing of these testimonies requires imagination (Gelman 2009, 117). This mechanism is a second reason why, according to Harris (2000, 89), imagination may elicit emotional responses. The emotion that is evoked makes it more likely that the second-hand experience is shared and remembered. Whether or not the testimony is real or fictional makes no difference. The child can thus start to open up its world to new knowledge, real or fictional, people and ideas because of its strong imaginative capacities. These abilities are required to interact with other people more efficiently (being able to imagine another persons’ thoughts and motives) and to process second-hand information (as is often the case in the school environment). Imagination is thus a perfect bridge between the more private world of the self-perception and the large, communal and symbolic world of self-conceptualization. Not only verbal or written accounts can be used to learn. The demonstration of specific skills or behaviours is also aided by self-imaginative capacities. Humans can pick up which aspects of the demonstrated behaviour are useful and what the teacher wants to show (Vaesen 2012; Hauser and Santos 2007). Self-imagination consequently allows one to move from merely imitating exactly what someone else does to copying the relevant features. This means that a child will for example be able to pick up important tips and techniques about how to swim by observing a teacher pretending (and thus also applying self-imagination) to swim on dry land.

In the sociocultural theory, the interaction between the developing child and its social environment is deemed crucial for the type of cognition the child displays. Individual development through interaction is shaped by the child’s community and also builds on this. According to Rogoff, the personal, interpersonal and community/institutional plane are all interrelated and can only be analytically distinguished (1998, 688). In shared activities, children ‘stretch’ what they know, i.e. their memories, in terms of Van Heusden, to fit with new perspectives that more experienced members of their community provide. “Such stretching to accomplish something together is development” (690). It is important to note that children cannot only learn from adults, but also from peers. Central to this collaboration remains the ability to coordinate one’s own and others’ perspectives in an ongoing

dynamic. This type of interchange naturally requires the ability to self-imagine and to be able to adopt novel perspectives. While in the school environment the adult most often will manage the type of collaboration and shared thinking the children are engaging in, the exchange of knowledge would be futile if it was not able to rely upon the highly imaginative metacognitive abilities of the young child.

3.6 FRIENDSHIPS IN CHILDHOOD: IMAGINING THE OTHER

One of the main domains where children use their metacognitive abilities is in their interactions with peers. In order to successfully play or work with other children, one needs to understand their thoughts, ideas and wishes. I believe imagination plays a key role in this process. Self-imagination allows one to form an image of what another person wants and feels which allows for interpersonal collaboration such as sharing, teaching and playing. Research shows that the ability to understand other people's beliefs, mental states, intentions and social characteristics increases dramatically between ages 5-11 (McKown and Strambler 2009, 1644). The child's ability to be socially competent refers mainly to the ability to cooperate and be prosocial and the cognitive skills to read the other accurately (Cillessen and Bellmore 2010, 395). Consistent with the findings of Piaget, children from age six onwards display interpersonal perception accuracy (402). This moderately increases during middle childhood and early adolescence. Preschool children however already have a notion of who their friends are and who other people's friends are.

Piaget thought that interactions with peers lead to greater awareness of different perspectives and breaks down egocentrism (unlike interactions with adults, whose views are seen as rules). The child compares its ideas and views with that of an equal, which contributes to its logic (Rogoff 1998, 686). Kohlberg also stresses the importance of peer interactions and thus exposure to moral issues (Vasta, Haith, and Miller 1999, 615). Vygotsky too underlines the role of social interactions with competent peers in children's learning. As children get older they spend less time with their parents and more time with their peers (30% at age one and two and 60% at age eleven) (618). Between the ages of two and five, peer relations increase and become a second social system for the child (619). Friendship has also been found to lead to higher self-esteem in children (644).

In preschool settings children imitate each other (modelling) about thirteen times per hour per child (624), which again shows their perception-oriented way of interacting with others. In preschool, friends are no more than temporary playmates and real friendships do not yet exist (Mussen 1990, 434). Young children see friends as children they can play with and share things with. This focus on the concrete external attributes of friendship illustrates the dominance of self-perception. After this age friendships develop, which may be due to increasing self-imaginative skills. Self-imagination fosters the ability to imagine what someone else is thinking or wants. You can also envisage how the needs of someone

else may differ from your own. These skills are very important in establishing true friendships which go beyond outward appearances of toys and activities. Older children, with more developed self-conceptual skills, see more abstract aspects of friendships (e.g. caring) (Vasta, Haith, and Miller 1999, 636). Young children see friendship as a passing event tied to a concrete activity while older children see friendship as something enduring. Children usually choose friends that are similar to themselves (637). This can be similarity in age, gender or race. Between age five to seven, friends are the playmates the child plays with most often. They share toys and like their friends because they are 'fun' or 'nice' (Mussen 1990, 434). "Whereas girls' friendships are characterized by emotional and physical closeness, the friendships of boys are founded on shared activities and interests" (Pasterski, Golombok, and Hines 2010, 284).

At age eight to nine, children participate in rule-based games and have reached a cooperative level (Vasta, Haith, and Miller 1999, 626). Increasing cognitive abilities, experience with peers and especially growing perspective taking skills underlie this development. Children in middle childhood almost always have friends of the same sex and often engage in different types of activities with their friends. Boys spend much of their free time in groups of boys playing competitive games. Girls like to spend time with their best friend discussing their interests and secrets. Children's conversations were studied in a laboratory setting and it was found that the girls talked long and intimately, while the boys quickly looked for something to do (Pasterski, Golombok, and Hines 2010, 285). At this age, friends are the ones you cooperate with, share things with, and whom you trust. "Mutual trust, shared interests, reciprocity, response to each other's needs, and possession of desirable attributes such as kindness and considerateness are also critical features of friendships [at this age]" (Mussen 1990, 434). Children's social groups also change with age. Between age six to eight, children form an informal group with few rules and changing members. These groups become more formal and structured and cohesive between ages ten to fourteen (438). The stability of friendships in general also increases as the children get older (Vasta, Haith, and Miller 1999, 639). A stage model of children's friendships is provided by Damon and Hart (fig. 1).

Stage level	Description	Typical statements
Level 1: app. 5-7 years of age	Friends are associates who are nice and fun to play with. Temporary relationship which is easily established and terminated	"I like him because he plays with me and has fun toys"
Level 2: app. 8-10 years of age	Friends help each other and trust each other. Friend is liked for certain traits and not because of frequency of play	"You help them when they are hurt and you trust them"
Level 3: app. 11 years of age	Friends understand each other and share innermost thoughts/feelings. Long-term relationship based on compatibility of interests and personality	"You can say what you want and tell your friend your problems"

fig. 1: Stage model of Damon and Hart (Vasta, Haith, and Miller 1999, 638)

A specific type of social interaction between humans is prosocial behaviour, which has recently been studied by House et al. (2013) in different types of cultures. Many mammals display prosocial behaviour. As they have a relatively long infancy and thus rely on others, helping others increases the chances of receiving help in the future and thus increases chances of survival (Grusec, Hastings, and Almas 2010, 551). House et al. (2013) claim that sharing depends on economic and demographic variables. People from larger societies punish unwillingness to share more and people from world religions or market-oriented groups are often willing to share (14586). The results of their study show that younger children's prosocial behaviour may develop through different processes than older children's (14590). The younger children from different societies show a similar development, while this development diverges in middle childhood. These children are more sensitive to society-specific norms. Western children become more averse to inequality at age seven to eight, but this is not the case for non-Western children.

"Overall, the timing of the shift in the development trajectory of prosocial behavior is consistent with claims that middle childhood- a period with unique features in humans that begins around age 6 and ends with sexual maturity- is an important developmental stage across human societies in which children are incorporated into the larger cultural community outside their households. This period would therefore be a particularly important time during development for individuals to conform to local social norms" (ibid.).

The influence of society is most pronounced when the outcomes of prosocial behaviour are costly. Prosocial behaviour increases during middle childhood, but this increase greatly depends on society-specific norms. Prosociality develops as young as 25 months. Young

children (under the age of five to six) are relatively more willing to engage in costly prosocial behaviour than the older group (seven to nine). Children are thus born social but this declines as they mature (ibid.). By middle childhood this can increase again, depending on the child's social environment. These findings fit the overall development of children's cultural cognition that becomes increasingly conceptual as children enter middle childhood.

3.7 THE SELF IN MIDDLE CHILDHOOD: FROM SELF-IMAGINATION TO SELF-CONCEPTUALIZATION

During middle and late childhood (starting around age seven or eight) attributes across areas are integrated into more conceptual categories (e.g. 'smart' or 'funny'). Children also start to realize that they can have opposite attributes in different contexts (for example that they can be smart at school and dumb with friends) (49). This phase corresponds with the neo-Piagetian representational systems stage where different, previously isolated concepts become integrated (Case and Bruchkowsky 1992, 344; Mascolo and Fischer 1998). The self becomes increasingly seen as a whole rather than a set of separate attributes as the child grows older: "...the concept of global self-worth, defined as how much one likes the self as a person, does not emerge until middle childhood" (Harter 1999, 49). The self-descriptions also become more balanced and start to include limitations. Social comparisons add to this more relativistic sense of self. This makes the self-concept vulnerable and can lead to low self-esteem.³⁷ The dispositional traits allow for general evaluations of the self: "They develop the ability to focus on the type of person that others expect them to be and to incorporate these expectations into internalized self-representations" (Jacobs, Bleeker, and Constantino 2003, 40). The combination of both positive and negative traits makes the self-representation more accurate. Starting from age seven or eight the self-image is therefore also more similar to that of teachers and peers. This phase corresponds to Lucariello's perspectival stage (Lucariello and Nelson 2004, 37).

37 Self-esteem is a widely discussed subject in developmental psychology and the self-perception of the child is often discussed in terms of self-esteem. Young children usually have very high self-esteem, which declines in middle childhood. In school, children compare themselves with classmates. The accuracy of this rating increases with age. This may help them to perform at higher levels, but can also lead to low self-esteem. However, for some students, grouping into small groups can aid performance and positive self-perceptions. The perception of parents in abilities such as sports and maths is a good indication for the children's own perception. Parents who highly value academic achievements often have children who are insecure about school. Parents

who promote a range of different activities often have children with high self-perceptions of abilities. Approval and acceptance strongly relate to the level of self-esteem in children. The gender stereotypes of parents also strongly influence the self-perception of children. Girls who base their self-esteem on appearance tend to have the lowest self-esteem (Jacobs, Bleeker, and Constantino 2003, 50). Although there is a link between the self-image of a child and its self-esteem, I choose to focus on the skills of cultural cognition rather than on the self-esteem that may result from a specific self-image. Especially since the level of self-esteem does not appear to be connected to a skill as such but more to other social and cognitive factors that arise during childhood.

Comparing oneself to others is very characteristic for this age group. Damon and Hart label the middle to late childhood level of self-development as the ‘comparative assessments’ stage. Children tend to be much more sensitive to how others perform and view them and base their physical, active, social and psychological self-scheme on how they see themselves compared to their peers. This “...self-understanding focuses on comparisons between the performances and capabilities of real or imagined others” (Damon and Hart 1988, 61). These social comparison skills balance the positive and negative views of the self. Not before middle childhood does the child really compare itself to peers.

“From a cognitive-developmental perspective, the ability to use social comparison information toward the goal of self-evaluation requires that the child have the ability, which is not sufficiently developed at younger ages, to relate one concept to another simultaneously. In addition to the contribution of advances in cognitive development (...), age stratification in school stimulates greater attention to individual differences between age-mates” (Harter 2008, 231).

Children at this age use peer comparison mainly for personal competence assessment. The cognitive development allows for a comparison between the representation of the self and that of others, but is also caused by the social environment. Teachers as well as parents increasingly compare children to each other. Because children start thinking more about the opinions and standards of others, they can start internalizing them and use these to guide their behaviour (Harter 1999, 54).

With the increase in self-conceptual skills that start to take over from the more imagination-driven world-view of young children also comes an increasing awareness of social norms and standards. At age three, obedience to parents is important for the child, while at age eight, academic accomplishment, acceptability to peers and physical attractiveness are important, at least for Western children (Kagan and Herschkowitz 2005, 201). When children first learn words, these usually refer to observable fixed features of objects. This may lead them to see social categories also as fixed.

“Thus, when children learn the names for social categories, like boy, girl, Catholic, or Hispanic, they are prepared to believe that these words, too, name a set of unchanging psychological characteristics appropriate to members of the category. Children believe they ought to be loyal to the psychological features that define the categories to which they belong, and will experience as much dissonance if they stray from these obligations as they would if they saw an animal without fur who never barked that was called a dog” (ibid.).

Increasing metacognitive skill also makes six- and seven-year-olds start to reflect on their errors. Because of this reflectivity, parents often trust their child with more responsibility around this age (193).

According to Kagan and Herschkowitz (2005), there are two types of social categories: nominal categories (e.g. gender) which are relatively fixed, and relational social categories. The first develops first. After about age four to five, children add religion, ethnicity, nationality and place of residence to their self-descriptions. The relational categories are added later and say something about the relation between the self and others (e.g. 'brother', 'friend' or 'son'). These categories have ethical obligations attached to them. This development relates to a more general development where children aged five to six can use categories which vary depending on context and which are not just based on observable features (self-perception). For example, the way to interact with one friend may be very different from the way to interact with another (202). Children at this age are usually ready to conform to adult authority. Not because, as with four and five year olds, they fear the consequences of doing otherwise, but because they desire semantic consistency in authority and power. "Children who accept the standards of their family and community, because of effective earlier socialization, regard self as conforming to the norms of legitimate authority. Children who do not comply regard self as opposing family and community norms" (203). During middle childhood, self-esteem declines as children think more negatively about themselves. "The emergence of three cognitive skills is noteworthy in this regard: (1) the ability to use social comparison for the purpose of self-evaluation, (2) the ability to differentiate real from ideal self-perceptions, and (3) increases in social-perspective-taking skills" (Harter 2008, 232).

The increase in self-conceptual skills does not mean that self-imagination disappears from age seven onwards. As the theory of the cumulative structure of the cultural skills would predict, previous skills are used and integrated into successive modes of thought. The influence of self-imagination on self-conceptualization is apparent in many developmental trends in the middle childhood period. Around age six to seven, children may start to think about perfect or ideal forms of something. These may include the perfect soccer player or the ideal friend. The child has to be able to imagine the perfect friend or soccer player, without having encountered them. This requires the prefrontal cortex to generate thoughts of what is possible (Kagan and Herschkowitz 2005, 238). A strong self-imagination is required for the formation of these kinds of self-concepts. As children in middle childhood search for logic and rules, they also feel the need to clarify self-concepts (e.g. racial, cultural, gender identities). How does a girl at a certain age act?

"They are at the height of their need to find rules that define themselves and others. Stereotyping rules are often applied insistently once learned and it is not surprising that the most rigid attitudes towards gender, towards those who speak a different

language or towards of a different ethnicity are expressed by 7-8 year olds (...). However, this then declines in late middle childhood into adolescence as thinking becomes more abstract and more flexible” (Griffin 1992, 201).

At around age ten, the so-called ‘dialectical phase’ starts. Children can coordinate opposing emotions and balance contradictive representations (“I hate flowers, but I like these flowers, because my friend gave them to me”) ((Lucariello and Nelson 2004, 37). Siegler, DeLoache and Eisenberg describe a very similar development and add that eight- to eleven-year-olds can link high-order concepts to specific behavioural features (“I am popular because I can keep secrets”) (Siegler, DeLoache, and Eisenberg 2006, 429).

Piaget and Kohlberg argue that the development of morality in childhood is characterized by a transition from authority (obeying parents out of fear of punishment) to autonomy where the adolescent cooperates with the adult and is more sensitive to the flexibility of rules (Helwig and Turiel 2010, 568). However, more recent research has challenged this view and has found that younger children do have a sense of morality (Helwig and Turiel 2010; Vasta, Haith, and Miller 1999, 537-9; Mussen 1990). Older children however take social norms more into account than younger children, which fits their increased conceptual skills. When children aged four to eight were given the scenario of a child who wants to eat a biscuit but is not allowed biscuits before dinner, the younger children predicted that the child would eat the biscuit and feel good about it (because it wanted to eat it) whereas the older children (aged seven to eight) predicted the child would not eat it and also feel good about it (because it listened to its mother) (Vasta, Haith, and Miller 1999, 578). “Children do not go through a period of rigid adherence to social rules and unilateral respect for adult authority, but often adopt a critical perspective in evaluating and judging the legitimacy of rules and authority. Children also develop notions of autonomy and personal freedom that place limits on the types of social regulations that are seen as legitimate” (ibid.).

3.8 THE CHILD IN THE MIRROR FROM AGES FOUR TO TEN: FROM SELF-PERCEPTION TO SELF-IMAGINATION TO SELF-CONCEPTUALIZATION

Much developmental psychological research suggests a development of cognitive skills that mimics Donald’s (1991) evolutionary stages and the sequence of Van Heusden’s (2009b) cultural cognitive skills. This means that perception, imagination, conceptualization, and analysis are cultural skills that are acquired in a cumulative structure throughout development. The metacognitive abilities of the child and thus its cultural consciousness seem to truly start at around age four when auto-noetic consciousness develops. The child then seems to move from a self-perceptive, bodily and accommodative engagement with the world around it to a more self-imaginative and assimilative mode of thought. Although the

emerging self-perceptive abilities have a significant impact on the child's initial experience of the cultural world, self-imagination rapidly starts to dominate the mode of reflection. Self-imagination develops out of self-perception, building on the cognitive mechanisms that self-perception has put into place³⁸. "Prior to this level, children may know how to do things in the world, but they are ignorant about the complexities and proliferation of 'possible worlds,' of cultural roles that people play, thoughts that people may have, true and false, and of their own possible futures" (Nelson 2005a, 135). The mechanism that enables the coordination of two simultaneous, but differing representations not only allows for an autobiographical sense of the self, built up from past memories, but also for the ability to think about the future. New combinations of memories can be made and manipulated in order to create new (mental) representations. The stronger the imagination, the more a child can distance itself from reality, allowing the imagination to dominate over perception (Namy 2005, 81).

The first imaginative acts are still very closely connected to perception, often involving imitation rather than imagination. As the child grows older, it is able to combine more different kinds of representations, allowing it to move further away from perception. Following both the Piagetian and Vygotskian tradition, it seems that active exploration, as well as social scaffolding, play a large role in this development. As Vygotsky rightly notes, imagination depends on the manipulation of memories and one's memory base is thus necessarily the basis of all fantasy. Vygotsky argues that: "Childhood is considered the time when fantasy is most highly developed, and, according to this belief, as the child develops, his imagination and the strength of his fantasy diminishes" (2004, 31). However, data show that a child's imagination is poorer than that of an adult. The relationship of a child with its environment is not as complex as that of an adult. Nevertheless, a child has more faith in its imagination, controls it less and it is also less restricted by rational requirements (34). This is precisely the phase in which self-conceptualization has not taken over yet from self-imagination as the dominant mode of reflection.

As children grow older (starting around age seven), their self-image becomes increasingly conceptual. The child will at some point become dissatisfied with the subjective na-

38 The swift and sometimes hardly discernible transition from a perceptive dominance to a strong imaginative mode of metacognition may be due to the mimetic function they both originate from (see Donald 1991). Nelson outlines a development in which the 'representational/reflective' stage is a transition phase to representational awareness by the child. Van Heusden's theory (2009b) would label this phase as the prerequisite of self-perception. The next phase of 'narrative' marks the true beginning of a self which is situated in time (autobiographical

self) and would therefore be considered as the starting point of metacognition from Van Heusden's perspective. In this phase (between ages 3-6), imaginative and narrative skills also take off, indicating a mixture of self-perception and self-imagination. Although the two skills can be clearly distinguished from each other in theory (see the semiotic argument as outlined by Van Heusden (2009b)) in the child's development they are intertwined to such a degree that one can hardly speak of a succession of dominance in metacognitive skills in early childhood.

ture of its fantasy and be more drawn to literary creation (36). This is the time when the child will find the arbitrary symbols of self-conceptualization more suitable to make sense of its increasingly collective and social environment³⁹. Children will start to think more about the moral standards of others and how to act accordingly. Self-imagination is in this case used to aid conceptual understanding. Social structures and roles such as ‘boy’, ‘girl’, ‘brother’ or ‘friend’ are better understood and children are more aware of the social implications of these roles. “Six-year-olds have acquired semantic categories for gender, family, and developmental stage, know some of the moral standards appropriate for these categories, and feel obligated to maintain semantic consistency between self’s features, on one hand, and their behaviour, on the other. This motive is unique to humans” (Kagan and Herschkowitz 2005, 200).

Increasing self-conceptualization and mastery of language skills go hand in hand with an awareness of one’s social and collectively shared culture. In evolution, semantic and propositional memory greatly expanded under the influence of the invention of symbols (especially language) (Donald 1991). Through this effective mode of communication, individual minds became part of a larger cultural context. “Symbolic intervention on a grand scale allowed the inherent structure of episodic events to be articulated (...) The human mind had come full circle, starting as the concrete, environmentally bound representational apparatus of episodic culture and eventually becoming a device capable of imposing an interpretation of the world from above, that is, from its collectively shared, mythic creations” (268).

The shift in dominance from a concrete perceptual or imaginative way of thinking about oneself and others to a more abstract and conceptual way of thinking permeates all aspects of a child’s life. Increasing perspective-taking abilities and imaginative skills allow the child to form its first real friendships in childhood. These friendships become increasingly based on abstract values such as trust and intimacy as the child matures. The self-imagination of a child allows it to open its world up to more people and to engage with them in play and other shared activities. As self-conceptualization develops, the child discerns more transcendent qualities of friendships and peer relations become more enduring and less focused on a shared activity alone. Gender plays a large role in the types of activities children like to engage in and the kinds of friendships that are formed. There are some clear differences in boys’ and girls’ behaviour and preferences when it comes to play, friendships and toys. These differences are likely to be partly inborn but are also influenced by the social environment of the child.

An increase in self-conceptualization in middle childhood is also apparent in children’s moral development and their prosocial behaviour. From age seven to eight onwards, children become more aware of and sensitive to the social norms of their culture. This af-

39 For more on the development of self-conceptualization in middle childhood, see the studies of my fellow *Culture in the Mirror* PhD student Welmoed Ekster

fects how they behave and think about themselves and others as they can choose to conform to the conventions of their social and cultural environment.

Although there are some general trends to be seen in the development of cultural (meta) cognitive development, there are also many individual differences between children. In middle childhood the concrete representations of perception and imagination slowly give way to more abstract types of cognition when the child masters self-concepts. Each phase has its own characteristics, strengths and weaknesses that tie in with the dominant skill and medium at that stage of development.

Even though many developmental psychologists and indeed the school system itself seem to emphasize the importance of language and abstract thought in this process, I would propose a different view. As the cognitive skills are co-dependent and cumulative in nature, they cannot be viewed in isolation or even in terms of a hierarchy. Each skill serves a specific function at a specific time and remains embedded in the following phases. Likewise, Donald claims that narrative only works when it succeeds in dominating and incorporating the mimetic layer. It cannot replace the basic experiences of the perception of difference and imagination, because these are its roots (p. 323). The same goes for theoretic representations; they too need to gain control over the other three layers to be successful. "The triumph of consciousness will be complete when it can finally reflect on the collective process itself and see only itself, in the mirror of its own reflection" (p. 326). Therefore I would also question whether the emphasis on conceptualization and analysis, which is prominent too in the Vygotskian and Piagetian views, really gives us the full picture of childhood metacognition. This preference for conceptualization and analysis is not surprising as they are not only the dominant modes of cognition in our society, but also in academia. However, one could argue that the use of abstract skills in understanding a concrete mode of thought may not be the most logical one. It would be interesting to see what happens when childhood cultural consciousness is looked at from a self-perceptive or self-imaginative perspective.

When looking at the metacognition of children, it would seem that their self-imaginative skills are especially well developed, allowing them to see new possibilities, form novel ideas and think about alternatives. Self-imagination is likely to aid decision-making, helps to express ideas and feelings, and is a powerful tool in understanding the (sociocultural) world of the child. The child is able to manipulate existing memories and, in doing so, to exaggerate and alter different aspects of the reality that it wants to understand and engage with. The ability to self-imagine is also vital for the child's interaction with others as it helps it to envision their thoughts, goals and beliefs. Likewise, it plays an important role in processing testimonies, which are the experiences of others. These can be used to form new memories, which in turn can be applied to reflect on actuality. The process of transferring knowledge, by verbal means or by demonstration, which is so central to teaching, would be far less effective without the child's self-imaginative competencies.

The dominance of self-imagination in young children may imply that even when they are triggered to use their conceptual or analytic skills, they may use their imagination as a scaffold. The highly theoretical and linguistic nature of our society and our schools does not seem to fit the cultural cognition of the young child. This does not mean that (cultural) education should stay away from these types of thinking altogether, but one could discuss the fruitfulness of focusing on (self-)conceptual and (self-)analytic thinking alone, the more so in the light of our and our children's cumulative cultural abilities. In the case of cultural education, it seems likely that children will be prone to reflect on themselves, others, their culture and other cultures using the skill that they are most proficient at. And this may not always be the one that our theoretic society favours. The effects of the strong self-imagination of the young child on its use of the different media will be explored in the next chapter. There we shall see that even in a highly linguistic and theoretical culture like our own, children find their own outlets for expressing their imaginative cultural consciousness.



Artefacts in childhood and the development of media skills

§I EXPRESSING IMAGINATION IN ARTEFACTS

We have seen in chapter three that the young child's cultural consciousness is highly imaginative. However, Western culture is very much language- and theory- oriented and may thus not leave much room for play and

fantasy. How do children make this conceptual and analytical world their own? As we shall see in the following chapter, the metacognitive world of the young child may be much more like a tribal village than the theoretical information society we adults live in.

Childhood is often labelled as the 'age of imagination' (e.g. Singer and Singer 1990). From chapter three we gathered that young children are keen to engage in pretend acts and other types of imaginative behaviour⁴⁰. Self-imagination serves as a cognitive bridge between the privacy of self-perception and collective self-conceptualization and thus marks the beginning of a more advanced abstract mode of thinking: "...we might say that pretense is recognized as the loquacious courier of childhood cognition, a pathway between the structures of semiotic competencies and the slipstreams of their culturally encoded and shaped manifestations" (Goldman 1998, 9).

It is important to note that, like the other cultural skills, self-imagination cannot exist in a purely private and immaterial form. It depends on interaction with others and material conditions (Vygotsky 2004, 30). As we have seen in chapter one, in Van Heusden's theory the skills of cultural consciousness are always paired with a medium. The media groups are: the body, the artefact, language, and graphic

⁴⁰ Roberts and Krause even make an evolutionary connection between childhood and the skill of imagination (see: Namy 2005).

signs. Imagination in particular seems to trigger *outward* expressions of consciousness. Vygotsky writes: “This feature [the most important one] is the imagination’s drive to be embodied, this is the real basis and motive force of creation. Every product of the imagination, stemming from reality, attempts to complete a full circle and to be embodied in reality” (41). In evolution, the first step of this externalization involved the expression of imagination in bodily movements. Donald calls this type of external self-image kinematic imagination. “Kinematic imagination is a very peculiar capacity. It is our real speciality as a species, our true Cartesian Theater. It is this, our kinematic image of the self, that anchors our experience” (Donald 2001, 273). Kinematic imagination signifies the shift from perception to consciously controlled actions that express imagination. The cognitive change to (self-) imagination seemed to require a particular type of medium that fitted both its concrete as well as its motoric, manipulative nature.

According to Donald, human group behaviour was heavily impacted by the shift from perception to imaginative actions. These acts could generate complex patterns of public activities. The dynamics of ape social groups changed towards a more structured way of life with efficient hunting and gathering skills and tool-making. Complex routines and collective expressions were passed on in the collective memory of the group (*ibid.*). The combination of imagination expressed in an outward form created a new type of culture in which cognitive networks between people could be established (274). This externalization started with the tool that was most readily available to convey imaginative thoughts, ideas and feelings: the body. Donald states how the ability to reflect –imaginatively– on the self and its place in the environment resulted in new cultural behaviours and more complex skills. It generated the universal mimetic mind-set that is still present in our cultural cognition today (273-4).

I would argue that even though a medium is required for all types of (meta)cognition, it is the *cultural skill* that dictates the nature and use of this medium. In other words, the medium is transformed into the kind of cognitive vehicle that fits a particular mode of thought best. It is not the body, the language or the artefact as such that signifies a culture but the *mental activity* that employs these media and naturally instills them with meaning. In the following chapter I will suggest that self-imagination is most naturally paired with the medium of the artefact. In fact, imagination seems to create ‘artefact-like’ dimensions in the other types of media it uses. I have selected three media types that are very common in childhood and cultural education: play, language and drawing. These types belong to the media groups of the body, language and graphic signs in the model of cultural cognition (see chapter one). However, I propose a different perspective and suggest that one could also see the use of these media by young self-imaginative children as ‘artefactual’, artefacts being the imagination’s natural allies. This would imply that children make the media fit their cognitive preferences and that they thus may use them differently than adults do, because of their different cognitive abilities.

1.1 THINKING WITH THINGS

Interestingly, the use of objects and artefacts in cognition has not been studied much when one compares it to the research on language or graphic signs. In Donald's book *The Origins of the Modern Mind*, tools are just briefly addressed and seem to play only a marginal role in the transition from episodic to mimetic culture (1991). In developmental psychology research, object use is often only studied in infancy and does not play any significant role in studies on preschool children or the school-age child. In terms of Van Heusden's theory, this is a remarkable finding as artefacts are the medium that fits in between the use of the body and language and they thus play a key role in cultural cognition and the transition to a more conceptual mode of thought. Also, artefacts can be very useful to express one's thoughts externally without having to use arbitrary symbols. One scholar who does emphasize the role artefacts can play in human cognition is professor of Pre-Colombian art history and archaeology Esther Pasztory. In her book *Thinking with Things, toward a new vision of art* (2005) she claims that: "Things are needed to think with, in order to manage problems of cognitive dissonance. The connecting link is visibility: once the intractable cognition in the mind is made visible, the processes of vision seem to link it to the verbal and conscious part of the mind. We make things visible so we can understand them" (21). Pasztory argues that the visual character of things makes it pleasurable to examine them, which benefits human survival, just like sexual pleasure is a reward for reproduction (23).

Although Merlin Donald does not explicitly address the role of artefacts in cognition, he too stresses the benefits of the external representation of thought and argues that human cognition can take various forms depending on a culture's needs. The plasticity of the brain allows for a wide variation of skills between cultures, especially when it comes to representation. External graphic representation plays a significant role in Donald's theory as he claims that graphic technologies help to free the mind from memory storage in the brain. Ideas in an external memory field can be compared and discussed much more easily than when they reside in the brain. Graphic signs thus serve as a means to reflect and allow for interplay between memory and the environment, between the memories in the mind and the externally stored memory (310). Furthermore, through external memory, the human mind itself can be programmed: "In symbolic technology, consciousness has gained a means to reflect its own activities back on itself and program its own operations. It can redirect the narratives and images of culture back into the flow of individual awareness, where it can take advantage of the tremendous resolving power of our perceptual apparatus" (316)⁴¹. I believe that although graphic signs and artefacts are two inherently different things (mainly the first relying on abstract thought and the latter engaging concrete thinking), the power and benefits of externally oriented media starts with the artefact, which in turn enables language and graphic expressions. By externalizing ideas into a perceptive

41 For more on the relationship between external memory and analytic abilities see also the studies of my fellow *Culture in the Mirror* PhD student Emiel Copini.

form, one can create a distance from one's thoughts which makes it easier to reflect on them and to communicate them with others. I think this feature of artefacts is a crucial step towards abstraction and a more complex type of metacognition.

The Russian cultural-historical psychologists likewise stressed the human capacity to mediate with artefacts. Vygotsky too embraced this idea. For him, the main type of mediation is through spoken language, but there are also other signs that can be used (e.g. drawings, art and writing). The mind can evolve through a connection with its surrounding heritage which links people to each other and to their environment (Cole and Wertsch 1996, 252). Vygotsky called the processes in which people interact with tools and objects 'instrumental acts' (Hedegaard 2004, 21). He was also interested in how tools become mental instruments. For Vygotsky, language and instruments are the two fundamental media in cultural development. The instrument can be seen as an intermediary between object and psyche (Verillon and Rabardel 1995, 81). "Development is therefore seen as the result of a largely artificial process in which the acquisition of instruments plays a leading role. It is not so much the instrument as such which determines evolution but the functional reorganization and redeployment that its acquisition and use impose on the innate mechanisms at different levels: sensory-motor, perceptive, mnemonic, representational, etc." (82). The use of a psychological tool does not change the object but it does change oneself (Hedegaard 2004, 22).

It is important not to restrict the term 'artefact' to material objects in a literal sense only. According to Hedegaard it is impossible to differentiate between material and mental tools, because both have mental and action features. In order to understand how humans function as social and cultural beings, one needs to take this unity into account (ibid.). The way in which children appropriate artefacts is mediated by their cultural environment and is therefore infused with cultural traditions (28).

Another important source in thinking about the role of artefacts in human cognition is philosopher Marx Wartofsky. Wartofsky has similar ideas to Vygotsky about the relationship between objects and people, but includes perception as well as artefacts in his theory. He claims that artefacts *change* human perception (22). Wartofsky argues that although Aristotle distinguished between the making of things (production) and the doing of things (communication), these two things are in fact very closely related. Human and animal behaviour differ when it comes to how artefacts are used, both productively and communicatively (1979, 203). Wartofsky does not distinguish either between the material attributes of artefacts and mental features of cognition: "I take the artifacts (tools and languages) to be objectifications of human needs and intentions; i.e. as *already* invested with cognitive and affective content. The tool is *understood*, both in its use, and in its production, in an instrumental fashion, as something to be made for and used for a certain end" (204).

1.2 THE UNION OF (SELF-)IMAGINATION AND ARTEFACTS

I believe that the strong bond between artefacts and imagination originates from imagination's motoric, manipulative and concrete nature. Imagination strives for the *active creation* of new shapes and forms that express thoughts in new configurations. Imagination goes beyond reality as it is perceived and generates alternative, possible worlds. Vygotsky argues that imagination's drive for external expression leads to objects that in turn affect culture. Because of the skill of imagination, new forms can be created that have never existed before in memory or in the environment. Once this fantasy has been externalized in an artefact, it actually becomes part of our reality and has its own agency (Vygotsky 2004, 20). Wartofsky has a similar view and argues that the artefact aids the transmission of knowledge between people: "The crucial character of the human artifact is that its production, its use, and the attainment of skills in these, can be transmitted, and thus preserved within a social group, and through time, from one generation to the next" (1979, 201). Imitation thus becomes a distinctive feature of human praxis. This means that the crucial role that imagination plays in teaching is facilitated by its expression in artefacts.

The use of artefacts in human culture is widely discussed in evolutionary discourses. Previously, the culture of *Homo Sapiens* in particular seemed to be strongly connected to tool use (Cole 1996, 148). However, *Homo Habilis* also used different types of tools. *Homo Erectus'* brain was much larger in size and the tools he used were more complex. There is a general agreement among scholars that the use of complex tools and having a larger, more sophisticated brain are interrelated. However, more and more people argue that social organization and not the use of tools is the driving force behind the evolution of our human brain (149).

Moreover, existing views on tool use as a uniquely human capacity have been modified due to increasing evidence that some apes can use tools as well (155). However, tool use that is directed at objects is very common in human children and very rare in wild apes (157). Tomasello claims that apes learn not through imitation but by the fact that their attention is drawn to a particular task (159). Humans, however, learn through imitation and imagination. Humans can also, unlike apes or monkeys, use tools for different purposes and are able to use their imaginative skills to think of multiple functions for an artefact. Hauser and Santos argue that once early hominids were able to craft wooden tools or tools which had multiple parts (e.g. by binding different pieces together with vines), the tool technology and its function changed (2007, 288). Tool use became an important means of representation in human culture that could be imitated and taught. This generated a basis for cultural innovation and new cultural dynamics.

Vaesen outlines even more differences between human and ape use of tools. He claims that humans and apes differ in terms of hand-eye coordination, body schema plasticity, causal reasoning, function representation, executive control, social learning, teaching, social intelligence and language (Vaesen 2012). All these functions serve a purpose in the use of tools. Chimpanzees have much strength in their hands but lack fine motor control. They

also lack the brain regions concerned with forming a 3D image from motion. Furthermore, apes have less preference for the use of one particular hand compared to humans. Studies show that lateralized chimps are better at termite fishing (which is considered possible precisely because of this lateralization). Handedness also makes it easier to copy another person's movement as one can copy exactly what another person is doing without having to first imagine the action being performed with the other hand (204). Sometimes, tools can be used not as an artefact but more as an extension of the body. Evidence has shown that the brain is able to update its body schemas (which is called plasticity). This makes it possible to see a much-used tool as an extension of the hand. Monkeys have been shown to be able to do this too. In this case, the tool does not change the action itself and one can therefore not speak of imagination (ibid.). Hand gestures and tool use are also argued to be neurologically related to each other (Osiurak 2014). Another difference between apes and humans that affects their use of tools is that chimps have been shown to learn about causality by associative learning rather than by causal reasoning. Humans are very good at working out how things work which makes their tool use more effective (205). Moreover, monkeys have been found not to stick to one function of an object. "Once having conceptualized a tool as being for a particular purpose, humans find it difficult to use a tool for something other than its designated function - a phenomenon called functional fixedness" (206). The inability to see the function of a tool can inhibit the use of complex technologies (ibid.).

In studies with apes, the apes often only effectively use a tool when a direct reward is offered (e.g. a piece of fruit) (208). Apes generally pursue fewer goals compared to humans and humans can use their imagination and self-control to successfully craft and use tools for different and sometimes delayed goals. Humans also imitate all kind of behaviours, not just those that immediately lead to the desired goals. They are thus better at copying complex behaviours. Humans can also make tools that are going to be used by another person, which allows for more skilled and specialized toolmakers (ibid.). Expensive investments in tool use can pay off when the rewards can be shared. These mechanisms are limited in apes, which makes it unlikely that highly advanced tools will be developed. Human tools are often crafted by more than one individual, making tool making a social enterprise (goal sharing) (209). Furthermore, human active teaching is unique. Humans use cues to select those individuals it is worth learning from (210). This type of behaviour is not observed in apes. Moreover, *Theory of Mind* helps the learner see the intentions of the teacher. This allows for the transition from over-imitation to imitation as the apprentice will be able to imagine which behaviour is relevant to copy and which is not (ibid.). Language is often seen as one of the most important media in teaching as it also aids the accumulation of technological knowledge, distribution of knowledge and speeding up of technological innovation (211). There is some evidence that language and tool use have a common evolutionary origin (212). However, even though language can aid tool use it is not required. Evidence even suggests that tool use aided the development of language and not vice versa (213).

1.3 TYPES OF ARTEFACTS: WARTOFSKY'S MODEL

As we have seen, artefacts and imagination seem to have a close bond. However, in order to assess the role that artefacts play in human cognition and in childhood in particular, it is necessary to define the imaginative artefact more precisely. Again, it is important to note that an artefact in this sense does not have to be an object per se but can take different forms and employ various senses. Wartofsky's theory is very useful in this respect as it also starts from a broad definition of artefacts. He claims that an artefact can be anything that humans create by transforming nature or themselves (this is what Vygotsky would call psychological tools). "Nature becomes transformed, not only in the direct practical way of becoming cultivated, or shaped into objects of use in the embodied artifacts we call tools... it becomes transformed as an object or arena of action, so that the forest or river is itself an 'artifact' in this ramified sense" (Cole and Derry 2005, 5).

According to Wartofsky there are three main categories of artefacts: primary, secondary and tertiary artefacts. Primary artefacts are directly used in action. They are combinations of material tools and their social practices which serve to directly transform the environment (Wells 2009, 244). Examples of primary artefacts are knives, spears, needles, bodily skills, technical skills and social organization (Wartofsky 1979, 202). Primary artefacts are not created for representation although they can be used as such (e.g. to represent the activity for which they are used) (Wells 2009, 244). Secondary artefacts transmit and preserve primary artefacts, they can be gestural, oral, musical or visual (Wartofsky 1979, 202). Examples of these are recipes, traditional beliefs and norms (Cole 1996, 212). Face-to-face mimetic acts are the earliest examples of secondary artefacts. Nowadays they can include speech, writing, diagrams, institutions or regulations (Wells 2009, 244). Representation is functional in secondary artefacts as they represent a particular mode of action (Wartofsky 1979, 202). Secondary artefacts exist outside the mind as externally embodied representations and involve the transformation of natural materials, the arrangement of bodily movements or forms of social organization such as hunting or kinship (*ibid.*). This level of artefacts certainly belongs to cultural cognition, but is in my opinion not an example of imaginative metacognition. Secondary artefacts are mimetic representations of the environment but do not reflect on culture itself. At most, some of them could be classified as expressions of self-perception, in the case of imitation of actions, but not of self-imagination.

The distinction between secondary and primary artefacts that Wartofsky makes helps to see how an artefact can become a representation and fulfil its role in our cultural cognition. Wartofsky argues that our environment does not just 'exist' but is always adapted to or transformed by an organism. Artefacts play a large role in this transformation. By producing and reproducing artefacts, humans shape their world and at the same time their artefacts become representations of their actions. In fact, everything can become an artefact in this sense. A forest can become a source of food or can be divided into different areas, a river can become anthropomorphized as a representation of its meaning to the

people using it. Every sound, sight or feature in the environment, whether man-made or not, can become infused with meaning as a representation of human praxis (206). Wartofsky mentions the example of the cracking of a branch of wood that becomes an artefact, a representation of the hunt itself. In this example one can clearly see how cognition turns a medium (the sound, a bodily sensation) into an artefact.

However, for childhood metacognition, Wartofsky's third class of artefacts is the most important one as it expresses the self-imaginative skills. Tertiary artefacts can constitute a world of their own without direct practical use (Cole 1996, 121). A hunt can, for example, be mimetically re-enacted without an actual animal getting killed (pretence). In this representation, not just the action, but also the values and needs of people enacting it are expressed. In fact, a whole new world is created that can exist independently of direct practical use and conventions. Wartofsky even calls this, quite fittingly, 'free play' (1979, 207-8). Tertiary artefacts have moved beyond the mere imitations of actions to real self-imaginative acts and objects. These types of artefacts are detached from perception and thus the original use of representation is bracketed or suspended. Tertiary artefacts may be defined as imaginative integrative representational structures such as myths, art, religion, theories and models "...in terms of which humans attempt to understand and explore ways of transforming the world and their existence in it" (Wells 2009, 244). In this case, one can speak of true *metacognition* as this class of artefacts is used to reflect on oneself or other people by means of self-imaginative skills. The fantasy worlds that are created can make us aware of the boundaries of real life and are also derived from regular praxis and perception. However, they can also transcend ordinary perception and violate the limits of real life (Wartofsky 1979, 209).

The external expression of imagination in an artefact is also a key feature in Wartofsky's theory. He claims that the imaginary worlds that are created are not 'in the head' but embodied alternative canons of representations (artefacts). "Once the visual picture can be 'lived' in, perceptually, it can come to color and change our perception of the 'actual' world, as envisioning possibilities in it not presently recognized" (ibid.). The imagination in the head is a derived form of the making of imaginative artefacts. Imaginative artefacts create an alternative to direct perception which can then in turn change the way we see the actual world (Cole 1996, 121). The artefact of self-imagination is thus in principle externally oriented and creates a possible world, designed to reflect on human praxis.

Wells has combined Donald and Wartofsky's theories in a diagram (see fig. 1). However, while I think there is a clear overlap between Donald's stages and the types of artefacts that Wartofsky describes, I think that the model does not work.

<i>Time before present</i>	<i>Mode of knowing</i>	<i>Participants</i>	<i>Most advanced form of representation</i>	
			<i>Donald</i>	<i>Wartofsky</i>
6-2 million years	Actional	Solo individuals	Episodic	Primary artefacts: found objects as tools
1.5-1 million years	Procedural	Between individuals while engaged in joint action	Mimetic	Secondary artefacts: tools and practices; mimetic interaction
50,000 years	Substantive	Among members of a cultural group, reflecting on action and planning further action	[Spoken] Linguistic	Secondary artefacts: representations of tools and practices; spoken interaction
	Aesthetic	Among members of a cultural group, making sense of human predicament	Mythic	Tertiary artefacts: artistic representations in narrative, graphic, dance and musical modes
2500 years	Theoretical	Among members of 'scientific' communities seeking to explain the natural and human world	Theoretic	Tertiary artefacts: disembedded representations, such as taxonomies, theories, models, etc.

fig. 1: Wells' phylogenetic and cultural development model (2009, 246).

The problem is already visible in Wells' model itself. A 'spoken linguistic' category is added between mimetic and mythic culture, while mythic culture is characterized by spoken language. The confusion can be solved by adding the distinction between cultural cognition and Van Heusden's cultural metacognition. Secondary artefacts then become part of the domain of imagination and possibly self-perception. Tertiary artefacts belong to yet another level of representation, for they are used to reflect on culture itself and can therefore not be classified in the way Wells does. Donald's types of cultures do not specify between cognition and metacognition while the categories in the third ('participants') and fifth ('Wartofsky') columns in Wells' table do. This causes a logical friction between them.

I.4 THE DEVELOPMENT OF THE USE OF OBJECTS AND ARTEFACTS IN CHILDREN

As already noted previously, developmental psychology usually focuses on the use of objects in infancy rather than in childhood. What does become clear from this research is that human children seem to be interested in objects and already distinguish the natural world from artefacts at an early age (Keil, Greif, and Kerner 2007, 234). They even have, what philosopher and cognitive scientist Daniel Dennett calls a 'design stance'. Dennett distinguishes between three stances towards objects: a physical stance, a design stance and an intentional stance (Dennett 1987, 16-7). The design stance ignores the physical attributes of an object (physical stance) and assumes that it has a design, i.e., was designed to behave in a certain way in various contexts. "Not just artifacts but also many biological objects

(plants and animals, kidneys and hearts, stamens and pistils) behave in ways that can be predicted from the design stance. They are not just physical systems but designed systems” (17). Research has found that children already have a design stance at an early age, and that children assume that an object has been created for a purpose. This is even true for children who live in societies that have little technology (Bjorklund and Gardiner 2011, 160). Tool use is thus likely to be part of children’s intuitive physics: “An ability to understand how objects can be used to affect other objects and change the environment underlies tool use in humans and develops as children interact with their world” (ibid.).

Research by Gelman and Bloom (2000) found that the intention of the creator of an object is valued highly by children (even by 3-year olds). This goes not only for artworks but also for everyday objects (such as a knife) (99). Gelman and Bloom hypothesize that children’s essentialism (the tendency of children to look for the essential characteristics of an object) might play a role in this. Children are very interested too in other people’s goals which could also explain this result (100). Casler and Kelemen’s study (2005) also found that young children (two and a half years of age) already intentionally use a new object for the purpose an adults says it is for, even when it can perform other tasks, which supports the idea of a design stance. Research has furthermore shown that from six years onwards, children take the creator’s intention into account when identifying an object (Keil, Greif, and Kerner 2007, 239). Humans usually start to use tools around age two. It is thought that this ability depends on a cognitive leap (Lockman 2000, 138). However, early attempts at tool use may be regarded as more exploratory rather than failing to perform the task the object was intended for. Tool use in young children can be seen as an interaction between the tool’s properties and the surface the tool is used on (140). Young children need to learn how different tools interact with the environment and how to coordinate different frames of reference (ibid.).

One key activity in which children often use objects is in their pretend play. Already at a very young age do children recognize that they can use objects in pretend play (Pellegrini 2009, 118). Exploration and tool use are different types of interactions with objects. The first serves to find out what the object’s attributes are. This trend decreases in childhood, but is required for object play (120). Children first explore objects to see what they do and then move on to asking what they can do with it (Bjorklund and Gardiner 2011, 155). They explore how objects can be used as tools in playful activities. The object play of children is often influenced by their culture (e.g. Western adults often give their children Lego or building blocks that are particularly suitable for constructive play) (157). In non-Western cultures, children are more likely to be given miniature versions of adult objects. Between one third and half of all play in the preschool period involves objects (ibid.). Similar numbers have been found in non-Western cultures. “As with other forms of play, object play displays an inverted-U pattern, with low levels observed during the early preschool years, peaking in childhood and decreasing in adolescence” (ibid.). However, even though tool use increases during early childhood, it has been very sparsely studied in children’s everyday

life (Pellegrini 2009, 120). One study that does incorporate school-aged children is Bock's study on Botswana children (2005). This study found that the development of boys' object play followed an inverted U shape peaking at age four to six. The same pattern showed in girls, but later, peaking at age ten to twelve. Other studies show that boys use objects more as weapons and girls more for gathering (123). However, there are also studies that indicate that girls engage more in constructive play than boys (125).

Pellegrini and Gustafson's study shows that in a nursery with plenty of objects available, exploration, construction and play with objects and tool use account for more than half of all behaviour (130). In a less object-rich environment, these percentages are lower. In this study, the girls were more engaged in construction play and boys used the objects slightly more as tools. Boys also often used the objects in fantasy play (*ibid.*). Furthermore, boys were found to use the objects more as weapons (131) which is consistent with earlier findings.

Bjorklund and Gardiner (2011) argue that children first need to learn about the affordances of tools (i.e. the functional relationships between the tool and the environment). In using tools one must have an action plan that facilitates the affordance of the object (159). "From the perception-action perspective, tool-use learning may be understood as a continual developmental process in which children come to understand the relations between objects through the perception of affordances, facilitated by their interactions with the environment, such as through object exploration or object play" (*ibid.*). They also claim that tool use is something that comes naturally to children and that they automatically start to explore objects. Bjorklund and Gardiner advocate the Piagetian view that children need no instruction to figure out what an object can do (167).

1.5 ARTEFACTS AS EXPRESSIONS OF CULTURAL COGNITION

Although there is very little research about children and artefacts, the studies described above do indicate a strong connection between object use and childhood in general. To differentiate between different types of artefact use in relation to different types of cultural cognition, Pasztory's research (2005) can be insightful. She distinguishes different types of societies: bands (simplest forms of societies of interrelated members, hunter-gatherers), tribes (sedentary and agricultural villages), chiefdoms (based on stratification and hereditary rank) and states (governed by a ruler with economic and military power) (32-4). In all these societies, 'things' are the main source of communication (36). Each society has its own unique characteristics which Pasztory calls 'insistence'. The social integration of a society frames its cultural content: "The levels of social integration determine the forms of things, like a skeleton. The 'flesh' is the insistence of a particular tradition" (42).

The hunter-gatherer society does not have many objects because physical things are difficult to take with you (46). Rock markings and two-dimensional body decorations are however very common. Strikingly, these rock markings are often superimposed, which is

uncommon in other types of societies, which suggests that the images serve as mental maps rather than as embodiments (48). “These are not ‘art’ in the sense of treasure but blueprints of thought” (50).⁴² In the village society, there are more objects than in the hunter-gather society. “One major change that seems to have occurred as hunter-gatherers became agriculturists was a change from the two-dimensional to the three-dimensional –from images as a temporary aid to those as a relatively permanent embodiment” (53). The objects of villages are mid-way between naturalistic and abstract images and are often made out of wood. According to Pasztory, the three-dimensionality of the village object signifies that the object embodies a kind of reality and permanence: “Three-dimensionality as a value suggests that things are accorded the same reality as persons and the objects in the natural world. They are not images of something more real than they are but an alternate reality created by humans” (54). Masks are very typical objects for village society and are used in spiritual masquerades to show that the villager wearing the mask is impersonating someone else. The role of objects is also much greater in villages than in bands of hunter-gatherers. The objects become a focal point in villages and they play a key role in representing power relations, external material memory and identities (57). In chiefdoms the main objects are not masks but a tableau vivant of the chief, his insignia and other titled individuals (61). The objects are used to display the status of the chief. Portraits are also common in chiefdoms, but unlike the mask, which is stylized and generic, the portrait is meant to be realistic and individual and to portray power. The way the portrait is styled dissolves the craft in favour of the person represented (unlike in the mask where the craft is very visible). The portrait is almost a living, immortal stand-in of the person represented (64).

Pasztory’s research is very inspiring in the light of the development of children’s cultural skills and the role of the artefact in this process. The different types of societies that Pasztory describes interlink very closely with Van Heusden’s four cultural skills (see fig. 2). The village society has very strong imaginative characteristics, especially in the sense that it seems to mediate between a naturalistic and an abstract way of meaning making. This is also what one can observe in the pretend play acts of young children which are still concrete but which also diverge from reality. The fact that objects are so prominent in the tribe lifestyle only enhances the idea that self-imagination and artefacts build a natural alliance. This is also evident in the description Pasztory gives of the masquerade that is so typical of tribal life. The masks are a pivot to mark the difference between the real and the imagined event. The villager is who he or she is, but also not. By means of an artefact this dual representation is made explicit and observable. Without the mask, it would take much more effort and abstract thinking to represent as effectively a spirit or god. This kind of impersonation is also very common in a child’s pretend play where children too like to dress up or act out different roles as a self-imaginative mid-way between the private world of self-perception and the symbolic and collective world of self-conceptualization.

⁴² Interestingly, children also often draw with transparency and multi-perspective rather than copying exactly what they see (Jolley 2010, 16).

Type of society Pasztory	Key artefacts according to Pasztory	(Meta) cognitive skills of Van Heusden	Childhood developmental phase	Characteristic features in development	Mode of thought
Hunter-gatherer	Rock markings and body decorations	(Self-) perception	Early childhood/ nursery school	Imitation, focus on observable features of the self and others	Concrete, sensory
Village/tribe	Masks	(Self-) imagination	Early childhood	Pretend play, creating 'possible worlds'	Concrete, motoric
Chiefdom	Portraits, insignia, status-enhancing objects	(Self-) concep- tualization	Middle childhood	Preference for realism, increasing awareness of social conventions	Abstract, motoric

fig. 2 Pasztory, Van Heusden and childhood cognition

The observation by Pasztory that the objects of the village are stylized and generic rather than realistic is an important one as well in the light of child development. This idea can shed light on the way in which children employ the different media imaginatively. The chief society shares many characteristics with a (self-)conceptual mode of thinking which, as I have outlined in the previous sections, is also typical for the older child. Pasztory shows how objects become used in a much more realistic way as an expression of conceptual norms and values such as power and status. This is a much more conceptual or maybe even linguistic way of metacognitive expression.

1.6 THE IMAGINATIVE ARTEFACT DEFINED

Artefacts can be seen as more than three-dimensional objects alone. When looking at artefacts from a broader perspective they can be regarded as important mediators of cultural (meta)cognitive processes, especially those that express (self-)imagination. "A cognitive artifact is an artificial device designed to maintain, display, or operate upon information in order to serve a representational function" (Carroll 1991, 17). In line with the theories of Vygotsky, Wartofsky, and Pasztory, I would define the artefact as a conveyor of culture as follows: *a concrete (has physical features that can be heard, seen, felt, smelled or tasted), manipulated (designed) externalization of one's thought which is used to represent reality in an imaginative way. This thought does not completely coincide with direct perception (like a script or schema), but nor is it completely detached from it (like a symbol).* When the artefact is used to express cultural consciousness or metacognition the definition would read as:

a concrete (has physical features that can be heard, seen, felt, smelled or tasted), manipulated (designed) external image (visual or acoustic) of the meaning we give to ourselves or others (our metacognition) by means of self-imagination. This image is a bridge between direct perception and conceptual abstraction.

Artefacts in this sense are thus more than material, three-dimensional, objects alone and can be found in all four media groups. The body, objects, language and graphic signs can all function in an artefact-like manner under the influence of (self-) imaginative thought: “...because what we call mind works through artifacts it cannot be unconditionally bounded by the head nor even by the body, but must be seen as distributed in the artifacts which are woven together and which weave together individual human actions in concert with and as a part of the permeable, changing, events of life” (Cole and Wertsch 1996, 2).

By looking at artefacts from this broader perspective I believe that one can provide an alternative view on metacognitive development; one that is not dominated by language alone. Although language can be a very effective and useful medium to express and communicate cultural (meta)cognition, it is also a medium that is naturally (and evolutionarily) connected with conceptual thought (Donald 1991). The characteristically self-imaginative way of reflection in young children does not fit this abstract nature of language. The sparse studies on object use in childhood show a clear link between object use in the narrow sense and childhood cognition.

As metacognition has often been defined either in terms of language (e.g. in the Vygotskian tradition) or analytical (in the case of Piagetian views) skills, the other types of metacognition of self-perception and self-imagination may have been overlooked in the studies on childhood development. Furthermore, self-perception and self-imagination are hard to discern in early childhood (as we have seen in chapter three). From a semiotic perspective this is not surprising as perception and imagination are examples of one-place signs (see chapter one). Neither Donald nor Bruner make a clear distinction between the two, combining them in mimetic and iconic thinking respectively. However, I think that by on the one hand overlooking the concrete ways in which we can reflect on culture and on the other by not distinguishing between these concrete modes of thought, the artefact has become shielded from view. Pasztory’s theory makes us aware of the artefact as a powerful way of generating meaning in a socio-cultural world which bears striking resemblances to the world of the child. In the following sections on the development of play, drawing and language I want to explore how children use the media that are common in childhood and point out how the self-imaginative way of children to engage with them has artefact-like dimensions. In doing so, I hope to broaden the common notion of metacognition and to highlight rather than ignore the role of artefacts as significant tools of the mind, as: “...things are good to think with, rather than merely good to look at” (Pasztory 2005, 21).



§2 PLAY

Play is one of the characteristic activities of young children in which they express their cultural consciousness. Bjorklund even claims that: “Play is the essence of childhood. Children do not need to be taught to play” (Bjorklund 2007, 161). Not all play is necessarily metacognitive (e.g. rough-and-tumble play, which is also common in animals). A child’s cultural consciousness becomes visible in a specific type of play, which is called *socio-dramatic play* or *social pretend play*, in which its self-imagination is expressed in interaction with others. “When two or more children cooperate on the basis of their culturally rooted and shared experiences to consciously transform an object, situation or action into a flexible signifier of some other phenomenon (...) they thereby engage in social pretend play. Pretence is therefore symbolic, referential and communicative behaviour. Whether manifested as a mentation, or more usually as some physical act, pretence invariably involves *acting as if* one thing was another. It therefore invariably involves the use of imagination” (Goldman 1998, 2). One of the main scholars of pretend play is Leslie who developed a decoupled theory of pretence. This means that children need to be able to isolate two representations from each other and thus form a metarepresentation in order to engage in pretence (Kavanaugh 2011, 297). Animals have been found to sometimes be able to perform simple pretend acts (especially when they are held in captivity) but seem not to be able to engage in social pretend play (298). Pretend play appears to be a universal phenomenon in humans although the amount of time children can spend playing and the role of the parents in play differs greatly across the globe (299). Children engage in social play before they can really pretend (Singer and Singer 1990, 72). In order to speak of play as a self-imaginative act, the child needs to be aware of its pretence and to be able to reflect on it (Goldman 1998, 4; Singer and Singer 1990, 72-3; Golomb 2011, 173).

2.1 THE GENERAL DEVELOPMENT OF PLAY

The ability to pretend starts from around age two onwards, however, true dramatic play does not develop until about age three (Golomb 2011, 113). Pretend play is a very early example of how we humans are able to

manipulate our own and others’ relationship to reality according to Leslie. It is a skill that lies at the basis of all relationships that involve beliefs, expectations, promises and hopes (Singer and Singer 1990, 125). In early pretend play, self-perception is still quite dominant. Children often act out variations of daily life (Golomb 2011, 113) and the play is more an acting out of memories rather than true imagination (Vygotsky 1978, 103). As the child matures, socio-dramatic play becomes increasingly self-imaginative, especially between

the ages of four to seven, which is considered the highpoint of pretend play (Golomb 2011, 113). Around this time, the play becomes more elaborate, involving more roles, more complex themes, more sophisticated relationships between the players and include a wider number of participants (*ibid.*). Through play, the child can reflect on its culture in an imaginative way and re-create its memories: “A child’s play is not simply a reproduction of what he has experienced, but a creative reworking of the impressions he has acquired. He combines them and uses them to construct a new reality, one that conforms to his own needs and desires” (Vygotsky 2004, 11-2).

Later in childhood, increasing self-conceptual skills start to influence children’s play as they do other metacognitive activities. The rules in a child’s play become more rigid (Vygotsky 1978, 103), language becomes more prominent in play and more stereotypical fantasy figures such as Superman are included (Golomb 2011, 114). “Because increased capacity for logical thought, more complicated motor skills, longer attention span, and increased ability to concentrate, [the child’s] general play changes style and function” (Singer and Singer 1990, 88). This does not mean, however, that pretend play disappears around age seven. Many scholars argue that the child’s imagination goes underground or takes shape in theatre or games as the child gets older (e.g. Singer 1995; Golomb 2011; Kavanaugh 2011). Singer and Singer argue that with the start of more formal schooling and more time away from adult supervision, daydreaming and fantasy start to replace the pretend plays of early childhood. The self-imagination of children takes on new forms in video games, computer games, board games and theatre plays at school. Rather than disappearing, Singer and Singer claim that the self-imagination merely finds new outlets that are opened up by the expanding world of the child (Singer and Singer 1990, 234). Kavanaugh (2011, 303) argues that one reason for the decline in social pretend play as it is performed by younger children could be the function it has for the development of Theory of Mind, which is typical for the preschool period. Another cause could be that as children enter school, they have fewer opportunities for pretend play. Furthermore, children become more self-conscious as they get older and their parents less supportive of open pretence (e.g. in the case of imaginary companions).

2.2 GENDER DIFFERENCES IN PLAY

As we have seen in chapter three, gender plays a role in how children think and act. Golomb (2011) claims that gender already becomes a defining feature in the sense of self in infancy. A common playmate in early childhood is the imaginary friend. Imaginary friends are often created by children with no siblings or when there is a large age gap between children within the same family (117). Boys often have imaginary friends that are heroic and more competent than themselves while girls have imaginary friends that are less competent than themselves and that they can nurture and dominate (119). Girls and boys have also been

found to have different preferences in the kinds of pretence acts they engage in. Girls prefer scenes from domestic life. Boys prefer fantasy, action, adventure, conflict and warfare. Studies have also found that children play longer and more complexly with gender-preferred toys in same-gender groups (Goldstein 1994, 41).

2.3 BRIDGING PERCEPTION AND SYMBOLIC THOUGHT BY MEANS OF IMAGINATION AND ARTEFACTS IN PLAY

One can see the shift from self-perception to self-imagination in play when one looks at the objects that are used by children in their pretence. “It is the essence of play that a new relation is created between the field of meaning and the visual field- that is, between situations in thought and real situations” (Vygotsky 1978, 104). Before age three, children like to pretend using objects that resemble the real object, which shows that perception still plays a dominant role in the child’s cognition. This use and creation of resemblance is uniquely human (Mitchell 2002, 8). The ability to spot a resemblance between the pretend object or act and the real one is essential for any type of pretence (ibid.). Before actual pretence happens, children merely reproduce the action that they know. The next stage is pretence of a realistic use of an object but with an element missing (e.g. eating from a spoon with no food). As children get older and their imagination gets stronger, they can use objects in their play that diverge more from their referent. The prototypical objects are slowly replaced by true imaginative objects that are less bound to reality (Goldman 1998, 31). The imagination allows the child to act in contrast to what it perceives. Vygotsky claims that “Action in an imaginary situation teaches the child to guide her behavior not only by immediate perception of objects or by the situation immediately affecting her but also by the meaning of this situation” (Vygotsky 1978, 97). However, it is important to note that pretend play in children does not become completely abstract. Children need to use objects that share at least some properties with the thing it refers to, so not any object can serve as a substitute for anything. The relationship between the object and the referent in play is thus still concrete and imaginative rather than symbolic and conceptual. What happens is that the meaning that the child imposes on the object starts to dominate the perception of the object. “This characterizes the transitional nature of play; it is a stage between the purely situational constraints of early childhood and adult thought, which can be totally free of real situations” (98). Language can help to use less realistic objects in play because children can communicate to each other what it stands for (Singer and Singer 1990, 85). The object is thus an important anchor in which perceptive and imaginative meaning are combined.

Piaget too sees play as a bridge between perception and abstract thought. He focuses on the use of signs (which he calls symbols) in pretend play (which he calls symbolic play): “These symbols are borrowed from imitation as instruments, but not used to accurately

picture external reality. Rather, imitation serves as a means of evocation to achieve playful assimilation. Thus, symbolic play is not merely an assimilation of reality to the self, as is play in general, but an assimilation made possible (and reinforced) by symbolic 'language' that is developed by the self and is capable of being modified according to its needs" (Piaget, Gruber, and Vonèche 1977, 493). Pretend play in the Piagetian view is thus a form of extreme assimilation of the external world to the self (280) and as such characteristic of the child's strong self-imagination. The use of objects in play helps to detach one's thought more from direct perception while at the same time maintaining a concrete relationship with the world and the self. Goldman (1998, 11) likewise argues that pretend play occupies the space between mimesis and myth. Play thus serves an important function in the development of abstract thought and signifies the importance of self-imagination in childhood. "...we might say that pretence is recognized as the loquacious courier of childhood cognition, a pathway between the structures of semiotic competencies and the slipstreams of their culturally encoded and shaped manifestations" (9).

2.4 FUNCTION AND BENEFITS OF PLAY IN CHILDHOOD

There are several benefits of play for the child such as the development of motor skills, expressions of emotions, learning to share, increasing language skills, ordering and an increase in concentration and flexibility (Goldstein 1994, 11). "...play is not the purposeless activity that it is sometimes thought to be, but has been selected over the course of human (and mammalian) evolution to serve a significant role in social and intellectual development" (Bjorklund 2007, 141). One of the most commonly mentioned benefits of play is that the child can try out new ideas and test behaviours without serious consequences (Bruner 2006c, 141). Another use is the fact that children can reflect on their social environment. The large social world of the child is cut up into smaller, more manageable pieces (Singer et al. 2006). Singer and Signer argue that pretend play is critical for children to give meaning to their expanding social and physical environment (Singer 1995, 191). Self-imagination is thus an important preparation for the increasing communal world of the child and accompanying conceptual modes of thinking. Singer argues that because of this, children who are less able to engage in pretend play (e.g. autistic children) miss out on important ways to develop self-schemas (194). Bjorklund and Pellegrini (2002) argue that this may be one important reason why the play period (and indeed the childhood period in general) is so long in humans. Children need the time to practise their social roles in a safe setting before they enter adulthood. "The interactions and lessons acquired during play among peers, perhaps more than any single socializing agent, afford children the opportunity and flexibility to learn what it means to be a man or woman in their society" (331).

The neo-Vygotskians go even further and argue that play is the leading activity for young children which in turn leads to new motives (see also chapter three). Rather than

wanting to be free of social pressures, children like to explore social roles. One of the effects of socio-dramatic play according to the neo-Vygotskians is that children are no longer satisfied with the pseudo access to the world of adults they gain through pretence. The child wants to become an adult and starts to show a great desire to go to school. Pretend play is key in order to achieve the motive of learning at school for the neo-Vygotskians (Karpov 2005, 153). Pretend play in this sense actually plays an important role in the transition from a mainly self-imaginative metacognition to a more self-conceptual way of thinking. “Properly organized adult mediation of sociodramatic play is especially important in the light of the fact that (...) it results in major developmental accomplishments by the end of the period of early childhood” (150).

Studies show that role play is related to narrative creativity and drawing creativity (Mottweiler and Taylor 2014). However, the relationship between creativity and role play is still unclear. Children who engage in role play might be more trained in using their imagination, which benefits their creativity in other domains, or creative children could be more interested in role play. It is also possible that a more general ability underlies both skills, such as flexible thinking (ibid.). The same goes for studies that show that engaging in role play is related to an advanced Theory of Mind. However, the causality between the two is unknown (Goldstein and Winner 2011).

2.5 PLAY RECONSIDERED

One can see how the dominance of self-perception shifts to self-imagination and later to self-conceptualization in the development of children’s play. Self-imagination functions as a bridge between the more private world of the young child and the large social world of the young adolescent⁴³. The imagination on the one hand maintains a concrete relationship with reality, but on the other frees the child from its direct perception, allowing for more exploration and manipulation of existing memories.

“[Pretend play is] the foundation of a long term incorporation and consolidation of a major human characteristic: our human imagination, our capacity through consciousness to form experiences into stories, to manipulate memory representations of our physical and social worlds into new scenarios. We can travel mentally through time and space, and not only entertain ourselves to pass the time but also explore a range of possible futures, of alternative courses of action. We can sustain ourselves in periods of stress with the hope generated by such imagined explorations” (Goldstein 1994, 7).

⁴³ For more on young adolescents, see also the studies of my fellow *Culture in the Mirror* PhD student Welmoed Ekster

In this process, the artefact plays an important role. Through the use of objects the child can play with different meanings. The perception of the object can be made subservient to the meaning the child wants to give it. Two representations thus come together in one object. Vygotsky calls the object a pivot in play, as it no longer only has a utilitarian purpose, but can serve as a means of imagination. When a child pretends that a stick is a horse, the stick becomes the pivot between reality and imagination (Bruner 2006c, 149). This semi-otic transformation allows play to serve as a way to free meaning from perception and is as such a step towards abstraction.

Interestingly, one also can see a shift from the use of the body to the artefact in play. In the preschool years, children are likely to use their body to pretend (e.g. using a finger to enact brushing your teeth). In such cases, the body is used as an artefact (imaginatively). Around age eight, most children will be able to perform the same action with an imagined object (holding an invisible toothbrush) (Mottweiler and Taylor 2014). The artefact has become internalized.

The self-imagination and use of artefacts in play seem to serve many important functions in the development of a sense of self as well as in the child's ability to become part of its community. Bjorklund and Pellegrini (2002) thus warn against the present tendency to restrict children's play by formal schooling, adult supervision or formalizing the free play of the child. They fear that this alters the quality and quantity of play and affects the child's development. As play is a universal human activity that is so typical of childhood behaviour, one should think carefully about altering a child's environment (e.g. by promoting formal education) at the expense of play (331). From a neo-Vygotskian point of view, this would probably even work contra-productively as they claim that play and imagination itself leads to the readiness of the child to engage in more conceptual and formal ways of thinking.



§3 DRAWING

Drawing is another activity characteristic for children. Most children are eager to draw and use their drawings to tell a story (narrative motivation) or to convey an emotion (expressive motivation) (Golomb 2011). Drawing is thus not just a pleasurable pass-time but can aid a child's reflection by allowing it to express its thoughts on paper: "...drawings and paintings are not merely problem-solving exercises; they are expressive statements about what one knows, feels, and wants to understand" (63). In order to classify children's drawings as expressive representations of their cognition or metacognition, the child who has produced the drawing will have to have some understanding of the nature of representations. Winner (2006, 863-6) argues that this requires a set of four conditions. The child needs to recognize that:

- ▶ there is a *similarity* between the picture and what it represents
- ▶ there is a *difference* between the picture and what it represents
- ▶ there is a *dual reality* of the flat picture and the 3D world
- ▶ there is an *intentionality* in a picture and that pictures can be interpreted.

Young children often still struggle to see the relationships between a picture and the real world (864) and their pictures can therefore not be regarded as expressions of cultural (meta)cognition.

3.1 THE DEVELOPMENT OF DRAWING SKILLS IN CHILDREN

There has been much interest in children's drawings since the nineteenth century (Golomb 2002). Romanticism rejected the idea that pictures need to look like reality and appreciated the innocence and simplicity

of children's pictures. This appreciation was revived at the turn of the twentieth century (Jolley 2010, 8). The scientific study of children's pictures started in the nineteenth century with the search for origins. The interest in pictures from a scientific viewpoint was focused on how well reality was represented while the artistic interest was concerned with the expression in them (9).

At the basis of child art studies there are two main theories of drawing development: the one by Luquet and that by Willat. Luquet discerned between different stages in representation. The first is that of *scribbling* where there is no real intentional representation. Then comes *fortuitous realism* which means that the child starts to notice a similarity between what it has drawn and reality. The next stage is *failed realism* which is characterized by the drawing of tadpoles (human figures that consist of a head with legs and/or arms

sticking out of it). The child tries to mimic reality but due to limited motor control and attention span it forgets to draw details. *Intellectual realism* follows which is characterized by the child's desire to include as many typical details as possible. "Intellectual realism is not just characterized by an advance in detail and spatial arrangement, but also by the child's desire to draw the details in their usual, generic shape" (13). This may lead to the inclusion of multiple perspectives in one picture because the child wants to draw what it knows rather than what it sees (17). The final stage is *visual realism*. With the aid of techniques such as occlusion and perspective and an increased attention span, the child can draw more specific examples of reality, relying more on what it sees than what it knows. Most people do not reach this level of drawing (19). The studies that followed those of Luquet showed that children could produce pictures typical of different stages under certain conditions. However, Luquet himself did not claim that the stages were fixed or that one was better than the other (20). Willat agrees with Luquet that children want to achieve realism, or what they see as effective representations (22). He discerns between five drawing systems: *topology* (where spatial relations are incoherent), *orthogonal projection* (front-to-back relations are ignored), *horizontal and vertical oblique projections* (the picture looks flat) and *oblique projection and perspective* (23). The drawback of Willat's theory is that a child may use more than one projection in one drawing and unless it is probed by an experimenter, one cannot be sure of its intentions. One of the key problems in the analysis of children's pictures is that it is difficult to assess when a child has intended to make a representational drawing. Often, adults will ask the child what a drawing means, which will make the child name the picture (31). Scribbles by young children are for example rarely spontaneously named and often only occur when children are asked about them.

Golomb's research shows a similar stage-like progression in the drawing of the human figure, which is a favourite subject for children (2002). However, she claims that these stages are not necessarily tied to a specific age: "...I tend to view it as a series of phases that can be short-lived, depending on practice, motivation, talent, and mental maturity" (18). Like Luquet she sees the early scribbles of young children as unintentional and non-representational expressions. This behaviour could be classified as enactive behaviour rather than iconic behaviour. "The crayon is an extension of the child's body; the pleasure is in the movement. The child is not 'making a picture,' certainly not making a picture of something. The child is the picture" (Bellah 2011, 23). Only when adults ask children about their scribbles will they invent a narrative. In preschool, children start to see a resemblance between what they draw and reality. They usually draw circles, lines and dots (Golomb 2002). The circular shape can stand for almost anything (2011, 19). The first true representational figures are called 'globals' which are spherical shapes with few details. They are not meant to be real copies of animals or humans: "The global figures represent the child's discovery or, more precisely, invention of a drawing system in which simple forms stand for the vastly more complex three-dimensional object. The ability to capture

resemblance in an abstract manner speaks of a uniquely human capacity and marks the beginning of representational development in this domain” (20). The child at this phase does not mistake the representation for the real thing and therefore this step marks the beginning of the self-imagination in drawing. “...the child is making sense of the world as well as the self and seeing balanced form in both” (Bellah 2011, 23). Next, the global is extended with limbs, which makes a tadpole figure. The tadpole develops into a stick figure or open trunk figure. Previously it was thought that the lack of details or absence of body parts showed the cognitive immaturity of the child. However, children have been found to know that what they draw differs from reality. They do not lack the knowledge about the reality of a human’s or animal’s physical appearance and are able to switch between different styles depending on the task (Golomb 2002). Children are eager to improve their drawings and within a short time their figures get clothes, hairstyles etc. to indicate gender. Height is usually used to indicate age. Besides the drawing of humans, children love to draw animals as well. The body of an animal is usually drawn from the side while humans are often drawn from the front (Golomb 2011, 31).

Children use different strategies to convey their ideas in drawing. One of which is transparency (showing details that in reality cannot be seen from that particular angle). In this case, the information about the subject is deemed more important than the actual likeness (37). One of the pictorial problems that children face is that the preference for depicting a frontal view (useful for conveying lots of information about a person) conflicts with the desire to express actions and motions (40). In middle childhood children face spatial challenges as they wish to depict space more accurately (49). Sometimes, when the theme is very compelling (e.g. hide and seek), the younger children also depict occlusion. By observing others and gaining more experience with the medium, children will develop more sophisticated techniques such as ways to visualize depth and volume in middle childhood (50). However, many children do not learn drawing techniques such as perspective by themselves (ibid.).

Not only the figures themselves but also the ways in which they are aligned tell a story for the child. Studies of children’s drawings show that children will either use a grid-like alignment of figures around the horizontal or vertical axis, or group the figures around a centre. To create a meaningful composition requires planning and knowledge of effective strategies in order to accomplish what you want to visualize (51). Grouping is a very powerful way to create meaning. By middle childhood, children start to group by style, figure, location, colour and/or activity: this kind of grouping requires advanced planning skills. Children also tend to organize figures symmetrically. However, children usually struggle to achieve an overall composition in their drawings. A coherent whole that encompasses all the elements is rarely achieved in childhood (63).

3.2 DRAWING AND SCULPTURE AND CHILDHOOD COGNITION

Because children's drawings tend to become more realistic or naturalistic as they grow older, it has been assumed that the child's drawing is a direct representation of its cognitive development. As the drawings become more realistic, they were used in tests where details and alignments were seen as indicators of intelligence (Winner 2006, 861-2). Vygotsky, however, argues that the young child draws from memory and not from reality. "The child, when he draws, puts into his drawing what he knows about the subject and not what he sees" (2004, 77). This may lead to adding extra elements or including things that cannot be seen (e.g. things in a pocket). Buhler claims that: "When you ask a seven-year-old to describe a horse, what you get is essentially the identical list of body parts that you get when he draws one: a horse is one head and one tail, two legs in front and two behind, and so on. This is why drawing from memory can be understood simply as a graphic narration" (Vygotsky 2004, 77). The child depicts as if describing the subject to itself. When the child gets older, line and form are developed which mark the transition to a more realistic depiction that is less schematic. Winner, however, argues that intellectual realism is a typical strategy rather than a stage (Winner 2006, 876). She claims that there is no indication that children move from drawing what they know to drawing what they see, but they learn new rules that allow them to foreshorten, for example. "All pictures are schematic, but schemata are more obvious in children's drawings because they have fewer schemes and are less able to modify them" (ibid.). Breeuwsma propagates a different view on children's drawings, one that is not so much focused on the product of drawing, but more on the process (2005, 48). He has found that young children draw very differently than older children (who draw much more slowly and are more critical). Breeuwsma claims that children draw for many reasons besides the specific end product and that a sole focus on *what* they draw obscures the many reasons *why* children draw in the first place. He calls this: 'efficiency without purpose' 'doelmatigheid zonder doel'.

Also in sculpture can one see this focus on meaning rather than likeness. Sculpture development has been studied far less than drawing development (Golomb 2002, 51). Researchers prefer to study drawings rather than sculpture because clay is difficult to mould and can fall apart. Drawings are also easier to collect and store. There are few studies that research sculpture and only a few of these take into account the three-dimensional aspects of the medium. In one study, 300 American and Israeli children from ages two to seven were asked to model a doll, a mummy and a daddy. The youngest children performed pre-representational actions (such as squeezing and poking the clay) with the clay. Further practice leads them to recognize something in what they have made (which is the same phenomenon that happens in early drawing development). The three-dimensional medium invites imitative actions such as moving a lump of clay across the table like a train or pretending to make pancakes. "These actions are in lieu of or as an aid to representation. They are not performed to create a perceptual likeness of the dough shape to the object but

instead to imply the object by imitating one of its functions” (53).

Around three years of age, true representation starts as children begin to make figurines of the human body in the form of upright columns (which are not common shapes in drawing). The child will often verbalize the missing parts. A child can also make tadpoles, which are balls or flattened circular shapes with all the features scratched in. Later on in their development, legs are included. A third shape is a graphic shape made out of clay of separate body parts. This last one resembles the open trunk figure in drawing, but in sculpture, all body parts are made individually and are assembled later (58). All shapes are mainly focused on the front of a human figure. In their verbal explanations, children show that they are aware of the missing body parts (so they do not exclude them because they are unaware of what a human figure looks like). They are also aware of how their sculptures fail in their intentions (a child who has made a figure with a bent leg may say: ‘he broke his leg’). “Verticality, uprightness, and facial features serve as defining attributes of the human figure” (60). As in drawing, with the child’s age the models become more detailed.

Sculpture offers different challenges than drawing as children like their human and animal figures to be able to stand up. Usually, animals are shaped from more angles than humans. As children get older, they can concentrate better and longer in an effort to match the figure with their intentions (71-2). The trend for differentiation levels off around age eight to nine. “This levelling-off effect is similar to that found in drawing; only in case of continued practice and the motivation to acquire new representational skills do the drawings of adolescents and adults show progression beyond the typical middle childhood drawings. These factors may well lead to a similar phenomenon in modelling with clay” (76). There is little proof for the theory that early representations stand for the cognitive immaturity of the child. The child will often create different shapes and perspectives, depending on the task. The study of sculpture can shed light on the cognition of children. While some aspects of the development of sculpture resemble the development of drawing, other phenomena do not occur in both (e.g. the juxtaposition of different views in drawing hardly ever occurs in sculpture which suggests that it is not a cognitive constraint but a medium-specific phenomenon).

3.3 U-CURVE IN DRAWING?

Another interesting point of debate in the research on children’s drawings is whether or not children’s drawing development shows a U-curve. Winner is one of the scholars who argue that young children draw more like adult painters than older children (859). According to her, five to eight year olds show a greater sense of personal style than nine to ten year olds. Drawings lose their playfulness at this age as does the children’s willingness to play with language and create metaphors. The willingness to violate realism declines around age ten (881). This idea had already been proposed by Piaget. “They [Piaget & V/d Berg] claimed that the assumption that pictorial work of young children often shares properties

and attributes of artefacts produced by mature artists, with these similarities dramatically diminishing in the middle childhood years only to re-emerge later in the work of older adolescents or adults”(Kindler 2000, 15). However, some scholars claim that this U-curve is only apparent when looking at specific qualities of a drawing and is thus “...a cultural artefact of Western societies” (ibid.).

Anna Kindler is one of the scholars who have tested the U-curve hypothesis. In an experiment in which 180 pictures by children aged five to fourteen and adults were judged by eight, eleven, fourteen- year olds and adults, no U-curve was found (18). Older children’s pictures were judged superior to the ones made by younger children, although the success of a drawing may depend on its topic (27). Kindler concluded that the U-curve shows a particular aesthetic preference which is not universal: “With the criteria of growth and progress shifting as a function of culture, age, and the very nature of art, the ambition of proposing a universal model becomes questionable. Complex developmental processes involved in the creation of art may perhaps be better understood through the use of multiple lenses and the exploration of the multi-dimensional picture that they collectively project” (ibid.). Jolley too replicated the U-curve experiment and showed a slow improvement in expressive drawings between ages four and twelve (Jolley 2010, 49). Subsequent studies revealed similar results. He concludes that the Project Zero studies (whose research team includes Ellen Winner) depend on a modernist perspective on art (57-8). He also claims that other studies (like those of Pariser and Van den Berg) show similar results when the drawings were judged by Chinese artists who focus more on technical skill than on modernist expressive characteristics (59).

While the U-curve in artistic accomplishment may thus not exist, it is clear from the studies on children’s drawings and paintings that the desire to draw declines as children reach middle childhood. Vygotsky argues that verbal creativity replaces drawing as a characteristic skill in the school years (2004, 42). Because children cease to develop their drawing skills further, most adults will draw very similarly to children aged eight or nine (75). Most children will not spontaneously acquire technical drawing skills such as perspective and lose their interest in drawing. In countries where drawing skills are more supported, this levelling-off effect is therefore not observed (Golomb 2002, 46). Only gifted children in Western countries seem to continue to develop their skills in drawing. According to Golomb, these children share motivation to translate their experiences in a graphic form “Thus, in addition to their natural talent and intrinsic motivation, they gain skills immensely from the constant interaction with their chosen medium, that is, from the on-going problem seeing and solving they engage in” (43). However, even these gifted children do not skip any of the stages in drawing as previously outlined. Golomb also stresses that giftedness in drawing and painting can take many forms. Some children are very skilled at realistic drawing while others are very proficient in using colour (35). What is clear is that the medium of drawing is used for a particular purpose and that this medium seems to serve

the expression of the younger child's (meta)cognition very well as the structure of children's drawings seems to be universal (Golomb 2011, 96). However, this function seems to become less suitable as the child's cognition develops and requires additional technical aid in the older child. The U-curve may not be a universal phenomenon, but it does show that a particular style of drawing becomes less prominent in middle childhood.

3.4 THE DEVELOPMENT OF VISUAL ART APPRECIATION IN CHILDHOOD

The shift in dominant skills from perception to imagination is also apparent in the way children look at art. By age four, children tend to match paintings on the basis of colour, while by age seven they look at the story the painting tells (the subject) (Winner 2006, 867). Children are easily confused about the intention of the artist under the age of eight (865). And under the age of ten they struggle to recognize the mood in abstract paintings (867). Between the ages of four to eight, children gradually learn to see the internal structure of a painting, but this ability only fully develops by late childhood or early adolescence: "...by age 3 or 4, children have the ability to perceive aspects of expression, style, and composition. However, when representational content is pitted against one of these nonrepresentational properties and competes for the child's attention, representation wins out and children ignore the aesthetic property" (868).

Parsons discerns between different stages in looking at art⁴⁴. The child progresses from stage one which is an intuitive liking for paintings in preschool to stage two in primary school which is characterized by a focus on the subject rather than on the colours alone (1987). These stages mimic the transition from self-imagination where the child is mostly focused on the personal pleasure an artwork gives rather than its more general features, to a more self-conceptual view. At the earlier stage, a child interprets the work of art associatively which also implies that it can change many times (31). In the more self-conceptual phase, a work of art is best when it is about something beautiful and looks realistic. The style of the painting matters less (39).

Kindler and Darras (Pariser et al. 2007) studied how children aged eight and fourteen, and adults judged pictures made by children and adults. The previously mentioned U-curve was only found in about thirty per cent of the adult expert judges. More prevalent across countries is the notion that skill improves with age (the 'traditionalist view'), this notion was shared by sixty per cent of all judges (ibid.). The eight- and fourteen- year old judges considered the drawings by the fourteen- year olds and adults the best. This leads to an inverted U curve (anti-modernist). The eight-year-olds judged the cartoon drawings above the other pictures, while adults favoured the narrative or emotional drawings. Kindler et al. argue that: "Developmentally, the youngest judges have not yet adopted the rigid and tra-

⁴⁴ See also chapter two

ditional categories for what constitutes art and what does not. For younger children, images that refer to favorite topics are invariably considered ‘good drawings’ regardless of other aesthetic considerations” (ibid.). The preference for cartoons in the eight year olds also fits their self-conceptual tendencies as cartoons are good examples of symbolic and conceptual expressions in art. However, cartoons are usually not promoted by adults or at schools. Kindler et al. argue that the modernist tendencies of Western adults lead to a disdain for cartoons and television images as they do not express an artist’s ‘authentic self’ (ibid.). In their research, the cartoon drawings were judged especially low on the scale by adult artists.

There are studies that show that children prefer the pictures that are like the ones they draw themselves. This is in line with Laquet’s research who claims that the internal model of the child determines a successful picture. The drawings and preferences thus change as the child’s conception of salient features changes (Jolley 2010, 101-2). Other studies, however, show that the production of children’s drawings lags behind their preferences (Winner 2006). As children get older and their drawing skills increase, this gap closes (Jolley 2010, 103). An explanation for the conflicting findings may be that children could be choosing differently when selecting pictures on affective or cognitive bases (106). Research by Jolley showed that children’s choices both affectively (which picture they preferred) and cognitively (which picture is the most realistic) advanced their own production (108). A small number of less advanced drawers showed a preference for the picture of their own level or slightly above (113). The conventional drawers preferred the most realistic pictures. This is consistent with Parsons who claims that as soon as children focus on the subject of a picture, they judge pictures on the basis of their realism (114).

3.5 DRAWING IN THE TRANSITION FROM SELF-PERCEPTION TO SELF-CONCEPTUALIZATION VIA SELF-IMAGINATION

Vygotsky (2004) argues that there are many similarities between the drawing of the young child and its play. The child will tend to talk while drawing and dramatize its characters. This shows how different forms of metacognition can absorb elements from each other “A child rarely works on his creations for a long time; in the majority of cases he completes them in one sitting. A child’s creative effort in this case is reminiscent of play, which grows out of the child’s acute need and provides for a rapid and complete venting of his feelings” (67). In early childhood, the drawing is still very closely connected to the bodily experience it generates. A drawing at this stage is more like a perceptual schema than an expression of self-imagination (77). As the child grows older and its drawings become more representational, the drawing fulfils a means to express its imaginative reflections on the self. “Art making, even in childhood, is an act of transformation, of creating a universe on a formerly blank page, an imaginative act of making meaning and coming to understand the object and the self in new ways (...) Above and beyond the intention to represent it is

the aesthetic pleasure children feel about their work, the desire to embellish, to decorate, to use color to enhance the emotional appeal of a drawing or painting independent of its reality status” (Golomb 2011, 172). Piaget argues that drawing fits between play and more logical thinking: “Drawing is a form of the semiotic function which should be considered as being halfway between symbolic play and the mental image. It is like symbolic play and the mental image in its effort at imitating the real” (Piaget 1977a, 495). The development of drawing is thus considered a stage-like transition towards realism.

The desire for drawing diminishes at school age. “Evidently, the young child’s creative forces are concentrated on drawing not by chance, but because it is precisely drawing that provides the child with the opportunity to most easily express what concerns him at this stage” (Vygotsky 2004, 43). Jolley has found that as children grow older, they become less satisfied with their drawings (2010, 115). He argues that this may be because of the general tendency to become more self-critical with age. Young children are usually very positive about themselves and think they are better than they really are (116, see also chapter three). However, I would argue that older children also want to use their drawings for different purposes than younger ones. Their self-conceptual ways of thinking require symbols rather than artefacts to be expressed effectively. The more expressive, individual and imaginative drawings (as artefacts) that are valued so by Western artists and modernist-minded adults do not seem to meet the conceptual criteria of the child in middle childhood⁴⁵.

The research by Kindler et al. shows that younger children appreciate more diverse styles when judging drawings than older children. There seem to be multiple routes that the young child’s drawing development can take early on in development. However, as the child grows up, the drawings of the older children of all countries involved in the study (Brazil, Canada and Taiwan) develop similarly (Pariser et al. 2007, 8). These findings also fit the increase in self-conceptual skills in middle childhood. Self-imagination is a very divergent way of thinking, allowing for the exploration of multiple possibilities and ways of thinking. The moulding and manipulation of existing reality into a wide range of possible forms is the key characteristic of imaginative thought in artefacts. Apparently, this use of drawing and painting as a concrete manipulation of reality is very appealing in early childhood. Children across the globe experiment in their drawings and use these as artefact-like expressions of their metacognition. Just as we have seen in the development of children’s play, the purpose of the drawing, the story the child wants to tell, overrides reality and perception. “There is much evidence from the variability of graphic forms children can produce to stand for a topic at any given time point that children’s drawings are a product of their *intentions* as well as subject to production processes” (Jolley 2010, 114).

The fact that children often switch between tadpoles and more conventional drawings (Jolley 2010; Golomb 2002) indicates that they are less concerned with the likeness of the image they produce than with its mean-

⁴⁵ See also the studies of my fellow *Culture in the Mirror* PhD student Welmoed Ekster

ing. However, this does not mean that children's pictures have no relationship with reality. Research shows that children are indeed concerned with and motivated to create shapes that bear some resemblance to the object they wish to represent (Golomb 2002, 43). Thus, the child's drawing cannot be seen as a totally abstract symbol (for it still retains some sensory reference to reality), but does allow for multiple interpretations of that reality which lead to a wide range of possible drawing styles. As long as the drawing can serve as an artefact rather than a symbol, the child may not be as concerned with its lack of more conceptual and technical skills such as occlusion or perception, for "[d]rawing creates an imaginative representation of an aspect of the child's world" (ibid.).

However, as children become more self-conceptual in their thinking, their 'artefact-like' drawings which are concrete, subjective, schematic and personal, no longer suit their metacognitive style. "The rankings of the youngest children show that at the start of aesthetic development, a much larger set of visual repertoires (...) is included in the concept of 'art' and that, as the individual is socialized, these wide vistas are narrowed" (Pariser et al. 2007, 9). This may explain the U-curve in artistic development when judging children's pictures on imaginative qualities rather than conceptual ones. When the techniques required to make more conceptual drawings are not offered, it is not surprising that many children will abandon drawing and focus on other media to express their cultural consciousness. Similarly, if teachers have a disdain for more conceptual artistic styles such as manga, cartoons or other images from popular media, it may be difficult for them to connect with the metacognition of the middle childhood child. Kindler (2003) argues for a more open-minded attitude towards drawing and painting, one that is not confined to an individual and imaginative style alone. Pictures serve as a means of communication and reflection and can thus take different shapes according to the meaning that is expressed in them: "They constitute the imagery that people have a 'need for'- imagery that is not guided by artistic intentions but rather by the need to represent, express, communicate, process for oneself or share with others events, ideas, or emotions that are significant in one's life" (291). The child's drawing does not need to be artistic in the modernist sense in order to be effective as a mode of reflection. However, as the younger child is often very skilled at self-imaginative thinking and is thus likely to use the drawing as an artefact this leads to a multiplicity of possible forms and individual and expressive styles that show a personal and creative take on reality that is often much appreciated by teachers and Western artists. Nonetheless, this imaginative use of drawing is neither superior nor inferior to conceptual modes of thinking from the perspective of metacognitive development. "To a large extent, children's involvement with art making is inner directed and propelled toward increasingly greater articulation. Drawing and painting are expressive statements about what one knows, feels, and wants to understand" (Golomb 2002, 43).



4.1 THE IMPORTANCE OF LANGUAGE

Language is a very effective way of signification and communication, which has proved its benefits in the lives of our ancestors. Language allowed for more specific, individual episodic memories to be shared in a community. Thus, a collective memory could be established, preserving the knowledge of previous generations, stored in symbolic signs in the shape of communal narratives (Nelson 2003, p. 126). In evolution, semantic and propositional memory greatly expanded under the influence of the invention of symbols (especially linguistic symbols) (Donald 1991). Donald claims that language is primarily used to bond as a group (2001, 253). Individual minds became part of a larger cultural context through this very efficient mode of communication. “Symbolic intervention on a grand scale allowed the inherent structure of episodic events to be articulated (...) The human mind had come full circle, starting as the concrete, environmentally bound representational apparatus of episodic culture and eventually becoming a device capable of imposing an interpretation of the world from above, that is, from its collectively shared, mythic creations” (1991, 268). However, this does not mean that there were no social communities before there was language. Language just provided the perfect medium to share collective ideas and values, which offered humans an enormous evolutionary advantage.

“The great divide in human evolution was not language but the formation of cognitive communities in the first place. Symbolic cognition could not spontaneously self-generate until those communities were a reality. This reverses the standard order of succession, placing cultural evolution first and language second. It also suggests that human ancestors could not have evolved an ability to generate language unless they had already connected with another somehow in simple communities of mind” (2001, 254).

Human children nowadays grow up surrounded by language from the moment they are born. Bjorklund claims that the fact that children are so quick to learn languages must mean that language served a great purpose in evolution not only for adults but also for children (2007, 104). Some argue that language enabled the child to communicate very effectively with its parents, which was decidedly useful as it was still extremely dependent on them.

4.2 LANGUAGE AND THE DEVELOPMENT OF SELF

Language has been claimed to aid or even allow for the formation of an autobiographical memory, which, as discussed in the previous sections, marks the starting point of metacognitive thought. “This memory system, typically organized as narratives of the social self, emerges later in childhood and is assumed to be unique to humans, dependent upon symbolic language” (Ellis and Bjorklund 2005, 365). Similarly, Theory of Mind development has also been claimed to depend on language abilities. Nelson argues that there are many factors that have been said to influence Theory of Mind, but that language must be directly related to it, as children without language do not master it, nor do non-human primates (Nelson 2005b, 28). “The most important development, the one with maximum impact on all social and cognitive functioning, is the acquisition of complex language-including semantics and syntax- and its use as a representational system in conveying and reflecting on knowledge, imaginative constructions, reminiscence, explanations, and other social and cultural, as well as cognitive, functions” (ibid.). Thus, according to Nelson, language plays a key role in the development of self and cultural consciousness.

In order to become a social and metacognitive being one needs to understand the different backgrounds, personalities and histories that people have. “The main reason for ‘reading’ minds is to interpret the difference between others’ and one’s own state of mind. Indeed, this is the first step toward entry into the community, and it begins as the child is exposed to what other people think in contrast to what the child thinks, which becomes possible through language in the early childhood years” (29). However, there is still a debate about whether language is a necessity in order to develop Theory of Mind or if it is just a very useful medium to aid this development. Donald argues for the second view. He also observes that language includes many words that refer to one’s own mental states or those of others, which points to the importance of this type of consciousness. Language can thus be a very useful tool in understanding oneself and other people and adheres to our social tendencies as humans: “We are comfortable in the realm of intersubjectivity” (Donald 2001, 60). Nelson claims that representing mental states in language requires abstraction from the real world (2005b). Children start to use mental state terms in emotional or perceptual ways around the age of two and by age three they use the words ‘think’ and ‘know’. The differentiation between these two words starts around age four. Only by the early school years is there a clear discrimination between ‘think’, ‘know’ and ‘guess’. However, even in the late primary school years children do not fully understand these words although some researchers assume that when a child uses the word ‘think’ and responds to it appropriately, it understands the concept. However, the child may only use it in contexts where it has been used by an adult and in a pragmatic way without truly knowing its meaning. Children are eager to talk about reasons behind actions, but they may not have arrived yet at what Nelson calls ‘the community of minds’ (ibid.).

4.3 DEVELOPMENT OF LANGUAGE AND STORY- TELLING

Piaget states that the development of language is structured by the development of logic in the child. The coordination of actions that develops (through stages) structures (verbal) thought until the logico-mathematical operations stage (Piaget, Gruber, and Vonèche 1977, 507). Vygotsky, however, does not start from logical thinking, but from language and how this language is used in context. “For Vygotsky, mental life first expresses itself in interaction with others. The results of such interactions then become internalized and enter the stream of thought. Since social interaction is principally constituted and mediated by speech, what gets internalized into the child’s stream of thought are the meanings and forms generated in verbal exchange which themselves are products of the broader cultural-historical system” (Bruner 2006b, 191). Language thus stimulates and directs development as adults tell the child what is important and how to interpret the world around it. In this collaborative dynamic, meaning is communally formed, which guides and structures the cognitive development of the child.

Language development starts with speech. The more the parents talk in the presence of the child, the more easily a child learns to talk. In the early years of life, spoken language is the main influence on a child’s language development (Hulit, Howard, and Fahey 2011, 243). Written language becomes important at around six or seven years of age. Research shows that by the age of nine or ten, children who engage a lot in reading, have significantly larger vocabularies than those who do not (ibid.). Adults and older children learn new words through direct teaching from more accomplished people (often these are teachers and parents), by picking up cues in the context in which the word is used and by allying morphological information (ibid.). Word knowledge may develop both horizontally (learning more words) as well as vertically (deeper understanding of the meaning of a word). The language that children use can reveal something about how they think. School age children use ‘and’ at the beginning of eighty per cent of sentences in narratives. As the child grows older, this number declines to about twenty per cent in his or her teens. The conjunction ‘because’ is difficult to master for children as it implies a causal relation (requiring analytical thinking). It takes until about ten to eleven years of age until the child fully masters the use of this word (256). “The most noticeable and dramatic increase in metalinguistic awareness occurs between the ages of 5 and 8 years (...) Beginning at this time but continuing even into adulthood, the child notices and develops an understanding of each of the basic components of language, including phonology, semantics, syntax, and pragmatics” (274).

The types of stories that children tell obviously change as children develop. Between the ages of four to ten, children become more acquainted with the conventions of story construction. The shift from self-perception to self-imagination shows when you see their stories move from something that may have happened in the past to a purely fictional story “... a world of alternatives and possibilities rather than reality” (Golomb 2011, 154). The stories of a young child have an episodic structure consisting of a setting, the initiating of the event, a response and an outcome (Case and Bruchkowsky 1992). In the setting, a

fixed time and place is chosen and the characters are introduced. In the event, an action sequence starts which causes a response. The outcome follows from the response. The four year olds' stories included syntactic (simple episodic format) and semantic (familiar social event sequence without making the motivation for the action explicit) elements.

The stories of the six-year-olds often include two coordinated episodes. The second episode remains a script-like happily ever after version, just like in the four-year-olds' stories. The first episode does, however, have affective repercussions on the second and problems presented in the first event may be solved in the last part of the story. This marks a shift from script to plot: "The action in scripts is based on a well-known set of events with an equally well-known temporal format, and so, is pre-determined. Plots, on the other hand, center around a problem and its resolution" (175). The events in the stories of the older child are also pre-determined, not by a script, but by the necessity to solve the problem from the view of the character(s). The more script-like stories that match the perceptive outlook of the child on reality become increasingly fantastical, and indeed truly imaginative *stories* rather than descriptions. "In the beginning the incidents are linked sentences, a kind of chaining of elements, elements that over time are organized or centred within an overall conception of the story which entails the ending within the initial situation. With the expansion of a fantasy world, the action moves away from the personal center, from close to home to distant times and places as the narrator moves the protagonist through space into new locales, although only those events are reported that are accessible to immediate observation" (Golomb 2011, 154).

Later in childhood, the child will become more skilled at self-conceptualization, which also shows in their stories. The stories now include a plot that consists of a problem, a solution to the problem and an outcome around the start of middle childhood at age seven to eight. The plot becomes clearer and the problem is more sufficiently solved in the stories of children aged around eight (Hulit, Howard, and Fahey 2011, 265). Fully formed stories emerge in middle childhood, which fits the onset of the dominance of self-conceptual skills. Hulit (ibid.) argues that this development could also be due to the fact that fictional narratives are usually prominent in the school curriculum during these years. Between the ages of six and ten, there is already some understanding of the intentions of characters, but only from age ten upwards does the child really consider the motivations and inner life of the protagonist and antagonist (Golomb 2011, 154). The stories of middle childhood "... include greater detail and more information on the relationship of the characters, moods, motivations, and circumstances. The storyteller ties information together and may specify the significance of an event" (Hulit, Howard, and Fahey 2011, 265)⁴⁶. Conflict is often

46 From a neo-Piagetian perspective, the development of storytelling in children can also be classified into substages. Case discerns four levels of complexity in children's stories: event script structure (interrelational), problem-resolution

structure (dimensional substage 1), adding of a complicating event sequence (substage 2 of dimensional stage) and further elaboration which results in an integrated structure (3rd dimensional substage) (1992, 178).

dealt with passively by the protagonist in the stories of young children. This is different in the stories of older children; the protagonist will find solutions to overpower or outsmart the aggressor (Golomb 2011, 156). “The change from passively enduring adversity to active engagement also reflects the older child’s striving for greater autonomy and a growing sense of self as an active and problem-solving agent whose courage, competence, and intelligence meet socio-cultural expectations” (ibid.).

There are also some differences between the stories of boys and those of girls. The stories of young boys often include impersonal threats such as a car being crashed. Boys often enjoy themes of violence (155). Aggression is, however, also an important theme in girls’ stories. The aggression is usually more intense in boys’ stories, while sociability and crying are more common in girls’ stories. Animals are favourite themes in general between ages three and eight and they often serve as stand-ins for the self (ibid.)⁴⁷. Animals are also often different in nature in the stories of girls and those of boys. Animals in the stories of boys are usually ferocious, while animals in the girls’ stories are more domesticated. There are differences in both the styles and the topics of girls’ and boys’ stories: “Differences in the narrative style of girls and boys extend to both form and content, with the stories of girls more coherently structured, depicting a more orderly world that neutralizes disruptive elements, while boys’ stories are characterized by disruption and conflict” (155). Boys seem to strive for disorder, while girls prefer to re-establish order. Interestingly, girls’ stories also include boys, the stories of boys, however, rarely feature girls.

4.4 THE DEVELOPMENT OF CLASSIFICATIONS

Although children clearly use language from an early age, this does not mean that they have mastered true conceptual thinking yet. One of the key characteristics of (self-) conceptualization is the ability to group and classify the world around you into arbitrary (symbolic) categories. A child’s ability to categorize and classify changes as it grows older. Previous research has indicated that children’s categories are structured around themes rather than adult-like concepts (Kagan, Moss, and Siegel 1963). However, some more recent research questions this. Nguyen and Murphy for example claim “...that the opposition between two different kinds of classification has oversimplified our understanding of children’s conceptual abilities and that children may be able to use simultaneously both categorical and other kinds of relations” (2003, 1783).

⁴⁷ A very interesting avenue for further research would be to see if the concept of totemism offers additional insight into the transition from self-imaginative to self-conceptual thinking in childhood and the role of the artefact in this development. The totem has both imaginative, as well as highly symbolic and ritualistic traits and can have both an individualistic as well as a communal purpose. It would be useful to see if an evolutionary and psychological analysis of the totem culture sheds new light on how artefacts may be used in human cultural metacognition and possibly in childhood specifically.

They argue that there are three kinds of categories that children use to classify things:

- ▶ *Thematic categories*: objects that are associated with each other or have a complementary relationship (e.g. dog-lead)
- ▶ *Script categories*: objects that play the same role in a script or routine event (e.g. eggs-cereal)
- ▶ *Taxonomic categories*: hierarchies of increasingly abstract categories, classification on the basis of similarity or common properties (e.g. child-adult).

Although all three types of categories are sometimes called concepts, only the latter are abstract and would therefore, according to Van Heusden, fit a conceptual way of thinking. Thematic and script categories seem to rely more on perceptive and imaginative schemata than on conceptual thought. “Although thematic and script categories are different, they share the property that they are primarily defined by external relations rather than by internal properties” (Nguyen and Murphy 2003, 1784). A similar distinction between categories comes from Bjorklund (2005). According to him, classification starts with *idiosyncratic classification* around two to three years of age where objects are grouped randomly. This stage is followed by *perceptual classification* at three to four years of age. Things are now grouped on the basis of perceptual similarities. When children are about four to five years of age, they can use *complementary classification* (also called functional, schematic or thematic classification). Different items that share a complementary relation are now grouped together. Lastly children can employ *conceptual classifications* (also referred to as similarity, taxonomic, nominal or categorical classifications) around the ages of six to nine. Groupings at this stage are based on a similar category (e.g. ‘animals’ or ‘furniture’) (258). Although these types of classifications are also found in preschool children, they greatly increase between the ages of six to ten. The types of categories that Bjorklund outlines fit the development of cultural skills very well. Perceptual classifications are exemplary for the perception-dominated phase of early childhood, while complementary classifications require more imaginative skills. Just as the child starts to think and reflect more conceptually, the conceptual classifications (true concepts) become more prominent.

Another distinction between the types of categories children employ is the one made by Rosch et al. (Meadows 2006). She distinguishes between ‘basic level’ categories and ‘superordinate level’ categories. “Basic-level categories are relatively easy to recognize, recall and name, using as they do distinctive overall shape and motor interaction, and being at the most general level where a coherent mental image is possible” (152). These categories involve concepts like ‘bird’, ‘dog’ and ‘car’ in which the category members share the most perceptual features with each other and the least with other categories (e.g. most cars have four wheels). The correlational structure of objects is based on co-occurring attributes, the motor movements associated with them, a similarity in shape, and identifiability of shape. The basic level is the highest level of abstraction at which perceptual identification can

take place. “Basic objects names were shown to be the most used in language by adults, the first used by children developing language, and the least dispensable in a language possessing fewer lexical items than standard English” (Rosch et al. 1976, 429). Superordinate level categories require more abstract thinking and are detached from perceptual information. These two category types roughly correspond to respectively thematic/script categories and taxonomic categories. The basic level category type can already be mastered at a very young age, and many categories can be formed on the basis of perceptual similarity. It is also called a ‘prototype theory’. “Rosch (...) argued that at the so-called ‘basic level’ of category abstraction, concepts such as ‘cat’, ‘bird’, ‘cow’, ‘tree’, and ‘car’ were perceptually ‘given’ by covariations in the constituent features of category members” (Goswami 2008, 110). This use of prototypes is the most effective use of categories since it involves very little cognitive effort. Prototypes require no theory of representation. Infants can form these categorizations of prototypes based on perception. Already at three months of age, infants can use motion cues as well as visual perception cues (Goswami 2008, 112). The basic level categories that are mastered at an early age may not always be applied effectively. Young children often use basic level concepts and tend to over-extend them. When the child knows the other basic categories or the superordinate ones, over-extension will decline. Children prefer contrastive features which mark the similarities within a category and the differences between categories. They can also under-extend, when for example the family dog is called ‘dog’ and the child realizes only later that other dogs are also called ‘dog’ (Meadows 2006, 158).

Studies show that objects are represented across different areas of the brain. This means that there is no abstract concept of something located in one specific part of the brain (Goswami 2008, 121). Much research has been done about children’s concepts in particular domains.⁴⁸ These studies indicate that the use of concepts greatly depends on the field they are applied to (Meadows 2006, 159; Siegal and Surian 2004). Children may use different kinds of categories for different kinds of information: “...the present studies suggest that children can cross-classify items into multiple categories and use these categories for inductive inferences (...) These results suggest that young children are not restricted to a single form of categorization, as suggested by traditional accounts of children’s conceptual development. Even young children can categorize aspects of their world flexibly, laying the groundwork for their ability to cross-classify as adults” (Nguyen and Murphy 2003, 1802). The transition from concrete (perceptual and imaginative) to abstract (conceptual) classifications may thus be more domain specific than domain general.

⁴⁸ See for example Goswami (2008) and Meadows (2006) for an overview of children’s concepts about biology, psychology and physics.

4.5 THE USE OF LANGUAGE AND CONCEPTS IN CHILDREN

The previous section on classification indicates that there may be a mismatch between the onset of language and true mastery of abstract concepts. The ability to use concepts for metacognitive thought may not be as well-developed in young children as adults might be tempted to believe. Nelson (2005b) argues that by the late primary school years children still do not have the full range of understanding of conceptual words that refer to mental states such as 'know'. Furthermore she argues that while it is important to know the right words, it is essential to understand that language is a representational system in order to enter the community of minds. Not until middle childhood do children include mental states spontaneously in their narratives (43).

Bruner has made a distinction between different kinds of cognition which he calls *paradigmatic* and *narrative* thought which may help to shed some light on this matter⁴⁹. Paradigmatic thought is related to logical reasoning, narrative to temporal 'good stories'. Narrative thought constructs two different fields: the *landscape of consciousness* (which consists of beliefs, motives, emotions, etc.) and the *landscape of actions* (actions and actors)⁵⁰. Studies show that prior to the age of five, children use very little of the landscape of consciousness and instead refer to the landscape of actions (41). The use of language by young children may thus be more concrete and action-focused than truly self-conceptual even though they may use similar words to adults.

“Although the task of telling a story does indeed have specific requirements, it also has a more general requirement as well, one which would appear to implicate a more central conceptual structure (...) Children’s early narratives may therefore be seen as one of the primary stages on which they play out this emerging awareness of the landscape of consciousness, and come to understand its implications for the landscape of action more fully, using the social and literary forms that their society provides”(p. 188).

4.6 CHILD LANGUAGE AS IMAGINATIVE ARTEFACT

Vygotsky has written extensively about the use of language in children. He claims that the child will need to learn what the difference is between phonetics and semantics. First, the two are combined “The word, to the child, is an integral part of the object it denotes. Such a conception seems to be characteristic of primitive linguistic consciousness” (Vygotsky, Hanfmann, and Vakar 1965, 129). In nursery school children have been found to explain a name for a thing by the attributes of the object (cow means it has horns). “When asked whether one could interchange the names of objects, for instance call a cow ‘ink’, and ink ‘cow’, children will answer no, ‘because ink is used for writing and the cow gives milk.’ An

⁴⁹ See also chapter two

⁵⁰ For this distinction in particular, see Van Heusden (2007, 139)

exchange of names would mean an exchange of characteristic features, so inseparable is the connection between them in the child's mind" (129). The language that a young child uses thus seems rather more perceptive and imaginative than conceptual. The definitions that children give of words are also usually descriptive (e.g. a dog has four legs and a tail) (Hulit, Howard, and Fahey 2011, 248).

A child will be able to dissect words into sounds and sentences into words between age five to seven. At six to seven years of age, meaning and referent can be separated and a child can understand multiple meanings of a word and the arbitrary connection between words and referent. It will however take until secondary school before children are able to explain this (Hulit, Howard, and Fahey 2011, 275). By ten years of age, children's descriptions become more categorical.

"The metalinguistic part of defining words is the pervasive language awareness that comes with age, maturation, knowledge, developing cognitive skills, and increasingly refined perceptual skills. The more the child knows about life, and the more she knows about language, the more skilfully and completely she will identify the components of the dictionary definition. The metalinguistic influence is clear in the evolution of the child's definitions. We know, for example, that the preschool child's definitions and the early elementary school child's definitions are concrete and personal (...). As he proceeds through the elementary school years and gains more experience with life and language, the child's definitions become more conceptual, more abstract (...)" (Hulit, Howard, and Fahey 2011, 249).

Another way of describing the transition to a different use of language as the child matures is by introducing the concept of narrative. Narrative can be seen as an imaginative transitional phase to true conceptual language use. Its meaning does not reside in the individual words or sentences, but in the story as a whole (Bellah 2011, 33). It invites a bodily engagement with the stories being told and stimulates identification with them, both in a personal sense and in constructing a social identity. Humans use narrative in their arts, music and poetry to reflect on their lives and their cultures without using truly abstract concepts. "Narrative, with its capacity to reach into our bodies and reformulate our identities, individually and socially, also contains, in its womb so to speak, conceptual possibilities. But the attainment of conceptual representation is an achievement in its own right" (37).

When language is not used in a predominantly conceptual way, but more in a concrete, imaginative way (as is the case with basic level categories and imaginative narratives), one could argue that language is in fact *used as an artefact*. The word for the younger child is a derivative of reality: it is a concrete, imaginative way of expressing thoughts and feelings. "The primary word is not a straightforward symbol for a concept but rather an image, a picture, a mental sketch of a concept, a short tale about it- indeed, a small work of art. In

naming an object by means of such a pictorial concept, man ties it into one group with a number of other objects. In this respect the process of language creation is analogous to the process of complex formation in the intellectual development of the child" (Vygotsky, Hanfmann, and Vakar 1965, 75). Just as in the case of play, the child will use the artefact (in this case the word) as a means of externalizing its thoughts and to separate meaning from direct perception. The word, like the mask in tribal rituals, is on the one hand a representation of the thing it denotes but does not fully coincide with it. Just as in the performance of the village culture that Pasztory describes, the mask is there to remind you that although the actor is impersonating something or somebody else, he is still your neighbour as well. This is the difference with truly conceptual language: behind the mask (the word) there is no direct connection to reality, the mask is empty and its meaning derives from its relationships with other words and social conventions. The word of the young child is not yet fully abstract as it is still connected in a concrete way to its referent "For a child the word 'horse' applied to the stick means 'there is a horse,' because mentally he sees the object standing behind the word (...) Thus, through play the child achieves a functional definition of concepts or objects, and words become parts of a thing" (Vygotsky 1978, 99). Language can be used as an artefact to form a new, schematic and motoric representation of an aspect of the child's environment. It is definitely a step towards abstract thinking, but at the same time it is still perceptually bound.

The relationship between play and language in child development is also underlined by Engel (1995). She sees children's story-telling as a similar activity to play and as an important means for the child to engage with the world around it. "Children tell stories to organize their experience and their knowledge and to communicate their knowledge to others" (54). Storytelling in this sense is not so much a conceptual exercise as it is an imaginative expression of metacognition. "Children use stories to understand their world, or to take an extreme constructivist position, to invent their world. But when they tell stories as a way of playing, they are also using narratives as a way to re-invent their world. Storytelling is, after all, at heart a creative act. As with other creative and symbolic media, the author has a unique power to manipulate characters and scenes to make the world appear as he wishes or dreads it to be, or both" (53). Just like play and drawing, the word-as-artefact, as an external extension of self-imaginative thinking, may allow the child to reflect on itself and the world and gain control over it (57). Neisser calls this phenomenon 'the extended self' and claims that: "When children tell stories about who they might be, wish they were, imagine being, they are trying on one of the other selves that are part of the entire self we each ultimately are" (Neisser in: Engel 1995, 55-6). The function of the story for the young child as a means to self-reflect also becomes apparent from the fact that children are often unlikely to introduce the reader to the story they tell. The purpose is mainly to understand themselves and their place in the family (62).

The views of Egan, which were also addressed in chapter two, support the idea that chil-

dren may use language in an imaginative way which is different from that of an adult. Egan distinguishes between the mythic mind (roughly age two to age seven) and the romantic mind (starting between ages five to ten and ending around age fifteen) as two types of thinking in childhood. The mythic mind is characterized by an oral culture. Egan identifies several key traits of this type of thinking such as thinking in binary oppositions, rhyme, metaphor and play (2005). In the mythic mind, literacy becomes internalized, which leads the child to become more focused on what is real. The boundaries of reality are explored and children at this age are often intrigued by the strange and the exotic (1999, 45). Language plays a large role Egan's views of development and education, and although he argues that the Piagetian view of child development is too narrowly focused on the transition from the concrete to the abstract in order to reach mathematical and theoretical thinking, his ideas tie in well with the hypothesis that language can also be used as an imaginative artefact. Egan thinks that children are concrete as well as abstract thinkers, even though their concepts may not always be conscious (1997, 48). I would argue that it is precisely the self-imagination of the child that allows for this duality. Imagination marks the transition from the concrete perception of the world and the self to a more distant, abstract relationship with the environment. I feel that it is not language as such that is key in this transition, but the artefact-type use of this dominant medium in our culture that is most relevant. In this sense, Egan's views of the mythic and the romantic mind are very insightful and useful, for Egan is able to show how the use of the medium (language) changes as the child matures.

Egan is inspired and influenced by Donald, which is apparent in his categorization of the different stages of childhood. However, I think that he has mislabelled the mythic stage. When comparing Donald and Egan, it is clear that Egan has added the romantic mind in between the mythic and philosophic mind (resembling Donald's theoretic stage). This issue is also addressed in Egan's book *The Educated Mind* (1997, 183-4). Egan argues that he felt that the romantic stage was so distinctive in education that it needed to be a separate phase. When one adds Van Heusden's framework to the comparison, one could argue that what Egan calls the romantic mind is actually similar to the mythic mind in Donald's work and Van Heusden's self-conceptualization phase. Egan's mythic mind then corresponds with Donald's mimetic culture and Van Heusden's self-imaginative and self-perceptive skills. The transition between self-perceptive acts (such as imitation) and self-imagination (such as play) which are part of both Donald's mimetic phase and Egan's mythic mind can be made more explicit by separating them. Van Heusden's framework can thus easily be linked to Egan and may help explain the mechanisms behind the development he describes.

The use of the external nature of the artefact is also illustrated in the example of egocentric speech. For Piaget egocentric or private speech marks the intermediate stage where the child still is very egocentric but already has some language abilities. The child is not yet able to communicate with others. Vygotsky considered egocentric speech to be an important activity and argued that children use this speech to self-regulate and internalize

verbal tools. This self-regulation becomes a new higher process in itself (Karpov 2005). The words are thus first used as external, concrete tools before they can become internal means of thinking. This notion has been adopted by most contemporary researchers. "... the specifically human capacity for language enables children to provide for auxiliary tools in the solution of difficult tasks, to overcome impulsive action, to plan a solution to a problem prior to its execution, and to master their own behaviour" (Karpov 2005, 32-3).

Considering that young children seem to have a different understanding of language and use it in an imaginative rather than conceptual way, it is not surprising that their sense of humour reflects this. Hult (2011, 252) writes that under the age of six the child will mainly be amused by slapstick-like scenes where the action dominates. Between six and nine the child will find words funny that sound like other words it knows. Not until late childhood (nine to twelve) will a child have sufficient mastery of conceptualization to laugh at jokes that are based on multiple word meanings. Acquiring and using language in the conceptual sense thus requires an abstract use of memories rather than a concrete and personal one. I would argue that the language of the young child can be seen as an artefact, in which the words are concrete, external, manipulated reflections on the world of the child. Only when the self-conceptual skills starts to become more advanced will the child start to use its language for its 'natural' purpose which is to share beliefs, norms and values in an abstract and symbolic way and to engage even more effectively in its social community. "During the early school years, the child's definitions progress from personal, experience-based understandings to more socially shared understandings, and from single words to sentences with appropriate detail and explanation around age 7" (249).

4.7 SPEECH AND WRITING

Writing derives from the medium of language and is a very important and useful skill in human culture. Donald (1991) has written about the function of graphic signs in the transition from a mythic to a theoretical culture. He argues that symbolic literacy is not just reading and writing, but the skill to use a graphic, symbolic system (Eskritt, Lee, and Donald 2001). The great advantage of using a notational system is that it can serve as external memory storage. Information can thus be divided between internal and external storage "... external symbols have greatly expanded cognition by allowing it to become much less individualized, making cognition a much more collective process" (49). Donald however claims that little is known about the ability of children to create external storage and if they are able to voluntarily control the distribution of information storage.

While there may be little knowledge about children's ability to use external memory sources, there is ample research on the development of reading and writing in children (p. 289). What is striking about these studies is that they reveal a gap of several years between the start of a child's speaking and writing abilities (Vygotsky, Hanfmann, and Vakar 1965,

98; Hult, Howard, and Fahey 2011). According to Vygotsky, this has everything to do with the abstraction that is required for writing and reading. Oral use of language still has some musical and expressive qualities that written language lacks. “Written speech is a separate linguistic function, differing from oral speech in both structure and mode of functioning. Even its minimal development requires a high level of abstraction” (Vygotsky, Hanfmann, and Vakar 1965, 98). From the perspective of Van Heusden’s theory, the difficulty in learning to read and write presents a double challenge to the young child. First, it will have to think conceptually (and thus turn the word-as-artefact into a word-as-abstract symbol) and then it will have to understand the grammar and structure of language (which requires an analytical mode of thought).

4.8 METAPHOR

One way of getting a better understanding of the different uses of language in children is by using Langer’s theory. She distinguishes between discursive and presentational forms of language (1978). The first is used denotatively: meaning and referent correspond one-to-one (Feinstein 1982, 47). This meaning is usually agreed upon in culture and could also be called conceptual use of language. Non-literal meaning uses connotation, but does also require literal referents in order to communicate. The referents correspond one-to-many and their meaning may not be agreed upon. The presentational forms of language can be called ‘metaphors’ and are constructed on the basis of individual experience rather than the result of a shared cultural convention. The arts belong to the domain of non-propositional and non-literal meaning (45). Thus even ‘linguistic’ art forms such as poetry have an imaginative, metaphoric meaning that cannot be translated in a literal sense

“..for though the material of poetry is verbal, its import is not the literal assertion made in the words, but the way the assertion is made, and this involves the sounds, the tempo, the aura of associations of the words, the long or short sequences of ideas, the wealth or poverty of transient imagery that contains them, the sudden arrest of fantasy by pure fact, or of familiar fact by sudden fantasy, the suspense of literal meaning by a sustained ambiguity resolved in a long-awaited key-word, and the unifying, all-embracing artifice of rhythm” (Langer 1978, 260-1).

According to Langer, an artwork “..is an outward showing of an inward nature, an objective presentation of a subjective reality” (Langer in: Feinstein 1982, 48). In this sense, one could argue that the language-as-artefact of the young child shares many characteristics with the metaphorical and non-literal use of language Langer describes. Her view on art as metaphor with a personal, untranslatable meaning not only shows how different aspects of culture may display distinct relations between meaning and referent but also illustrates that how

children create meaning is in fact similar to that of artists. This is not surprising as both the cognition of the young child and that of the artist rely on a strong self-imagination.

Lakoff also points out that there are many preconceptual ways in which we can make sense of our world as we have our motor movement, rich mental images and gestalt perception (1987, 270). The basic levels concepts mentioned earlier build on these kinesthetic image schemas and can thus be seen as intermediaries between Gestalts and concepts. The image schemas are concrete as they rely on our direct experience with the world but also require imagination as they move a step further in the direction of abstraction and generate bodily metaphors. Image-schemas are cognitive structures that derive their logic from how we as humans experience the world. "What Lakoff (...) is saying is that the schemata that emerge from our bodily experience have a basic logic that enables them to form connections in at least two ways: first, things that are alike in some ways be grouped together as categories; and second, things that are seemingly unlike can be joined and made meaningful through metaphor" (Efland 2002, 148). Johnson too argues that the imaginative metaphor is a vital way to reshape our experience (1987, 169). Unlike Piaget, who thought that image-schemata were replaced by more abstract types of cognition, Lakoff and Johnson argue that metaphor remains present in our everyday thought and that it has a great purpose in self-understanding. "A large part of self-understanding is the search for appropriate personal metaphors that make sense of our lives" (2003, 233). By constantly creating new metaphors one keeps constructing new stories to make sense of one's experiences. Efland argues that the arts play a key role in examining and exploring these metaphors. The language of young children may also be one of those places where one can see these building blocks of our cognition in their prime. Winner argues that metaphor (and its imaginative, rather than symbolic qualities) is very common in the language of children (Winner et al. 1980). Metaphors in this non-symbolic sense (e.g. 'the legs of a table') are bridges between bodily experiences and more abstract thinking. By acknowledging the imaginative qualities that language can possess, one can look at language from a broader perspective and see not only its strong conceptual potential but also how it can function as an expression of a personal and collective metaphor.

4.9 LANGUAGE AS MEDIATOR OF THOUGHT

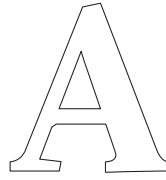
Although language is a very common and popular medium to use for reflection in Western culture, it is important to note that metacognition can be expressed in a variety of media. One can express and develop an awareness of self and others in many forms. "In their creative origins, symbols are a product of thought, not vice versa, and in their interpretation, symbols get their meaning from thought, not vice versa" (Donald 2001, 276). Donald argues that although language mediates and amplifies thought, the mind is infinitely larger than language alone.

Language is a medium that is very suitable for conceptual thought, but as we have seen, it can be used for more imaginative modes of representation as well. By using language in a more imaginative way, the child can explore itself and its world in narrative. Although narrative requires the use of linguistic symbols, it retains the more bodily and affective qualities of the imagination. “Narrative fiction creates possible worlds –but they are worlds extrapolated from the world we know, however much they may soar beyond it. The art of the possible is a perilous art. It must take heed of life as we know it, yet alienate us from it sufficiently to tempt us into thinking of alternatives beyond it. It challenges and it comforts. In the end, it has the power to change our habits of conceiving what is real, what canonical” (Bruner 2002, 94). The language of the child is easily mistaken for an expression of conceptual and logical thought, but it is important to note that the child will be likely to use words in the fashion that fits its thinking best. This does however not mean that the more artefact-like way in which language may be used by the child is in any way inferior to more abstract conceptualization. As Donald argues: “The success of a truly new expression can (...) be judged only by a part of the mind that intuits the successful clarification of its own inner state” (2001, 278). In other words, the use of the medium is effective when it can shape and express one’s metacognitive experience in a satisfactory way. By taking the focus off the solely abstract (conceptual or structural) qualities of language one can see that it offers a wide range of uses, some of which are utilized very successfully by young children. “...narratives change across time to reflect the child’s expanding experiences, cognitive growth, and imagination” (Hulit, Howard, and Fahey 2011, 265). Metaphor in the non-symbolic sense is a typically linguistic tool that can be used to describe the self-imaginative, artefact-like way that language is employed by the young child, a way which mirrors its pretend play.

The words themselves, whether written or spoken, have no meaning on their own but only become interesting as they reveal the thoughts, feelings and ideas of the person who created them. As the cognition behind the word grows and matures, so does the use of language. “The relation between thought and word is a living process; thought is born through words. A word devoid of thought is a dead thing, and a thought unembodied in words remains a shadow. The connection between them, however, is not a preformed and constant one. It emerges in the course of development, and itself evolves” (Vygotsky, Hanfmann, and Vakar 1965, 153).



§5 TO CONCLUDE



As we have seen in the previous chapter, the focus on abstract types of thinking may not suit the child's metacognition best. However, does this mean that the corresponding media of language and graphic signs should be avoided in the (cultural) education of young children? I think not. Language and graphic signs are very important and powerful tools in transmitting meaning and knowledge in our culture. Although one could question the strong (neo-) Vygotskian emphasis on language as a crucial tool in development, there is no question that it is a highly efficient and effective way to teach and to store personal and collective memories. However, I believe that the strong focus on self-analytical and self-conceptual skills in metacognition has obscured the role of the artefact in cultural consciousness. Debray also argues that the overemphasis of language overlooks the technical embeddedness of our culture (2000, 120).

The artefact as a concrete, imaginative medium is a powerful and useful means in thought and behaviour, and one that I think is very prominent in early childhood. Although the media and the cultural skills cannot be separated from each other in practice, they can be in theory. And this I think helps in order to better understand how children give meaning to their cultural surroundings. The strong self-imagination that, as we have discussed in chapter three, plays a crucial role in transition from the private, perception-dominated world of the nursery school child to the larger social and cultural collective of the middle childhood child, moulds and manipulates the media it employs to suit its mechanisms best. The result is the artefact. Wartofsky helps to open our minds to a wider notion of artefacts, one where the artefact is not bound by physical properties alone, but can be regarded as a specific representation of human action. Pasztory's analysis of different cultures and societies shows how artefacts can be used in different ways to express different types of cultural cognition. I believe that the objects of the village society mirror those used in early childhood: through their schematic nature, their distinct craft and their ability to create alternative realities. It is precisely because it is not restricted by the conventions of abstract concepts that the artefact can be truly (self-)imaginative and free.

By theoretically separating the cultural cognition from its means of transmission, I feel that one gains a better perspective of metacognition in childhood. For cultural education this means that one should be aware of how a medium *is used to think with*. Language, like the other media, only becomes a way of reflection when it is infused with meaning and suits some types of cognition better than others. By acknowledging that children may be prone to a more concrete and motoric way of interacting with the world, the artefact becomes more visible and can thus be effectively utilized in (cultural) education. Egan too raises awareness about the fact that our education is mainly focused on a literate way of thinking and that this may not necessarily fit the way a child creates meaning. He pro-

poses an alternative which is not only to offer physical 'hands-on' education that stresses the concrete, but to connect more with the oral tools that children have: "The belief that young children are generally concrete thinkers has meant shunning content that seems to involve abstractions, instead focusing on 'active doing' and practical manipulation that has made the typical elementary classroom less intellectually rich than it should be"(1997, 50). Despite the emphasis that Egan puts on the medium of language as the key mode of thought, I think that his comments about education are valid. The result of broadening not only our perspectives of reflection, but also of the artefact, is a wide array of possibilities to use all medium groups effectively in order to engage the young child's cultural consciousness. This is especially relevant for primary school teachers, who want to develop cultural education lessons. My empirical studies are a first step in acquainting teachers with Van Heusden's framework and will be presented in the following chapter.

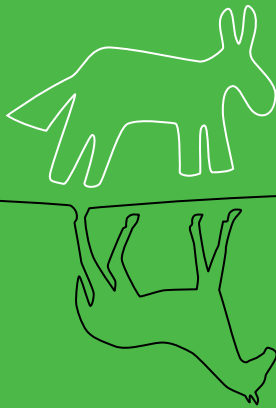


PART THREE

CHAPTER 5: *The development of teachers' understanding of cultural education – an empirical study*

CHAPTER 6: *Cultural education 'live'*

Empirical research



The development of teachers' understanding of cultural education – an empirical study

INTRODUCTION

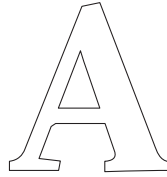


As outlined in chapter one, cultural education is part of the curriculum in many Dutch primary schools and receives extra financial support from the Dutch government. This financial support, however, comes with little content backing. Schools and teachers are relatively autonomous in the Dutch system, which generates much freedom but which is also sometimes difficult when teachers need to shape their cultural education programmes. There are so-called 'kerndoelen' (core objectives) for cultural education, but these are very broad and thus provide little direction. The Bamford Report praised the enthusiasm of teachers and the great potential of the Dutch system. However, it also indicated that there is still some way to go when it comes to the quality of cultural education and that there are several areas which need improvement (Bamford 2007). One of the fundamental problems which lies at the heart of cultural education is that there seems to be a lack of understanding of the schools' and teachers' part in what cultural education entails, about its function and how it can best be conveyed. There is also some confusion about the relationship between arts education and other realms of cultural education such as media education and heritage education. Teachers need assistance in their struggle for good cultural education and should be provided with the theoretical support that matches their commitment. This support is vital to increase its quality and sustainability.

One of the goals of the Culture in the Mirror project was to study how cultural education can be improved by increasing the teachers' command of the subject. At the heart of the project lies Van Heusden's theoretical model, which was outlined in chapter one. This theoretical framework is based on research in semiotics, cultural studies and the cognitive sciences and specifies the nature of culture and cultural consciousness. It was hypothesized that the use of this framework would help teachers to develop and deepen their understanding of cultural education. The highly conceptual and analytical nature of the framework may, however, prove to be difficult to translate into a cultural education practice that works for teachers. In this chapter I will assess what the impact is of designing lessons inspired by Van Heusden's framework on primary school teachers' understanding of cultural education. The model will be briefly outlined followed by a short overview of some current research on teacher knowledge and the development of teacher knowledge. An analysis of the level of understanding of cultural education of twelve primary school teachers who participated in the CiM project will show if and how this knowledge has developed over the course of two to three design cycles. Lastly, I will conclude with some final recommendations.



I.1 A FRAMEWORK FOR CULTURAL EDUCATION



As was outlined in chapter one, Van Heusden argues that culture is based in cognition. Culture is defined as the on-going dynamic in which our minds interact with our environment, generating feelings, thoughts and behaviours. This environment can be natural or man-made, stable or unpredictable. We are constantly attributing form and meaning to our environment (often without even noticing) by using skills that we are born with or that we have acquired over the years. These forms and meanings are stored in our brains as memories and can be re-used, when our environment reminds us of something we have experienced before. What we call culture starts with exactly this process, in which memories are matched with new experiences and during which new memories are constructed. The four skills by which we do so are perception, imagination, conceptualization, and analysis. These four cognitive skills tie together in a cumulative structure. The use of these skills to make sense of our world is what we call culture or *cultural cognition*.

The cultural skills of perception, imagination, conceptualization and analysis always require a medium through which they are expressed. Van Heusden categorizes these media into four main groups: the body, artefacts, language and graphic signs. All skills can be partnered with all media (i.e. an imaginative drawing), although some combinations are more likely than others. *Culture is thus an on-going form- and meaning-making dynamic in which people try to make sense of actuality* by using their cognitive skills in different media to make their memories work best for them⁵¹.

Arguably one of the most interesting features of cultural cognition is that cultural skills can be used to make sense of culture itself. This means that one can for example analyze someone's imagination or perceive the concepts of a society. The representation process is thus recursively doubled: one is representing a representation process. This duplication results in what we call *cultural consciousness*, or *metacognition*. This is the awareness of our human culture. The four cognitive skills and the media are now applied to reflect on the cultural cognition of an individual, a group or a society. To differentiate between cultural cognition and cultural consciousness, we refer to the latter in terms of: self-perception,

⁵¹ Much of the way we attribute form and meaning is shared by others in our community. Families, friends, (sub-) groups and societies share customs, rituals and behaviours that result from similar ways of looking at the world. Although cultural cognition can be individual (i.e. my conceptualization or my perception), most of it is collective and distributed across household-, city- and country borders. See also Donald (2007).

self-imagination, self-conceptualization and self-analysis. Expressions of cultural consciousness are all around us. Just think about the news, politics, the arts, philosophy and religion. In all these domains we reflect on what we as humans do, think and create.

Cultural education focuses on this type of reflection. Cultural education is education about culture and is therefore also education for our cultural consciousness skills. The *subject* of cultural education is therefore necessarily always *culture itself*, which we interpret using one or more of the cognitive skills and one or more of the media groups. This happens in the cultural classes such as visual arts, music, drama, dance, philosophy, history, media education, heritage education and languages. As cultural education centers around metacognition, it is important to be aware of the fact that these reflexive cognitive abilities develop over time as the child matures. The skills of self-perception, self-imagination, self-conceptualization and self-analysis are shaped by cognitive development and experience⁵². Likewise, the way a child is able to express its cultural consciousness in a medium depends on its mastery of specific technical skills (to reflect on culture in a drawing requires drawing skills, just like writing a poem requires a certain mastery of language).

The framework as outlined above has several implications for cultural education. The first being that the *content* of cultural education lessons is always some aspect of culture, and that the pupils are using their cultural consciousness (the four skills and the medium groups). Secondly, cultural education must *connect* to the development of the children because their cultural consciousness develops over time. This means that children must be encouraged to use their cognitive skills at the level that is required for the task (e.g.: a certain degree of self-imagination), they should be accomplished enough in the medium to be able to express their thoughts and ideas in it, and they should be at least somewhat familiar with the topic (since memories are used to give meaning, some relevant memories need to be present already). Thirdly, Van Heusden implies that there is a *cohesive relationship* between the use of different subjects, skills and media, both between classes of the same age group (horizontally) and as the child progresses into higher grades (vertically). A school can decide which skills, topics and media they think are most important for their pupils and design the curriculum accordingly.

1.2 TEACHER KNOWLEDGE

Van Heusden's framework could provide a firm foundation for cultural education programmes in primary schools. It may increase the teachers' command and awareness of what cultural education is, what it can mean for the pupils, and how it relates to other school subjects. However, as the theory also points out, these new concepts and structures will first need to find their place among the existing beliefs and practices of teachers. Teachers have their own reference points

⁵² For an outline of this development in children ages four to ten, see chapters three and four.

and memories that need to be acknowledged before the model can be used effectively in any classroom. Much research that has been conducted in the past on teaching studied isolated teaching behaviours and had a prescriptive nature. Nowadays however, many educational scholars believe that educational studies can only be truly effective if the whole dynamics of teaching practice is taken into account: “Research on teaching changed from studying teacher behavior into studying teacher cognitions and beliefs underlying that behavior, based on ideas about the interaction between them” (Verloop, Van Driel, and Meijer 2001, 442). One can make a distinction between knowledge *for* teaching that comes from outside the school and which is formalized and based on scientific research on the one hand and the knowledge base *of* the teachers which consists of experience, formal and informal schooling on the other (Verloop and Lowyck 2003, 205-6; Verloop, Van Driel, and Meijer 2001). Teacher knowledge contains firstly the interactive knowledge that the teacher uses to interpret what happens in the classroom and react to it. Secondly, there is the type of knowledge that consists of the teachers’ views, opinions and subjective theories that exist independently of the classroom (Verloop and Lowyck 2003, 210-1). All these different sources contribute to what the teacher thinks and does. “Teacher knowledge is the total knowledge that a teacher has at his or her disposal at a particular moment which, by definition, underlies his or her actions” (Verloop, Van Driel, and Meijer 2001, 445). Or, in line with Van Heusden, one could also say that teacher knowledge consists of all memories a teacher has at a given moment that may be used to give meaning both inside and outside the school environment.

Shulman has studied the type of teacher knowledge that links subject-specific knowledge to more general didactic knowledge. Teachers need to be aware of the subject they are teaching, how this subject can be represented in the classroom and how this information will be received by the pupils (Shulman 1987). Shulman has named this type of knowledge Pedagogical Content Knowledge (PCK). “Pedagogical Content Knowledge (PCK) is different from content knowledge, on the one hand, because of the focus on communication between teacher and student, and from general pedagogical knowledge, on the other, because of the direct relationship with subject matter” (Verloop, Van Driel, and Meijer 2001, 449). PCK has become more popular over the years because people have come to realize that awareness of learning processes in general without relating them to a specific content is insufficient for professional development. A teacher needs to be flexible and know how to help students overcome any difficulties they may face when appropriating knowledge. This requires the ability to present the subject in various ways as well as an understanding of how the subject connects to the pupils’ concepts (Verloop and Lowyck 2003, 213).

1.3 TEACHER KNOWLEDGE AND CULTURAL EDUCATION

PCK ties in very well with some of Van Heusden's main principles. The emphasis on the interdependency of the content and the connection to the pupil is shared by both. The Van Heusden framework shows that both the cognitive development of the child as well as the child's memory base which serves as a reference point is required to give meaning to new information

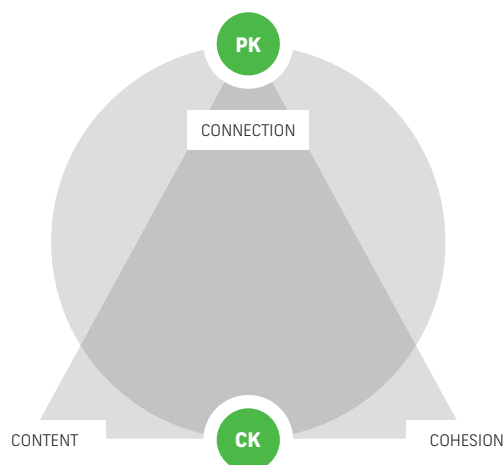


fig. 1: PCK and Van Heusden

Two of the three pillars of this framework, namely content and cohesion, seem to correspond more with the content knowledge side of PCK while connection has more similarities with its pedagogical features (see fig. 1). Both theories, however, regard teaching as a dynamic in which pupil cognition and teacher cognition interact. Teachers' understanding of cultural education therefore implies:

*an understanding of the **subject matter** at hand (what are suitable subjects for cultural education and how can they be conveyed?), the **cohesion** of cultural education (how do subjects, skills and media relate to each other both horizontally and vertically?) and the **development of cultural consciousness** of children (how can the children give the subject meaning?).*

The CiM project aims to promote teachers' understanding on all three of these levels (content, cohesion and connection).

I.4 PROFESSIONAL DEVELOPMENT

Several scholars have studied which features of an intervention are effective when aiming to support the professional development of teachers. One of these is the focus on the content. “The content of the intervention should be related to classroom practice, more specifically to subject content, pedagogical content knowledge and student learning processes of a specific subject. When teachers develop with respect to these aspects of content, an increase in teacher quality and student learning results” (Veen, Zwart, and Meirink 2011, 12). Providing practical examples is also a useful method (Voogt et al. 2011, 1235). Furthermore, studies show that the professional development of teachers can be especially effective when they are actively engaged as opposed to, for example, passively listening to lectures (13).

Collaboration between teachers is proven to facilitate teacher learning as well. “While collaborating, teachers can exchange ideas or experiences, develop and discuss new materials, get feedback from colleagues, and give each other moral support” (Meirink et al. 2010, p. 161). It also seems helpful if the teachers can choose the content and design of the intervention programme themselves (Veen, Zwart, and Meirink 2011, 13). The effectiveness of a theory-based content, collaboration between teachers, focus on classroom practice and active engagement are also in line with the studies by Veen et al (2011). Not only collaborations between teachers are effective ways of learning, but collaborations between teachers and researchers can be too. “Studies around the globe have shown that collaboration between teachers and researchers significantly adds to teachers’ professional development. This is firstly, because teachers regain their interest in scientific issues; and secondly, because teachers and researchers exchange their experiences in theory and practice at a deeper level” (Meijer et al. 2013, 39).

However, merely discussing cultural education alone may not be very effective. Meirink points out that teachers will need to go beyond exchanging thoughts and design concrete materials such as lesson plans in order to learn from their collaboration (2010, 176). Research has shown that collaborative design of curriculum materials might be a good strategy to achieve effective professional development in teachers (Handelzalts 2009). When teachers work together to design lessons and teaching materials they are exposed to their daily practice, interact with their peers and relate the general ideas of the desired change to their own situation. All these things are shown to stimulate professional development (Voogt et al. 2011). “The process of (re-)design provides opportunities for teachers to reflect on the curriculum starting from their personal knowledge and beliefs, their practice, and their goals for student learning” (1236). By designing lessons the teachers are actively bridging the gap between theory and practice rather than only passively absorbing the new information that is provided. Designing concrete materials is an especially attractive proposal when it comes to cultural education since teachers often lack well thought-out educational materials that address the subject in a multidisciplinary way. Collaborative design between teachers and researchers may thus kill two birds with one stone: useful material is designed

and teachers and researchers engage in a constructive and meaningful partnership.

The effectiveness of a professional development can be measured on different levels. Desimone has created a model which shows the relationships between these levels (fig. 2).

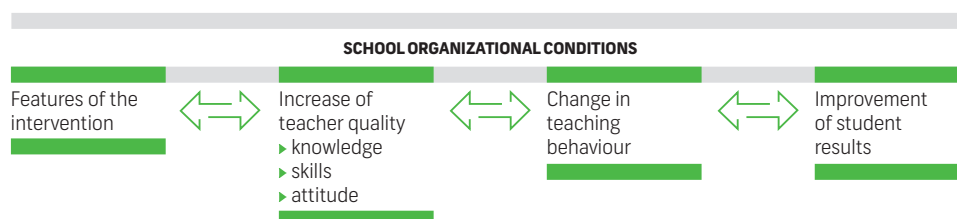


fig. 2: The model of Desimone (Veen, Zwart, and Meirink 2011, 4)

However, intervention, teacher quality, teaching behaviour and student results interact dynamically with each other and are not necessarily linearly orientated. Teachers may also learn from experiences they have in the classroom when they see how the pupils react to the materials. Because of the limitations of a linear model, Clarke and Hollingsworth (2002) have proposed an 'interconnected' alternative (fig. 3). The external domain refers to the non-professional world of the teacher which can understandably also inspire new classroom practice. New knowledge belongs to the personal domain, while experiments with new strategies are part of the domain of practice. When classroom practices lead to salient outcomes, they reside in the domain of consequence (951).

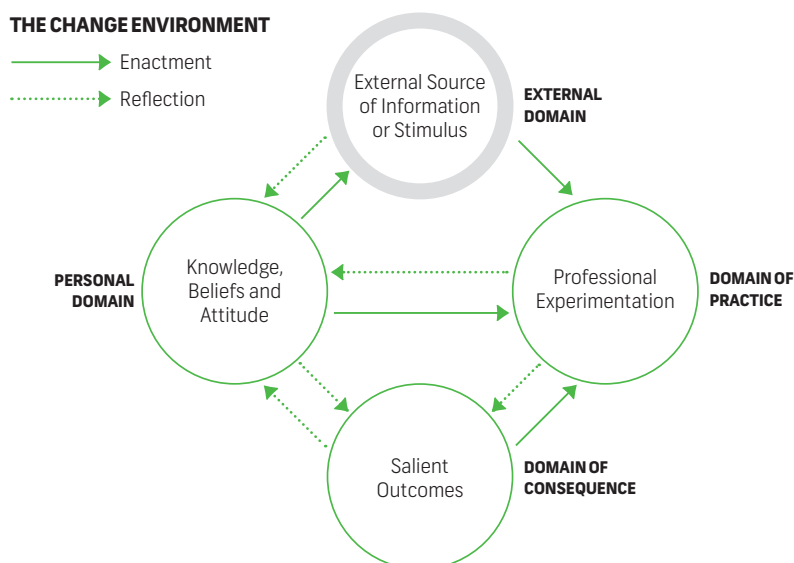


fig. 3: The interconnected model of professional growth (Clarke and Hollingsworth 2002, 951)

The relationships between these different elements can be summarized in the underlying ‘theory of improvement’ of a professional development (Veen, Zwart, and Meirink 2011, 4). A theory of improvement specifies “What is the intervention supposed to do? Who has to learn what, how and why? And what elements will result in an effective PD [professional development] intervention? This theory of improvement can refer to three aspects: theory of change, theory of instruction and theory of context” (5). The first is about the effect of the intervention on what the teachers know and/or how they teach. The second is geared towards a change in student outcomes as a result of the influence of the intervention on the teacher. The last is focused on the required organizational preconditions in the school (ibid.). Although all these levels are vital for good cultural education, the CiM project is aimed predominantly at a theory of change and is focused on an increase in knowledge in the teachers first. The personal domain of the teacher in Clarke and Hollingsworth’s model is thus the focus of this study. The model shows how all four domains affect and are affected by the personal domain of beliefs, knowledge and attitude and it is therefore to be expected that any change in the way teachers perceive cultural education is not solely caused by an intervention in their knowledge base. However, this research is meant as a first exploratory attempt to see if and how knowledge and beliefs about content, cohesion and connection of cultural education are affected by introducing the Van Heusden framework. Further studies will be needed to examine how the other domains influence this development and exactly what the interplay between teacher knowledge, the use of the designed materials and the pupils’ responses look like in this particular case.



§2 METHOD

2.1 DESIGN

The CiM project started with a learning trajectory for all twelve participating schools which consisted of a series of lectures and work sessions by head researcher Van Heusden and cluster meetings with groups of schools. The schools then formed smaller design teams with a PhD researcher from the CiM research team and a member of the National Institute for Curriculum Development SLO. The teams would meet three times per cycle to design cultural education lessons. The teachers were free to choose the kind of lessons they wanted to develop. The aim was to see if the teachers could adjust and rethink their existing cultural education by working with the framework rather than implementing a completely new type of education. The practice of the schools was thus leading and the teachers made all the decisions with regards to the subjects, the length of the projects, the didactics, the materials, and so on. The PhD researcher could help to clarify the theory and the SLO member could assist with didactic and organizational issues. The teams designed one or two cultural education projects during the first school year. The teachers taught their lessons after the three design sessions had taken place. The lesson series varied from one or two weeks to several months, depending on the wishes of the school. Regular meetings and visits took place over the course of three years. The PhD researcher and SLO member provided support during these meetings as well as by phone and via email.

2.2 INSTRUMENTS

The evaluation of the projects took place in one or more sessions with individual teachers and teams. This evaluation was conducted using semi-structured interviews and guided by videos of the lessons and sometimes accompanied by pupils' products. According to Borko, videos, student work and other records of actual classroom practice are very useful tools when it comes to teacher learning (2004, 7). The experience of the first lesson series served as a starting point for the second design cycle (design-execution-evaluation). The overall process and the data that was collected can be seen in fig. 4. Most of the data collected served as a means to keep track of the design process. The evaluation interviews (both individual and group interviews) were used as research data to study the development of understanding (see green text in fig. 4).

After the first year the teachers had to design their lessons independently. A 'starting kit' was provided to the teams which contained both existing design documents of cycle 1 as well

as new ones (see online appendix). The PhD researcher and SLO member were still present at the design meetings but only as observers. It was important to see whether the teachers would be able to use the Van Heusden framework without the assistance of the CiM research team. The evaluation was split into two sessions. The teachers evaluated their lessons among themselves (and thus only used videos if they themselves had taped any) and also evaluated their projects with the PhD researcher. The teachers were asked as well, during the latter interviews, to reflect on the research process as a whole and the practicality of the starting kit.

2.3 SELECTION

Four primary schools that participated in the CiM project were selected for this particular study. These schools were selected because the participating teachers taught children in the four to ten age group, which is the focus of my study on metacognitive development (see chapters 3 and 4). The preliminary results of that study could be provided as background information for the teachers when they designed their classes. However, two of the four selected schools withdrew from the project during the learning trajectory and had to be replaced. Two additional schools were found that joined the project after the learning trajectory had been completed (schools B and D). All four schools had a wide array of cultural education activities but were very different in terms of location, teaching styles and student population (see fig. 8), which was useful in order to see if Van Heusden's framework could be applied in different types of schools. The participating teachers were therefore information-rich cases to study the effects of the framework in different settings.

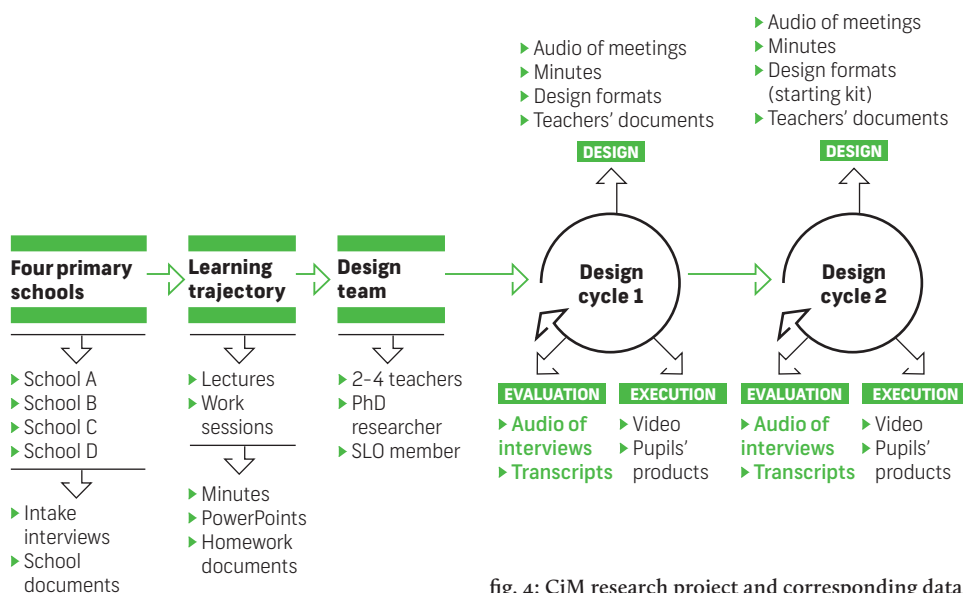


fig. 4: CiM research project and corresponding data

2.4 INTERVENTION

At the very start of the design process, the role of the PhD researcher proved to be more extensive than foreseen. The teachers were struggling to grasp the theory and found it difficult to relate the abstract framework to their daily practice. Several tools were created during this year to make the theory more accessible for the teachers and more time was spent during the design sessions explaining the model. Only in the second design cycle could the PhD researcher take a more backseat role. However, all the decisions regarding the types of lessons, themes, didactics and other content-related issues were made by the teachers.

2.5 ANALYSIS

All the evaluation interviews that were recorded during the project were transcribed and coded using *Atlas.ti*. The combination of both individual and group interviews allowed for triangulation of my findings (Miles and Huberman 1994, 267). A coding system was developed in which all the major elements of the theoretical framework were represented (see fig. 5).

Teacher	Period	Main subject	Subcategory	Level of understanding	Skill
A1-D4	ECO	Cultural education	Content	-1	Self-perception
	EC1	Framework	Cohesion	0	Self-Imagination
	EC2	Process	Connection	+1	Self-conceptualization
			General	+2	Self-analysis

fig. 5: simplified model of the coding system

The system works like a tree structure and first separates between comments made in the evaluation interviews about cultural education, views on the framework itself and remarks about the design process and implementation of the theory. The main subject categories are then further specified according to the three main tenets of the theory (content, cohesion, connection) and a fourth category for general comments. The quotes about cultural education were scored -1, 0, +1 or +2, according to the displayed level of comprehension (see fig. 6). Since the theoretical framework is very conceptual and analytical in nature it seemed plausible that analytical and conceptual comments could therefore be rated higher than more descriptive or creative ones. I used the four skills distinguished by Van Heusden (self-perception, self-imagination, self-conceptualization, self-analysis) as supplementary categories to distinguish between different types of quotes about cultural education (hereafter referred to as *skills-analysis*) (see fig. 7). The comments about the process and framework were not coded according to level of understanding or personal skill. The 'process' category was however divided into subcategories about materials, people (supervision), own views on level of understanding and general comments.

Level of understanding	Definition	Example
-1	The teacher shows a misunderstanding of cultural education	"Children's imagination can only be stimulated with visual arts"
0	It is unclear if the teacher has understood cultural education	"The children were working nicely and quietly"
+1	The teacher displays some understanding of cultural education. This understanding is mainly a reproduction of the CiM framework	"Self-perception precedes self-imagination"
+2	The teacher shows a high level of understanding of cultural education. The quote shows that the teacher has appropriated the theory to reflect on, change or create cultural education.	"Our school is so focused on conceptual and language skills that we fail to see that many of our pupils have a high level of self-perception"

fig. 6: levels of understanding (subcategory of comments on cultural education)

My two colleagues and I first check-coded a few texts together to come to an agreement on the definitions of each code. About ten per cent of my data was then coded separately by one of my colleagues and I.

Skill	Definition	Indication in evaluation
Self-perception	The teacher describes a (classroom)situation, children's behaviours or ideas like an observant and without explicitly labeling them. The teacher may quote the children's responses or recall an anecdote	"I noticed" "I recognized..." "I experienced..." "I saw..."
Self-imaginaition	The teacher imagines, creates, designs or explores new ideas or situations. The teacher may also envisage or predict comething that has not happened yet.	"You could also ..." "I can imagine that..." "I was thinking like..." "In the future I would like to..."
Self-conceptualization	The teacher labels or classifies (classroom situations, children's behaviour, ideas or more general topics. The statement includes a form of judgement or catagorization.	"That is obviously X" "This means that ..." "Me, being a (teacher, leader) ..." "I like/dislike..."
Self-analysis	The teacher comes up with a hypothesis or theory to explain a phenomenon Different events or ideas may be linked to come up with a logical account.	"It could be that ..." "X may be the reason for Y" "I can conclude that..." "X will be needed to achieve Y"

fig. 7: skills analysis (subcategory of comments about cultural education)

The intercoder reliability came to 0.78, which shows a high level of internal consistency (Miles and Huberman 1994, 64). The levels of understanding and the skills were a later addition to the coding system and were developed and checked in collaboration with critical friends.

I analyzed the data on three levels: teacher, team and between teams. The development of understanding of each teacher is described per school in my within-case analysis. I will review which aspects of cultural education (first main subject in the coding system, see fig. 5)

Area	School A Groningen City (centre)	School B Groningen Province
Pupil population	Children from the city of Groningen	Children from rural Groningen
Age of participating pupils	4-6	6-8
Specifics		
Number of participating locations	2	1
Supervision and guidance before the start of the projects	Participated in the full learning trajectory and cluster meetings	Two presentations by PhD researcher (missed the learning trajectory and cluster meetings)
Project 0 evaluated at ECO		
Design team members (+ 1 PhD researcher and 1 SLO member)		
Number of weeks		
Training and supervision documents		
Project 1 Evaluated at EC1		
	'Collecting'	'My favourite book'
Design team members (+ 1 PhD researcher and 1 SLO member)	2 ▶ Regular group teacher A1 ▶ Regular group teacher A2	1 ▶ Regular group teacher B1 (assisted by coordinator)
Number of weeks	2	6
Training and supervision documents	<ul style="list-style-type: none"> ▶ Learning plan and lesson format designed by SLO ▶ Simplified lesson format designed by the SLO ▶ Little black book by Van Heusden ▶ Circle designed by researchers ▶ Explanation and examples of cultural education ▶ Profile of development of metacognition ▶ Evaluation document 	<ul style="list-style-type: none"> ▶ Learning plan and lessonformat designed by SLO ▶ Simplified lesson format designed by the SLO ▶ Little black book by Van Heusden ▶ Circle designed by researchers ▶ Explanation and examples of cultural education ▶ Profile of development of metacognition ▶ Evaluation document
Project 2 Evaluated at EC2		
	'Heroes'	'St. Nicholas'
Design team members (PhD researcher and SLO member only present as observers)	<ul style="list-style-type: none"> ▶ Regular group teacher A1 ▶ Regular group teacher A3 	▶ Regular group teacher B1 (assisted by coordinator)
Number of weeks	2	3
Training and supervision documents	<ul style="list-style-type: none"> ▶ A 'road map' designed by the SLO (used before the starting kit was available) ▶ 'Starting kit' (including revised versions of previous documents) 	▶ 'Starting Kit' (including revised versions of previous documents)

School C Groningen City	School D Rotterdam
Children with learning disabilities	Children from mixed ethnic backgrounds
5-12	8-10
Teaching in workshops	Natural Learning Day- arrangements
2	1
Participated in the full learning trajectory and cluster meetings	Participated in the final cluster meetings (missed the learning trajectory)
'Water'	(did complete a pilot project 'Books' just before the start of ECO)
3	
<ul style="list-style-type: none"> ▶ Regular group teacher C2 ▶ Philosophy teacher C1 ▶ Artist C3 	
3	
<ul style="list-style-type: none"> ▶ Learning plan and lesson format designed by SLO ▶ Little black book by Van Heusden ▶ Circle of cultural skills designed by researchers ▶ Explanation and examples of cultural education ▶ Profile of development of metacognition 	
'Energy'	'Plastic'
3	4
<ul style="list-style-type: none"> ▶ Regular group teacher C2 ▶ Philosophy teacher C1 ▶ Artist C3 	<ul style="list-style-type: none"> ▶ Director D1 ▶ Coordinator D2 ▶ Nature workshop teacher D3 ▶ Arts workshop teacher D4
3	3
<ul style="list-style-type: none"> ▶ Learning plan and lessons format designed by SLO ▶ Simplified lesson format designed by the SLO ▶ Little black book by Van Heusden ▶ Circle designed by researchers ▶ Explanation and examples of cultural education ▶ Profile of development of metacognition ▶ Evaluation document 	<ul style="list-style-type: none"> ▶ Learning plan and lesson format designed by SLO ▶ Simplified lesson format designed by the SLO ▶ Little black book by Van Heusden ▶ Circle designed by researchers ▶ Explanation and examples of cultural education ▶ Profile of development of metacognition ▶ Evaluation document
'War and Peace'	'Food'
<ul style="list-style-type: none"> ▶ Regular group teacher C2 ▶ Philosophy teacher C1 ▶ Music teacher C4 	<ul style="list-style-type: none"> ▶ Director D1 ▶ Coordinator D2 ▶ Nature workshop teacher D3 ▶ Arts workshop teacher D4 (design also executed by two additional teachers)
3	2
<ul style="list-style-type: none"> ▶ 'Starting Kit' (including revised versions of previous documents) 	<ul style="list-style-type: none"> ▶ 'Starting Kit' (including revised versions of previous documents)

fig 8: schools and their projects

each teacher commented on (subcategory 1) and whether these statements are in line with the Van Heusden framework or not (level of understanding). As the number of comments is not significant in itself (a teacher may have been more talkative during one evaluation than another), I will assess which percentage of all comments made by a teacher about cultural education are in line with the theory and which topics are discussed most and whether these percentages change over the course of the CiM project. My analysis will thus show whether the teachers' understanding improved between the evaluation of cycle one and two (hereafter referred to as EC₁ and EC₂), or, in the case of school C, over the course of three design cycles (EC₀, EC₁ and EC₂). I shall also assess whether the teacher has used self-perceptive, self-imaginative, self-conceptual or self-analytical phrases to reflect on his or her classes. The analysis of the comments on cultural education will be followed by a discussion of what the teachers have said about the process and the framework (main subjects two and three in the coding system). The next section consists of a cross-case analysis between the four schools/teams to establish whether there are similarities or differences with regards to their understanding of cultural education and remarks about the process and the framework. I will discuss the results of the within case and cross case analyses in the following sections.



3.1.1 SCHOOL A

School A is a primary school⁵³ with four locations in the City of Groningen. The school aims to connect its activities with events, sites and institutes in the city because of its location in the (historic) city centre. Cultural

education is regarded as a core characteristic of the school. My research in this particular school focused on the teachers of group 1 and 2 (children aged 4-6). I worked with a team of two teachers at two different locations. One of the teachers, teacher A1, is also the cultural coordinator for the school and as such responsible for the organization and coordination of the cultural activities of the school. The first project was designed by teacher A1 and teacher A2. Teacher A2 went on maternity leave after cycle one and was replaced by her colleague teacher A3 in cycle two. The first project was centred around the school-wide theme of 'Collecting'. Key objectives were to make the children aware of the relationship between the collection and the collector (why you find it meaningful), the nature of a collection (when do you call something a collection) and the purpose of a collection. The activities took place both inside and outside the school (e.g. the children took a trip to a local toy museum). Classes were taught by A1 and A2 and by an external artist.

The second project took place during what is called 'book week'⁵⁴ and was focused on the subject of 'Heroes'. Several activities were designed by A1 and A3 to make the pupils reflect on what heroes look like, how they act and what defines heroism. They were specifically aimed at stimulating self-imagination and self-conceptualization. The media that were chosen were the body (striking heroic poses), language (discussing heroism) and graphic signs (making your own book in which you and your friends are the heroes). In addition, the teachers read several books starring heroic and brave animals and children⁵⁵. The team were not able to work with the starting kit that the other schools used because of the early timing of their meetings. Instead they used a set of documents designed by the SLO. They were also supported to a minor degree in their design where necessary. However, the overall aim remained to intervene as little as possible, in contrast to the design of the first project which was highly supported. The evaluation was structured by an evaluation form from the starting kit. The team was not interviewed or assisted during their evaluation of cycle 2.

53 Primary education in The Netherlands is offered to children aged four to twelve and divided into groups one to eight.

54 Children's book week is an annual Dutch event during which children's books are promoted and celebrated. Many schools develop special events around reading and books and the children's book week theme of that year.

55 For more detailed information about some of the projects that were designed and executed as part of the CiM project see chapter six.

	A1		A2		A3
	EC1	EC2	EC1	EC2	
Content	-1	0%	0%	0%	0%
	0	32%	12%	26%	18%
	1	18%	0%	11%	8%
	2	0%	0%	2%	0%
Cohesion	-1	0%	0%	0%	0%
	0	0%	0%	11%	0%
	1	3%	2%	2%	0%
Connection	-1	0%	0%	0%	0%
	0	15%	78%	17%	69%
	1	26%	7%	30%	5%
	2	0%	0%	2%	0%
General	-1	0%	0%	0%	0%
	0	6%	0%	0%	0%
	1	0%	0%	0%	0%
	2	0%	0%	0%	0%

fig. 9: understanding and subcategories of school A

	A1		A2		A3
	EC1	EC2	EC1	EC2	
Perceptive	18%	61%	13%	44%	
Imaginative	12%	12%	4%	10%	
Conceptual	65%	27%	74%	46%	
Analytical	6%	0%	9%	0%	

fig. 10: skills used by School A teachers

3.1.2 TEACHER A1

Main subject: Cultural education

Analysis of EC₁ data shows that 47% of all statements about cultural education by teacher A1 are in line with Van Heusden (score +1) (see fig. 9 in appendix). Content and connection are discussed most frequently (50% and 41% respectively), while cohesion is rarely evaluated. A1 is also the most knowledgeable on the topic of connection, as 26% of all her statements are about connection and rated as +1. Teacher A1 discusses her cultural education mostly in a conceptual way at EC₁: “[Objects] worked really well with young children. They also often need it” (EC₁). However, A1 also shows signs of self-imagination and self-perception (12% and 18%). The data shows a steep decline in understanding in A1 (from 47% at EC₁ to only 10% at EC₂) and an almost exclusive emphasis on connection (85% at EC₂). Content is far less discussed compared to the previous cycle (only 12%). Almost all statements are categorized as 0, showing neither understanding nor misunderstanding. The EC₂ evaluation is now dominated by self-perception rather than conceptualization (61%): “...some children do talk about brave things they do (...) ‘what I thought was very brave was that I could cycle without training wheels’”(A1 at EC₂).

Main subject: process

A1 wanted to work with as few documents as possible and liked it best when she could design her lessons in a free-flowing way. During the first design cycle she struggled with the formats and preferred the more flexible documents of the second cycle: “You do think of a subject and you think: What do I actually want to do with that? What do I want to teach

the children? And then, very quickly, all kinds of ideas pop into your head. It is nice that you can go with that, instead of constantly thinking of all sorts of aims and then thinking: oh I also have to come up with lessons related to those aims (...) That feels like a coat that you have to wear although it is too tight and you feel there is nowhere you can go..."(A1 at EC2). She appreciated the circle with examples of the four cultural skills as she liked to use it to check which skills her pupils were using (A1 at EC2). The documents designed by the SLO, however, she found too much work to read and fill out: "When I see a form like that, then I think ohh! That's because we already have to fill out so much. To the extent that you think: oh, please!" (A1 at EC2). Nevertheless, she did claim to like having some sort of structure to make sure her ideas did not go all over the place. Likewise, she enjoyed having been guided in learning to work with the theory and thinks that in order to work with the theory, schools will need to start with some form of supervision in place.

A1 feels as though her level of understanding of cultural education has improved over the course of the CiM project and found it easier to know which things to leave out and what was important. It also helped her to recognize what her pupils do: "When I am reading picture books to the children or having conversations with them. Then you are much more aware of what you are talking about, it is easier to understand where the children's remarks are coming from" (A1 at EC2). Although her level of understanding seems to have declined between EC1 and EC2 (see 'main subject cultural education') this does not correspond with her own sense of accomplishment: "I quite like that, that you, well, have learned something new which becomes part of you and that you think: oh, that belongs to that, or that is that skill, people use it to look at something that way"(A1 at EC2).

Main subject: framework

A1 says that she liked the way the theory helped her to label what she already knew about her pupils (at EC2).

3.1.3 TEACHER A2

Main subject: cultural education

Teacher A2 also demonstrates a high level of understanding at EC1, as 47% of all statements are in line with Van Heusden. Of these 4% are quotes that even show a +2 level of understanding: "... if perception does not work, conceptualization will not succeed either. So I think that the two irrevocably go together" (EC1). Connection is discussed the most (49%) followed by content (38%) and cohesion (13%). Connection is also understood best (32% of all statements are in line with Van Heusden and about connection). A2 has a high level of conceptual statements (74%): "...the connection I think becomes clear from the children's active and enthusiastic participation in the project"(A2 at EC1).

Main subject: process

A2 feels that she is more familiar with the concepts of the theory after design cycle 1 and is

happy to have learned something new about cultural education. She thinks that children's metacognitive development can be used to design a learning trajectory of cultural education for all ages.

Main subject: framework

A2 states that the theory helps to categorize the cultural skills and that this helps to prevent teachers from only addressing one or two skills in their classes.

3.1.4 TEACHER A3

Main subject: Cultural education

Teacher A3 shows a very similar pattern to A1; only 13% of her statements are in line with Van Heusden. Connection is discussed most (74%) and she too has a high level of perceptive statements (44%).

Main subject: process

A3 found setting clear goals for her classes the most difficult part, although she did find it valuable. She found that sometimes she was forcing herself a bit too much to make her classes fit the goals the team had set. Like A1, teacher A3 prefers the simplified documents of the starting kit to the previous design documents. She claims that the circle of skills helped her to understand the theory. A3 also enjoyed working with her colleagues and states that the design team have helped her to understand the theory. She claims that her main difficulty in the theory is the difference between cultural cognition and cultural metacognition. However, when she was re-reading the starting kit she surprised herself: "Wow, I have actually learned quite a lot! Goodness, I actually understand that really well!"(A3 at EC2).

Main subject: framework

A3 states that she has a better overview of what she does and does not do in her classes: "...certain things do not even relate to the target group that I work with, but it just gives you a better overview of what you are actually doing"(A3 at EC2).

3.2.1 SCHOOL B

School B is a very small country school in the east of the Province of Groningen. I worked with teacher B1 who formed a team with the internal coordinator (B2). B1 was the one executing the design and had the lead in the whole process while B2 was there to assist and to serve as a soundboard. The evaluations were done with B1 alone. B1 teaches group 3-4 (age group 6-8) which at school B consists of only about 15 children in total. One of the reasons for school B to participate in the CiM project was that their groups 5-8 follow a very structured programme in which all subjects are interlinked (the 'all-in-one' method). The school really appreciated this kind of approach and hoped that the Van Heusden framework could provide a similar coherent design for group 3-4. School B joined the CiM project later and

thus did not participate in the learning trajectory. Instead the team members attended two additional meetings at their school during which the theory was explained and discussed.

The first project was called ‘My favourite book’ and consisted of several activities to make the children aware of why we have books, the difference between types of media and the link between books and their readers. The second project was centred around the holiday of ‘Sinterklaas (St. Nicholas)’, which is a Dutch national holiday during which children usually receive many presents. In order to shift the focus from the number of presents to the notion of rewarding, B1 wanted to design classes that would make the children reflect on the various reasons there are for praising someone. The children all had to make a present for each other that represented a good trait of the recipient of the gift.

	B1		
		EC1	EC2
Content	-1	0%	0%
	0	18%	27%
	1	10%	7%
	2	0%	0%
Cohesion	-1	0%	0%
	0	15%	10%
	1	0%	3%
	2	0%	0%
Connection	-1	0%	0%
	0	50%	43%
	1	7%	10%
	2	0%	0%
General	-1	0%	0%
	0	0%	0%
	1	0%	0%
	2	0%	0%

fig. 11: understanding and subcategories of school B

	B1	
	EC1	EC2
Perceptive	15%	3%
Imaginative	7%	10%
Conceptual	78%	87%
Analytical	0%	0%

fig. 12: skills used by school B teacher

3.2.2 TEACHER B1

Main subject: cultural education

Analysis of teacher B1’s evaluations reveals that her level of understanding remains relatively stable between EC1 (17%) and EC2 (20%). The topics she discusses are also similar with a dominance of connection (57% and 53%) followed by content (28% and 33%) and cohesion (15% and 13%). She understands connection and content similarly well (between 7% and 10% of all statements at both EC1 and EC2). B1 has a very conceptual way of evaluating her lessons (78% at EC1 and 87% at EC2) and often labels what happens in the classroom as either desired or undesired behaviour “I am always a bit critical. It has to be really beautiful [a child’s drawing], I think. And that was not the case here”(EC1). Her conceptual statements are easier to classify than her perceptual ones. However, many of her observations are about subjects that are not exclusively part of cultural education (e.g. the

children's general behaviour or their more general medium skills) and are therefore often rated as 0. At EC2 teacher B1 had the disadvantage that her partner B2 was not present which meant that she had to evaluate the project by herself, with only the evaluation sheet to guide her. This resulted in very short and somewhat superficial answers to the questions in this form. It is likely that the overall score of understanding would have been much higher had there been another team member present.

Main subject: process

B1 states that she has enjoyed being part of the CiM project, although she wishes she had been involved from the start. As school B joined the project at a much later date than the other schools, she has had no contact with the other teachers "That would have been nice, every once in a while, that you can see hey how do you do that? And see..., if necessary discuss it" (B1 at EC2). Likewise, she claims that she felt overwhelmed at the beginning because the management had not informed her about the project sufficiently: "the teacher should be there too [at the meetings with the management] so that you know what the process is about. Yes. Because I think that that had something to do with it, that with us everything was just a bit shorter and had to be done more quickly. That maybe we joined a little bit later. But sometimes I have thought to myself: what?" (B1 at EC2).

Nevertheless, B1 claims that she did like being involved and that her coordinator, who was her partner in the design process had helped her come up with new ideas. She preferred the starting kit over the original design documents and says she does not write her lesson plans down beforehand. Also she feels that her competency has grown over the course of the project. "If I have done something once, and like the first meeting, when you have explained everything, that you discuss things and come up with ideas and then execute them, that is how I learn best"(B1 at EC2). In her view, the most difficult part of the theory was the difference between culture and cultural consciousness. However, she feels that she understands it at EC2. Another difficulty was the fact that B1 felt very self-conscious when she was being filmed and feels that her lessons are usually better when there is no camera around (B1 at EC2).

B1 did claim that she felt more competent with the theory at EC2 and that it had helped her a lot to have had already designed a project using the model "I think that it was useful, that someone explains that [the theory] to you. And that you make lessons together...and that's when I got it"(EC2). Her own idea of her mastery of the Van Heusden theory thus does not correspond with the understanding score which has remained almost stable at a relatively low level.

B1 claims she wants to continue to work with the theory, especially with the skills and the media. She will use the starting kit to come up with ideas but will not continue to write all her lessons down. B1 thinks that other schools wishing to work with the theory will need some form of supervision in addition to the starting kit.

Main subject: framework

B1 likes the fact that the theory helps her make connections between things that she would not have seen otherwise (B1 at EC2). Her conceptual preference shows when she discusses the value of the Van Heusden theory: “I like that everything has a name” (EC2). The theory is a way for her to come up with new ideas and to remind her of the many shapes that cultural education can take: “This [the framework] is very...a real support. Look, then you also know for certain that you’re not missing something (...) I always like that” (B1 at EC2).

3.3.1 SCHOOL C

Located in the second largest city in The Netherlands, school C has a very different population compared to the other schools in this study. Many of the pupils are from foreign backgrounds and are used to life in a big city. The school works with a teaching method called ‘Natural Learning’ (*Natuurlijk Leren*). This means that the teachers try to tailor their classes as much as possible to the children and their interests. The school wanted to improve the integration between the regular group lessons and the lessons taught by external teachers (e.g. artists and musicians). A team of three teachers from one of the two locations of School C participated in this study. They designed, executed and evaluated three projects rather than two. The evaluation of the first project will hereafter be referred to as ECo. All three projects were bound by the school-wide themes that were fixed for all classes. The first project had the theme of ‘Water’. The challenge here was to make this theme work for cultural education (as water is a more likely theme for biology or geography classes). The team designed activities which emphasized the positive and negative effects of water for people (i.e. when is water fun or enjoyable and when does it pose a threat). The second project was centred around ‘Energy’, which is a theme that is not typical for cultural education either. The design team wanted to stress sustainability and make the pupils think about energy saving solutions for the school and what that would mean for their life at school. The first two projects were designed by the coordinator and philosophy teacher C1, the group teacher of group 5-6 (ages 8-10) C2 and an external artist who works with the children once a week (C3). The last project was called ‘War and Peace’ which was a theme that lent itself well to cultural education (as it is a cultural topic in itself). Artist C3 was substituted by music teacher C4, who had participated in a separate trajectory of CiM with the school for music in the same city. She was also the chair in this last project.

		C1			C2			C3		C4
		ECO	EC1	EC2	ECO	EC1	EC2	ECO	EC1	EC2
Content	-1	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	0	28.6%	42.6%	17.6%	21.8%	26.1%	13.5%	37.0%	30.3%	22.5%
	1	10.2%	1.9%	23.5%	3.6%	2.2%	24.3%	0.0%	0.0%	15.0%
	2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
Cohesion	-1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	0	4.1%	5.6%	5.9%	5.5%	2.2%	5.4%	0.0%	12.1%	5.0%
	1	8.2%	0.0%	5.9%	1.8%	2.2%	2.7%	0.0%	0.0%	0.0%
	2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Connection	-1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	0	40.8%	44.4%	35.3%	61.8%	50.0%	24.3%	48.1%	36.4%	27.5%
	1	6.1%	5.6%	11.8%	5.5%	15.2%	29.7%	11.1%	15.2%	20.0%
	2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%
General	-1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	0	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	3.7%	6.1%	2.5%
	1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

fig. 13: understanding and subcategories of school C

	C1			C2			C3		C4
	ECO	EC1	EC2	ECO	EC1	EC2	ECO	EC1	EC2
Perceptive	2.0%	3.7%	17.6%	9.1%	17.4%	16.2%	11.1%	9.1%	2.5%
Imaginative	4.1%	1.9%	0.0%	10.9%	0.0%	13.5%	3.7%	3.0%	30.0%
Conceptual	93.9%	94.4%	82.4%	76.4%	80.4%	70.3%	85.2%	87.9%	65.0%
Analytical	0.0%	0.0%	0.0%	3.6%	2.2%	0.0%	0.0%	0.0%	2.5%

fig. 14: skills used by school C teachers

3.3.2 TEACHER C1

Main subject: cultural education

Analysis of C1 shows that there is a drop in understanding between ECO and EC1 (from 24% to 7%), but a vast improvement between EC1 and EC2 (from 7% to 41%). The topics she discusses are very similar in all three projects, with about 47% for connection and about 41% for content subjects. She seems to have the best overall understanding of content at EC2 as 24% of all comments are about content and scoring +1. C1 claimed at both ECO and EC1 that content was a difficult part of the framework for her. However, the overall understanding and especially that of content is much higher at EC2. C1 is very conceptual in her evaluation (94% of all comments at both ECO and EC1 are conceptual) although she shows more signs of self-perception at the last evaluation (18%).

Main subject: process

At ECO, C1 especially enjoyed being able to sit down together with all the teachers involved in the lessons around this theme. She claims that the theory has helped to structure these meetings and to ensure they are about the content of the classes. "I won't say that it went

flawlessly (...) but it has never ever occurred before that we have been able to sit down together with the team, have been able to communicate, been able to discuss the assignments, about what we were trying to achieve (...) these are the real benefits, I think”(C1 at ECo). The most difficult aspect of the theory at this stage for C1 was the difference between culture and cultural consciousness. She feels that she and C2 have had many discussions on this topic. A more practical difficulty was the complexity of the original design format by the SLO: “...it was already very new to me and then I also had to deal with that format and then I got really anxious” (C1 at ECo).

At EC1, her struggle with the theory in terms of defining whether or not an activity is part of cultural consciousness or not continues. However, C1 feels that she has already become a bit more knowledgeable on this subject: “...we have been looking at that from the beginning. Yes, practice makes perfect and this is the second time” (C1 at EC1). Also, she feels that too many activities are still only part of cognition and not of metacognition (cultural consciousness). During the second project C1 had difficulty focusing on the goals she had set beforehand and instead was following every lead given by the children. Reflecting on this, she says she is still looking for a way to stay close to the pupils’ reference points, while also retaining some form of direction and structure in her classes.

C1 found it quite difficult to design without external supervision in the third project. However, she does feel more competent with the theory and feels as though she could name the most important aspects of it (C1 at EC2). She likes the starting kit as a way to structure the design process. “Then we are brainstorming, so nothing to do with CiM, but in general when we are working on a new theme, all those good ideas and then it suddenly stops and you can’t get any further and I think (...) that this provides some support (...) you also need a lot of learning goals, that’s very important (...) but is there enough cohesion between the activities...?” (C1 at EC2).

The skill circle was also one of C1’s favourite tools as she found it very useful and clear. The simplified design format in the starting kit was a major improvement too compared to the first versions (C1 at EC2). C1 thinks that the examples of culture and cultural awareness are especially useful for people who are new to the theory. C1 states that the starting kit is a useful tool when designing cultural education: “see, there are models in here that you can use (...) that’s what people often find useful, and then when you’re busy developing a theme, you at least have a sort of a foundation from which to start (...) and you are more aware of everything you’re doing” (C1 at EC2). Like the starting kit, C1 enjoyed the supervision she got in the project which was also why she did not like having to design the third project without it. C1 found it very beneficial to design in a team: “sometimes you get stuck in your own thing, let’s put it that way (...) And especially by discussing it with somebody else...who can often see in no-time ‘hey, have you thought about that, or think about this or do it this way””(C1 at EC2).

Main subject: framework

C1 says she is more aware of what she does because of the theory at ECo. She also feels that the theory helps her to achieve more cohesion between the lessons. However, it is difficult to tell whether this is due to the theory or to the fact that the teachers are given time to discuss the lessons and design together. C1 finds it difficult to articulate the value of the theory at this point but does claim that: "... the cohesion, the communication between people, those are links that were absent before (...) it is nice that it does not stop where it usually stops, that you can go in depth. It takes a bit of extra effort, but, and you hope that it will pay off"(C1 at ECo).

3.3.3 TEACHER C2

Main subject: cultural education

C2 has a steady increase in understanding with scores of 11% at ECo, 20% at EC1 and 57% at EC2. C2 discusses connection the most, although content is also increasingly evaluated over time (38% at EC2). The understanding of content increases the most between EC1 and EC2, from 2% to 24% rated as +1 of all scores, which is exactly the same development as C1. C2 does, however, have a better understanding of connection compared to C1 (30% compared to 12% for C1 at EC2). The more suitable theme of the third project may have increased the number of correct quotes at EC2. C2 has a conceptual way of evaluating but not as much as C1 and does use self-imagination or self-perception as well (e.g. 16% and 14% at EC2).

Main subject: process

C2 preferred to first brainstorm freely and then come up with learning objectives. He feels that the second project went better because he was more knowledgeable (C2 at EC1). The main difficulty was determining whether an activity referred to metacognition or not and C2 wished that there was a simple tool to check this (C2 at EC1).

At EC2 C2 feels that he is much more at ease with the designing method and the theory. He thinks the fact that he has participated in two previous design rounds has helped him: "...partly due to the other two times you know what is going to happen, so it gets easier every time (...) that's also why it went more smoothly than last time" (C2 at EC2). He likes the starting kit to help him prepare his lessons as it gives him a structure to work with: "Of course I cannot speak for my colleagues, because I know that some of them prefer more freedom, but I prefer it when it says this is how you do it. And within your method I will always find my own way of doing things" (C2 at EC2). He has also enjoyed working in a team as his team members come up with ideas too. He particularly appreciated the supervision to check whether his lessons involved metacognition or not.

C2 would like to continue to work with the theory in the future but is hesitant whether it will spread throughout the school. He thinks supervision and guidance will be needed as

not everybody may be willing to try something new. C2 said that this way of working does fit the school very well and that it would only mean an adjustment for the teachers as he found it no more difficult for the pupils (C2 at EC2).

Main subject: framework

The main difficulty that C2 experienced with the theory was the difference between cognition and metacognition but he also feels that this is a very important distinction. C2 thinks that the school has too many school-wide themes that do not lend themselves very well to metacognition. He feels that it is very important that children learn to reflect on culture. A focus on the child's reference points and its metacognition would fit the school's natural learning approach (C2 at EC2).

3.3.4 ARTIST C3

Main subject: cultural education

C3's understanding does not improve much between ECo and EC1 (11% and 15%). The majority of her evaluation is devoted to connection (59% and 52%) and 37% (ECo) and 30% (EC1) to content. All quotes that are in line with the Van Heusden framework are about connection. Here too the difficult themes of cycle 0 and 1 may have influenced the scores for content. I was expecting C3 (being a visual artist) to have a very high percentage of imaginative comments at the evaluation, but these scores are actually very low (3% and 5%). The main skill she uses is self-conceptualization.

Main subject: process

At ECo artist C3 especially liked to be able to design lessons in a team. It is unclear whether the content of the theory specifically has made a difference or whether she mainly enjoyed the social aspect of teamwork: "...you all have something difficult at the same time [the theory] and that creates a sense of togetherness" (C3 at ECo). C3 preferred receiving pupils' drawings that were made in C1's classes to formats and liked the examples of culture and cultural cognition that were provided: "...like the class of [C1], I receive all the drawings [...] that is useful for me. I don't really need it verbally...I see it, when something like that is done, I look at it. And I read something into that"(C3 at ECo)..

C3 felt that the second project went much better than the first and felt freer to use her own design methods rather than the format of cycle 0. "The format, the format...Look I understand what you wanted and I wanted to answer all those questions and then I tried to understand those forms (...) you know, I am an artist, that's what I know. So I have to stick to that (...) I am in education so I cannot ignore it completely, but of those... yes, they always make me a bit nervous"(C3 at EC1). Again she especially highlights the benefits of having the chance to sit with the regular teacher and discuss their education: "...Appreciating each other (...) that I think has gone up. That, of course, is very important to me" (C3 at EC1).

Main subject: framework

C3 struggled with, on the one hand, wanting to learn something new and on the other her own way of doing things. “That whole CiM, that sharpens me (...) when you are working with the children then you think ‘well I am just happy that they are doing what I tell them or are quiet (...) I think about it, that is important, that is true, it is true, but it is very good fun to put a vase down and say to the children: ‘I want you to draw this vase’ you are so impressed, it is so much fun to do” (C3 at ECo).

3.3.4 MUSIC TEACHER C4

Main subject: cultural education

C4 has a relatively high level of understanding, scoring 35% +1 and even 8% +2. She too focuses on connection and content (50% and 43%) and masters both subjects almost equally well (20% of all scores are about content and either +1 or +2, 23% of all scores are about connection and either +1 or +2). C4 has a relatively high self-imagination score of 30% and in her evaluation she often thinks about possible improvements and generates new ideas for future projects: “...I would like to have a test that is not linguistic for my next experiment. But children would make a musical piece for example, based on what other children have done. And they reflect in that way, do you get it?” (C4 at EC2).

Main subject: process

C4 notices how focused teachers are on their practice and that this is very different from scientists who are concentrated on the theory (C4 at EC2). She liked working with the starting kit and thinks it is a good way to work with teams. C4 feels that for every teacher who has had an education at the *Pabo*⁵⁶, the forms in there should be very easy to fill out. C4 would ideally like to start with a small activity to determine the pupils’ level and then to find ways to activate their development (C4 at EC2). C4 enjoyed working in a team: “You need someone to spar with, if something isn’t going well or something” (C4 at EC2).

C4 thinks that the more times you have used the framework the fewer meetings will be needed. She thinks that it is especially important to think outside your own subject. According to C4, teachers are often practical people who just have to do their classes and that they are not used to the type of reflection that the theory requires. A good chair is therefore needed to guide the process (C4 at EC2).

Main subject: framework

C4 mainly likes how the theory makes her aware of the fact that metacognition is a sequence of skills and that not everyone is at the same level. “You always have to complete the circle through those four skills at every level. And that you can really do that at every level, but I already believed that, that that is possible” (C4 at EC2). For C4 this opens up possibilities to do new things with children.

56 Specific education for primary education

3.4.1 SCHOOL D

School D is actually a combination of two Christian primary schools for special education that work together. Both are located in Groningen. The children that go to these schools have developmental-, behavioural- or learning difficulties and thus cannot attend regular primary schools. The schools work with a system where the children go to different 'workshops' where they do all kinds of activities like cooking, crafts, reading and exercising in small groups with children of ages between 4-12. The team at school D consisted of the director (D1) of one of the locations, the cultural coordinator of the other location (D2), a teacher of the 'nature' workshop (D3) and a teacher of the 'arts' workshop (D4). D1 and D2 had also done a small pilot project with the Van Heusden framework prior to cycle 1 to experiment with the theory. School D joined the CiM project later and thus did not participate in the lecture series of the learning trajectory. School D chose a slightly different approach than the other schools. The team decided to have a shared brainstorm at the beginning of each project with all teachers (also those not involved in the design team) to establish the main objectives for the theme. The teachers then individually created activities for their workshops based on these objectives. Teachers D3 and D4's classes were filmed and evaluated and where possible adapted based on the feedback of the other team members. The idea behind this approach was to stay as close as possible to the regular practice of the teachers.

The themes for both projects were already fixed. The first project was entitled 'Plastic' and the second was 'Food'. Neither of these themes are necessarily cultural themes which made it more difficult for the teachers to come up with suitable activities to stimulate cultural consciousness. This was especially the case for D3 as the 'nature' workshop is mostly biology oriented. However, the team wanted to also emphasize the human aspect of nature (e.g. how we humans affect our natural environment and how we benefit from it) and to integrate the activities of different workshops more effectively.

		D1		D2		D3		D4	
		EC1	EC2	EC1	EC2	EC1	EC2	EC1	EC2
Content	-1	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	4.5%
	0	20.0%	16.7%	35.2%	35.4%	23.1%	16.7%	43.8%	31.8%
	1	25.0%	55.6%	9.3%	27.1%	15.4%	5.6%	6.3%	13.6%
Cohesion	2	0.0%	5.6%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%
	-1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	0	0.0%	0.0%	1.9%	0.0%	3.8%	0.0%	3.1%	0.0%
Connection	1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%
	2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	-1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
General	0	40.0%	11.1%	37.0%	14.6%	46.2%	33.3%	46.9%	36.4%
	1	5.0%	0.0%	7.4%	18.8%	0.0%	38.9%	0.0%	0.0%
	2	0.0%	11.1%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%
General	-1	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%
	0	10.0%	0.0%	9.3%	0.0%	3.8%	5.6%	0.0%	4.5%
	1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

fig. 15: understanding and subcategories of school D

	D1		D2		D3		D4	
	EC1	EC2	EC1	EC2	EC1	EC2	EC1	EC2
Perceptive	0.0%	5.6%	14.8%	2.1%	19.2%	0.0%	43.8%	27.3%
Imaginative	15.0%	11.1%	3.7%	8.3%	15.4%	5.6%	6.3%	9.1%
Conceptual	80.0%	55.6%	81.5%	87.5%	61.5%	88.9%	50.0%	63.6%
Analytical	5.0%	27.8%	0.0%	2.1%	3.8%	5.6%	0.0%	0.0%

fig 16: skills used by School D teachers

3.4.2 DIRECTOR D1

Main subject: cultural education

D1 has the highest level of understanding of all participants at EC2 with 73% (56% +1 and 17% +2 comments). This is a great improvement compared to EC1 where only 30% of all statements about cultural education are in line with Van Heusden. At EC1, content and connection are discussed equally often (both 45%), while at EC2 content is the main topic of conversation (78%). Analysis shows that content is also best understood by D1 at both EC1 and EC2 (25% of all comments at EC1 and 62% of all comments at EC2 are rated above 0 and are about content). D1 used all four skills to evaluate the projects, however, the emphasis on self-conceptualization at EC1 (80%) shifts to a more diverse pattern in EC2 where the other skills are used more with even 28% for analytical comments.

Main subject: process

As the director, D1 is very much concerned with how to use the experiences of the design team throughout the school and how to distribute the acquired knowledge. She is convinced that the theory can best be spread by slowly introducing teachers to it. D1 thus

prefers to feed the theory very gradually to her staff and is looking for ways to divide it up into small pieces and user-friendly ways to circulate it. The circle is one of the tools she finds helpful. School D did a small pilot before the official start of the CiM design cycles and D1 feels that they learned a lot from especially the first main project 'plastic': "It takes some time, but we will...we are becoming more and more professional, also thanks to our involvement in Culture in the Mirror. So I really enjoyed the experience of 'plastic'. This made you want to be part of it: 'let's go for it!'"(D1 at EC2).

In general, D1 claims she found the meetings with just the small design team more useful and enjoyable than the cluster meetings with the other schools. The documents from the starting kit she finds helpful as they may help the evaluation of projects: "Was the subject culture? Or: what has worked? Or: did it suit the children well? Or did we misjudge it? Or...then you can also feed it back. Exactly because you have those questions, you can make sure that you make it more profound" (D1 at EC2). Despite the fact that D1 thinks that acquiring the theory takes a lot of time, she does find it worthwhile and thinks that her staff has more knowledge about cultural education than ever before (D1 at EC2).

D1 and D2 are very close, both in their personal and professional life and D1 explicitly states how good it was to be involved in the CiM project together: "I don't know if I could have designed such a trajectory just with you. It also has a lot to do with the combination with [D2] (...) it is much too big a job to be doing it by yourself" (D1 at EC2).

Main subject: framework

D1 finds that her staff have been looking at their workshops from a more cohesive perspective since they have been introduced to the Van Heusden framework. This also leads to more depth in their classes according to her: "The depth I find just as essential [as cohesion]. Because I think: that is why we have started, or have hoped like: to underpin what you are doing" (D1 at EC2). A further benefit of the theory she thinks is that the theory helps to be able to specify the effects of cultural education. The fact that she mentions on several occasions how the theory may help her to identify and label what they do at her school, also for the inspection, also shows a very conceptual way of thinking. D1 finds that people working in the arts often lack the ability to clarify the effects of what they do: "To a concert! Great, we are going on a trip! Yes, that's all good fun, but what was it actually all about? How can I explain...how can I persuade an inspection as it were...?"(D1 at EC2).

3.4.3 COORDINATOR D2

Main subject: cultural education

Analysis of D2's evaluations also shows a great increase in understanding from 17% at EC1 to 50% (46% +1 and 4% +2) at EC2. Like D1, D2 too comments on both content and connection 44% of the time at EC1 while content is discussed most at EC2 (65%). Con-

tent is also understood best (29% of all comments at EC2 are rated +1 or +2 and are about content). However, D2's evaluations are much more conceptual than those of D1, ranging from 81% at EC1 to 88% at EC2.

Main subject: process

Like D1, D2 also thinks the theory should be spread slowly and start from a small team as there is already so much to do at school (D1 at EC2). She notes the fact that a critical reflection of one's own practice requires the ability to be open and vulnerable: "...I think it is also impressive how open they are [D3 and D4], you know, that you can just come in with a camera and that they ... ehm... well, they just let it happen and I take my hat off to them!" (D2 at EC1). At EC2 she draws the analogy between the children's reference points and those of the teachers. She feels that it is important to start from what they know and are already doing (D2 at EC2). "Because I think: yes, models you know dozens of them, a hundred! I mean, the SLO is filled with them, with models. But how do you take it into your own way of looking at things?"(D2 at EC2). D2 argues that the circle with the skills is the most useful tool in the starting kit together with the medium square (a similar tool designed by the CiM researchers to give some examples of the four medium groups). D2 wishes that there was a similar tool to distinguish between culture and cultural consciousness. She found the documents designed by the SLO less useful and she indicates that she prefers to use as few documents as possible (D2 at EC2). She did not use the profile of children's development but she claims that she will probably use it in the future.

D2 has found the involvement in the CiM project very time-consuming. She thinks that it takes a lot of practice to really make a change in the way you look at things. This is why, in her opinion, D1's has made more progress than her own (the additional teachers in the design team are both from D1's school). She also feels a bit disappointed sometimes at how difficult it is to make true progress: "I think I want too much (...) I get excited by the good things, but I always continue to see these other things as well. They are...they remain a thorn in my side"(D2 at EC2). D2 thinks that good supervision is very important when working with the theory to show how things can be done differently. "...you are part of your own school environment, in which certain mechanisms just operate. And everybody is part of that mechanism. So when somebody from outside comes in, then you think: 'oh yes, that!'"(D2 at EC2).

Main subject: framework

D2 claims that Van Heusden's theory has been very valuable for her school. Particularly to give the arts a better foundation within the school and to develop a broader perspective on cultural education: "...to have a theory behind that [the arts], that you can work with, because it has very concrete...avenues of approach. Yes, that I find very important"(D2 at EC2). One of the main aspects that she feels has made their cultural education more profound is the distinction between culture and cultural consciousness and the role of reflection in this distinction. This is also a main difficulty with her teachers and D2 hopes that

she will be able to teach them this without criticizing them: “...why is it good to do one thing and is it not so good to do another? If you want to use macaroni to make letters (...) and the theme is ‘food’, then I think, yes, you just do it to keep the children quiet. That for me belongs to the same category. But that I can just label it, I hope I will be able to do that better and better”(D2 at EC2).

3.4.4 TEACHER D3

Main subject: cultural education

Teacher D3 improves her understanding of cultural education between EC1 and EC2. D3’s understanding develops from 15% to 44%. D3 mainly discusses the connection to the pupils (46% at EC1 and 72% at EC2). D3 also especially improves on the subject of connection. None of her statements about connection scored above 0 at EC1 compared to 39% at EC2. She seems more aware of how she can connect her lessons to the development of the children: “... with the young children...I feel like I am more at the level of self-perception and self-imagination in those areas. And once in a while analysis, well, conceptualization perhaps” (D3 at EC2). This increased understanding of the type of cultural consciousness that suits her pupils has also made her rethink her classes: “...sometimes I was far too much here [points to conceptualization and analysis] and the response was much smaller. And I went more towards these [points to perception and imagination] with creating (...) and the children (...) responded better. Yes” (D3 at EC2). D3 is very conceptual in her evaluations (62% at EC1 and 89% at EC2).

Main subject: process

D3 made no comments about the process

Main subject: framework

Both at EC1 and EC2, D3 claims that the theory has provided her classes with more depth and more structure which has given her more satisfaction. “I was very much searching. For how does that work with nature [combining the nature workshop and cultural education]... it gets more focused for me. Yes” (D3 at EC1).

3.4.5 TEACHER D4

Main subject: cultural education

Like D3, D4 also becomes more accomplished with the framework. Understanding of cultural education rises from 6% to 23%. D4 comments more on content aspects (50% at both evaluations) and also seems to understand this aspect best (6% of all comments rated +1 and about content at EC1 and 14% at EC2). D4 has relatively many perceptual statements (44% at EC1 and 27% at EC2). The relatively high level of perceptual quotes by D4 may have influenced her overall scores on understanding.

Main subject: process

D4 likes to see how her fellow teachers go through a similar process when they learn about the theory: “It is some type of recognition. Because you think: ‘yes indeed. We actually said the same, didn’t we, the first time’”(D4 at EC2).

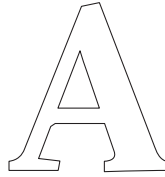
Main subject: framework

At EC1, D4 found that the theory gives an extra dimension which helps her to complete her assignments for the pupils. At EC2 she mentions that she has become more aware of what her goals are with her classes: “...you think about really enjoyable assignments, but if you truly look at the over-arching goal, then you think: oh, what am I really doing”(D4 at EC2). The theory is then a way to keep track of what you want with a project and a theme: “So it is really like a coat stand ...[‘kapstok’ in Dutch]”(D4 at EC2). D4 found that she did not have to change her classes completely, but that small things could be adjusted and tweaked.



§4 CROSS CASE ANALYSIS

4.1 MAIN SUBJECT: CULTURAL EDUCATION



Analysis of the evaluation interviews with all twelve participating teachers combined shows an overall increase in the understanding of cultural education. The number of -1 and 0 statements declines between EC₀, EC₁ and EC₂ while the percentages of +1 and +2 comments go up (see fig. 18). There is also a shift in understanding of content, connection and cohesion. At EC₁ connection is understood best (11.8% of all statements are rated above 0 and are about connection, compared to 8.8% for content and 0.7% for cohesion), while at EC₂ content scores highest (17.8% of all statements are rated above 0 and are about content compared to 15.8% for connection and 1.9% for cohesion) (fig. 17). It seems that the teachers are already quite knowledgeable about the children's development of cultural consciousness at EC₁ which does not improve very much over the course of two design cycles, while content is understood much better. Cohesion is very rarely discussed, even though many of the participating schools explicitly wanted to improve the cohesion between their cultural education activities. Cohesion may have been discussed more in the design meetings but was hardly taken into account at the evaluations.

School C and school D have improved the most between EC₁ and EC₂ (from 13.5% to 47.9% of all statements rated above 0 for school C and 15.9% to 47.2% for school D) (see fig. 19). They are also the two teams that had the most practice with the framework as they both did three projects instead of two (School D's first pilot project was executed before the data collection and is thus not part of this study). School A is the only school that shows a drop in understanding between EC₁ and EC₂. It is also the team with by far the most perceptive comments at EC₂ (52.5% at EC₂ compared to between 3.3% and 10.6% for the other teams) (see fig. 20). Analysis of the relationship between the rating of the quotes and the skills used shows that 98% of all perception quotes are rated as 0, compared to 70% for imaginative and 71% for conceptual ones. Analytical statements are rated highest as 63% of analytical quotes scored +1 and 37% scored +2 (see fig. 22).

In general, although self-conceptualization remains the most popular mode of evaluation at EC₂, its use does decline in favour of the other three metacognitive skills (see fig. 23).

4.2 MAIN SUBJECT: PROCESS

An inventory of the most commonly mentioned stumbling blocks in understanding the Van Heusden model shows that the teachers claimed they struggled most with defining the difference between cultural education and other types of education (cultural cognition and cultural metacognition) which lies at the heart of the content knowledge of cultural education. This difficulty may have been intensified by the fact that all of the participating schools worked with fixed themes that were not necessarily the most convenient for the development of cultural consciousness. However, the data show that the understanding of the content of cultural education did increase over the course of the CiM project.

In general, most teachers claim that they found the CiM project time-consuming but worthwhile. Several teachers mention that they enjoyed being able to sit down together with colleagues and really discuss their educational practice in depth. Overall, most teachers disliked the extensive and, in their view, complicated first formats that they were given in design cycle one and preferred the more compact documents of the starting kit. The circle of skills is mentioned by many as a useful and effective tool. Although there is a difference in approach between the schools, with some preferring a more free-flowing design process while others preferred more structuring, all agreed on the use of setting clear goals for a project and their classes. Many have mentioned that they would appreciate some materials to help them structure the design but that these materials should involve as little text as possible and should be user-friendly and not too overwhelming. The profile of pupils' development of metacognition is rarely used by the teachers, although they do claim that they find it important as part of the starting kit.

	A1		A2		A3		B1		C1			C2
	EC1	EC2	EC1	EC2	EC1	EC2	EC1	EC2	ECO	EC1	EC2	ECO
Content	-1	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%
	0	32%	12%	26%	18%	18%	27%	29%	43%	18%	22%	
	1	18%	0%	11%	8%	10%	7%	10%	2%	24%	4%	
Cohesion	2	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	
	-1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	0	0%	0%	11%	0%	15%	10%	4%	6%	6%	5%	
Connection	1	3%	2%	2%	0%	0%	3%	8%	0%	6%	2%	
	2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	-1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
General	0	15%	78%	17%	69%	50%	43%	41%	44%	35%	62%	
	1	26%	7%	30%	5%	7%	10%	6%	6%	12%	5%	
	2	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	
General	-1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	0	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
General	2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

Many of the participating teachers felt that they had become more accomplished at using the theory over the course of the design cycles. Several of them stated that the input by the PhD researcher, SLO member and their colleagues had been very valuable in this process.

All teachers who commented on the future use of the theory claimed that they would like to continue using it. Several however, were concerned as to whether it would be successfully implemented in their schools as there would no longer be any supervision. All agreed that any school that wished to use Van Heusden's framework would need some initial guidance to help understand the theory and the use of the starting kit.

4.3 MAIN SUBJECT: THEORY

All comments that were explicitly about the Van Heusden framework indicated that the teachers had valued its use. Although they found the theory complicated and difficult to grasp, especially the difference between cultural cognition and metacognition (education in general and cultural education in particular in this case), they also felt that it had given them a new perspective on cultural education which gave their education more depth. Several teachers liked how the framework can be used to label what they do and as a check to see if they have thought about the different options that cultural education offers.

fig. 17 : overview of levels of understanding and subcategory

C3			C4		D1		D2		D3		D4	
EC1	EC2	ECO	EC1	EC2	EC1	EC2	EC1	EC2	EC1	EC2	EC1	EC2
0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	5%
26%	14%	37%	30%	23%	20%	17%	35%	35%	23%	17%	44%	32%
2%	24%	0%	0%	15%	25%	56%	9%	27%	15%	6%	6%	14%
0%	0%	0%	0%	5%	0%	6%	0%	2%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2%	5%	0%	12%	5%	0%	0%	2%	0%	4%	0%	3%	0%
2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
50%	24%	48%	36%	28%	40%	11%	37%	15%	46%	33%	47%	36%
15%	30%	11%	15%	20%	5%	0%	7%	19%	0%	39%	0%	0%
0%	0%	0%	0%	3%	0%	11%	0%	2%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%
2%	0%	4%	6%	3%	10%	0%	9%	0%	4%	6%	0%	5%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

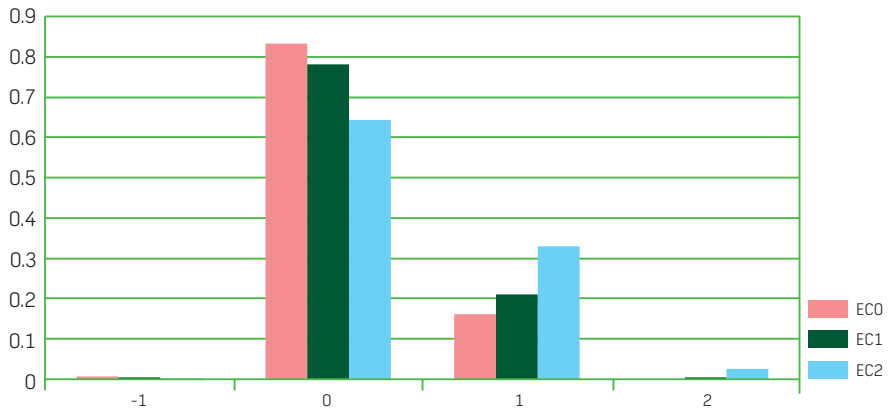


fig. 18: overall trend in level of understanding

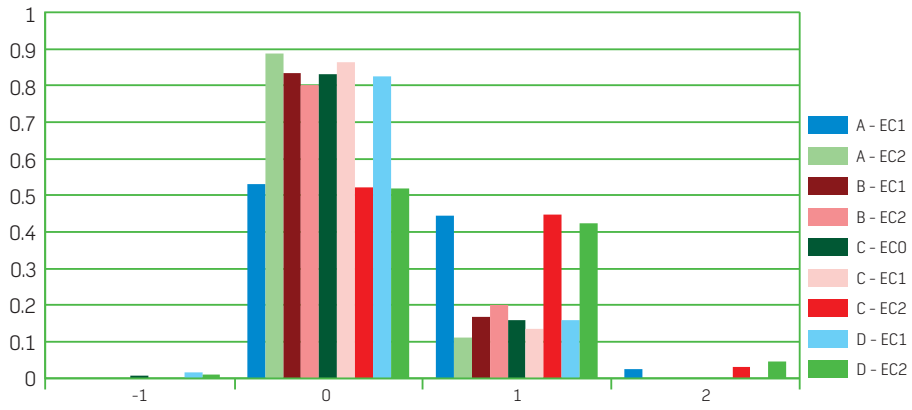


fig. 19: level of understanding per school per period

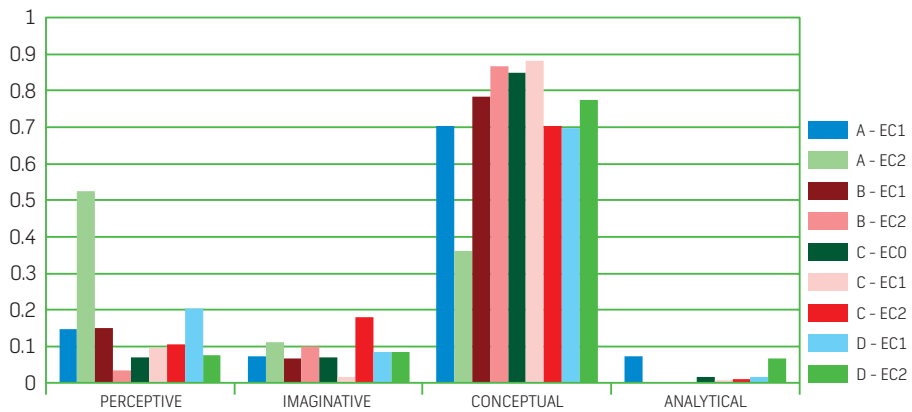


fig. 20: skills per school and period

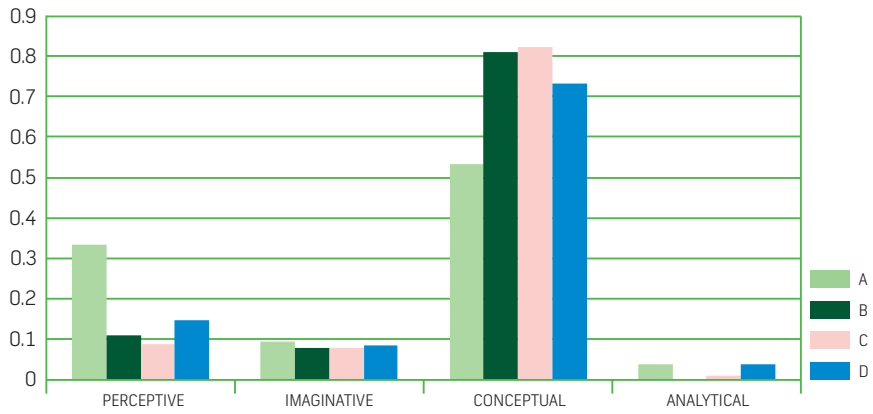


fig. 21: overall use of skills per school

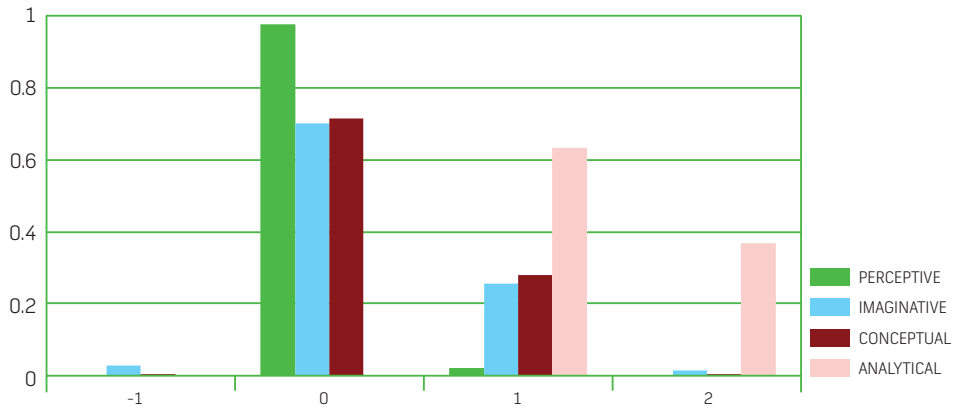


fig. 22: relationships between skills and level of understanding

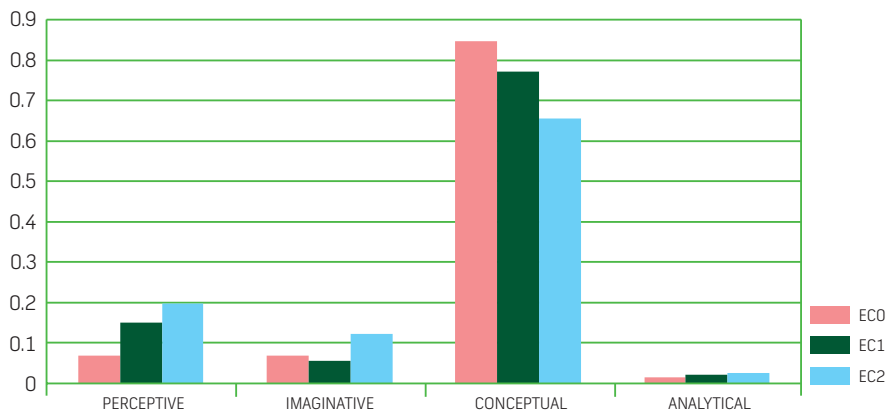


fig. 23: overall use of skills per period

§5 CONCLUSIONS

The Van Heusden framework can be used by the primary school teachers who participated in this study to design lessons and this improves their understanding of cultural education. The content of their cultural education,

the cohesion between different subjects and the connection to the development and memory of the pupils is understood better. Three of the four schools have increased their overall understanding of cultural education (school B, C, and D) although by far the greatest improvements can be seen in school C and D. They also designed and executed three rather than two projects. However, this study also shows that the participating teachers have improved most on the level of content and that their understanding of connection is less affected by working with the framework. Content and connection are discussed most often in the evaluations of cultural education lessons. It seems that the teachers already are quite knowledgeable about the development of cultural consciousness of the children at EC1 which does not improve very much over the course of the design cycles, while content is understood much better. In terms of Shulman one could say that the *pedagogical knowledge* (pk) of the teachers is impacted less by working with the Van Heusden than the *content knowledge* (ck) is. Cohesion was sometimes discussed when teachers reflected on the process, but was hardly addressed in discussions about cultural education. The skills analysis indicates that even though self-conceptualization remains the most widely used skill throughout the project, its use declines over time (85% at ECo, 77% at EC1 and 65% at EC2) in favour of the other skills. The conceptual and analytical comments are also often rated higher compared to the perceptive ones.

The teachers who joined the CiM project state that they are more aware of what they do and that the Van Heusden framework helps them to select suitable topics and activities for their cultural education. The main difficulty for this group of teachers in appropriating the theory was distinguishing between cultural cognition as a whole (in this case education in general) and cultural consciousness (cultural education) in particular. Teachers were struggling especially at design cycle one to determine if an activity was part of cultural education or not. However, many claim that they already felt more competent by design cycle two. The difficulty with distinguishing between cognition and cultural consciousness was further increased by the fact that many of the school-wide themes did not lend themselves well to the development of cultural consciousness and thus required revision.

The design process seems to have helped the teachers to acquire a higher level of understanding. Besides the fact that the teachers enjoyed being able to spend time together to think about their cultural education, they also claimed that they had found it easier to

grasp the framework once they had tried it out in their regular practice. This is in line with previous studies about the effectiveness of active participation for professional development. The teachers who were engaged in three rather than two design cycles had a higher level of understanding, regardless of their participation in the lecture series and work sessions. Other features that have previously been earmarked as potentially effective methods which were also mentioned by the teachers in the CiM project, such as the value of collaboration and teamwork with researchers and colleagues and the effectiveness of examples to help them grasp the theory. And although many primary school teachers may be unaccustomed to designing their own education (as they often use methods that specify the goals and activities) they were able to design, execute and evaluate their cultural education independently with the starting kit.



§6 DISCUSSION

Primary school teachers (especially the regular group teachers) work with the same group of children all day and year round. It is thus likely that they already have an (implicit or explicit) understanding of the development and interests of their pupils which they (consciously or unconsciously) apply when designing, executing and evaluating lessons which explains why their pedagogical knowledge, or in terms of Van Heusden, their understanding of *connection* remains relatively unaltered throughout the CiM project. However, the difficulty for these teachers may lie in the fact that they usually teach all subjects. The fact that there are some gaps in knowledge at the level of the *content* of cultural education is therefore not surprising. This was also revealed by the Bamford Report. However, all participants were very willing to fill these gaps and many stated they had enjoyed learning more about the scientific foundations that underlie their education. The challenge that primary school teachers may face in determining which subjects belong to cultural education and which do not is one that should be noted. Guidance and assistance in this area is probably needed if one wants to further develop the cultural consciousness of pupils. Once teachers are more knowledgeable about the content of their cultural education they can then make more informed choices about the types of activities they want to offer and the goals they want to achieve with them. They may also re-evaluate the suitability of the themes they choose for their cultural education classes (as many of the teachers in this study have already done). The fact that many of the pre-fixed school themes that were used in this project were unlikely subjects for cultural education made the design process more complicated for some of the teams.

A surprising result from the analysis of the teachers from school C is that cohesion is hardly ever discussed in the evaluation of their classes. Cohesion was one of the prime reasons for school C to participate in the CiM project as they wanted to improve the connection between their different classes. It could be that cohesion was discussed extensively during the design process but it is not in any way prominent in the evaluations. This is remarkable as it was not only a main objective but also part of the interviews at ECo and EC1. Cohesion was mentioned in discussions about the process and C1 did claim that it had improved, but this did not transpire in the evaluations of any of the projects. Somehow, content and connection are either seen as more important subjects to discuss, or they may be the topics that teachers are used to discussing in evaluations. Thus even when cohesion is a focus point for the school, it seems difficult to give it an equal status in the evaluation. Additional tools may therefore be needed to put this subject on the evaluation agenda.

It seems that the practical experience especially has helped the teachers of the CiM project to become more accomplished with the framework. Since school D missed the learning trajectory but did show one of the greatest improvements, it looks as though participating in the design process had more impact on the level of understanding than the attendance at the lectures. Practising thus may help to understand cultural education better, as D2 said: “I think it is very important (...) when it falls into place, like: ‘Oh, now I get it’ (...) It’s like there is some kind of shift in looking at things. And I think that’s one of the most important things for me. But you have to practise those things a lot, if you want to establish that kind of shift” (D2 at EC2).

It is important to distinguish between understanding what cultural education is, what it can do and how it can be organized and *good education*. Van Heusden’s framework does not guarantee any type of quality. One can design lessons that meet all the requirements of metacognitive education and that are still very poor. Good lessons and effective education depend on many factors besides knowledge of the subject alone. An example of this was when C3 was struggling to keep order at cycle 0 and felt that the second project went much better: “...this is as different as night and day”(C3 reflecting on video clips of cycle 0 and 1). She was clearly much more satisfied with her classes during the second project. This improvement is, however, not reflected in the scores for understanding. Although didactic skills are a prerequisite for all teaching and are thus also vital for the instruction of cultural education, they are not part of this study as they are not specifically concerned with cultural education content, connection and cohesion. The understanding of cultural education should thus not be confused with general didactic skills that are required for any type of education.

An important disadvantage of the research method used is the emphasis on language and the conceptual and analytical abilities of the participants. The conceptual and analytical nature of Van Heusden’s framework and the corresponding coding system makes it easiest to detect understanding in people who are skilled in these modes of thought and communication. However, as the theory itself underlines, there are *four* potential skills and *four* medium groups one can use to give meaning that are all equally valuable and which can all be effective. If the evaluations had included more types of media or if the lessons themselves had been part of the rating it is very likely that the level of understanding of some teachers would have been more visible. The evaluation style may also have been influenced by the way that teachers are used to working. The type of evaluation used in this study is likely to have triggered some skills more than others. When the teachers had to evaluate their lessons themselves, some chose a more descriptive rather than conceptual or analytical style. This is not necessarily problematic, but does make it more difficult to assess to what extent the teacher has truly understood his or her cultural education.

A clear example of this can be seen in the case of school A. Apparently, teacher A1 tends

to mainly discuss her classes in a descriptive way (even though she is capable of a more conceptual approach as demonstrated at EC₁) when the evaluation is not structured by an external party (as was the case at EC₂). Likewise, she focused much more on connection topics than content topics compared to EC₁. The evaluation at EC₂ was dominated by an exchange of anecdotes between A₁ and A₃ about the children and lacked the overview that would have showed to what extent they actually understood cultural education. It could be that people who are more 'perceptive' in their evaluation are also those who understand cultural education less well. However, it proved more difficult to rate the self-perception statements than the other types with this research method. The perceptual comments are often too ambiguous to be sure that they indicate understanding. Also, the case of A₁ shows that a teacher may have a high level of understanding (as shown at EC₁) even though that does not transpire in a more perceptive evaluation (A₁ at EC₂). The fact that analytical quotes are rated very highly highlights the bias in the coding. Since the Van Heusden framework is very analytical and conceptual in nature (which made the coding system very conceptual and analytical as well) and the evaluation was dominated by the medium of language this makes it difficult to notice the level of understanding of teachers with a more perceptive style or those who express themselves better in one of the other mediums. The preference for a particular evaluation style may also be linked to the way teachers are used to working. In the lower groups with younger children education is often much more flexible and dynamic compared to the higher groups. It could well be that the teachers who are used to a more free-flowing style of working are more perceptive to what is happening in the classroom and are used to adjusting their plans accordingly rather than planning and evaluating in a more structured and conceptual way. This too could explain the drop in understanding at school A. Likewise, not all teachers are equally accomplished in the use of the medium of language. Artist C₃ also mentioned how she found the drawings of children easier background material to work from than the design format. In fact, many teachers complained about the amount of text and reading materials in the first design cycle. Although language is a very difficult medium to avoid, it may be wise to search for additional media to aid teachers' professional development and assess their level of understanding.

The fact that self-conceptualization is used less in the evaluation at EC₂ could indicate that the teachers are slowly moving away from merely reproducing the concepts of the theory and develop a more diverse outlook on their cultural education as they become more accomplished with the framework. They learn to integrate the labels and structures into their own teaching style as they experience how the theory relates to their classroom practices. The use of other skills may therefore also be an encouraging and positive sign even though it is less obvious how to assess the more perceptive and imaginative comments.

In this study I have witnessed the drive that teachers can have to improve their cultural education and to increase their knowledge. Many the participating teachers felt the im-

portance of cultural education but very few knew how to articulate it. Van Heusden's scientific framework can help to shape the foundation under the cultural education practices of primary schools. This study has shown that the participating primary school teachers are able to improve their understanding of cultural education by designing their own lessons. Many teachers found the theory difficult to work with at first, but with practice their competence and confidence grew. In order to ensure that primary school children do not only learn how to read or do sums but also take the time to reflect on what we as humans do and why we do it is vital that their teachers know what cultural education is and what it does. The development of the cultural consciousness of children is seen by many teachers as something important but it is not ensured by merely 'fun' activities alone. It requires knowledge and experience to create, execute, and assess good cultural education. It is our responsibility to provide not only the time and money to facilitate cultural education but to also provide the content support that should go with it. This study has shown that it is possible. That it does not require a complete abandonment of existing practices. This study only reveals a tiny tip of the iceberg and much more (longitudinal) research is required to further understand how best to enhance the cultural consciousness of our children and how to train teachers to guide them. Still, with the growing body of scientific research, the commitment of schools and teachers, openness and a willingness to learn, a new perspective can make all the difference.



Cultural education 'live'

INTRODUCTION

It seemed odd to write a thesis about cultural education without talking about its classrooms, paint, scissors, stories or sounds i.e. the real-life world of schools. Therefore, I wanted to devote a small portion of this book to the teachers and the children who participated in the CiM project. This section is by no means the result of a scientific study, but an illustration of the people 'in front of' the numbers and the theory. I have selected a few classes and activities from each school that I worked with to show the diversity of projects and people. These give an insight into the processes that took place in the classrooms while the project was in full swing. They are examples of the wide range of lessons that were inspired by the CiM theory and may give you an idea of what the teachers have developed in the three years I was in their midst. I will conclude with some observations I made throughout this process. These again are not scientifically grounded, but issues I noticed while working with the teachers. This chapter provides a background for the earlier chapters and offers a glimpse into the school environment and the teachers who were the context of this research.

§I THE SCHOOLS

Twelve schools in total were selected to participate in the CiM project. These schools would be the researchers' partners to study if and how Van Heusden's theoretical framework would be useful for teachers and schools. Six of these schools were primary schools while the other half were offering secondary education. Since the project is based in Groningen, the majority of the schools were located in Groningen City or the Groningen Province. Because of the exploratory nature of the study it was thought vital to select schools that were willing to cooperate and that offered a variety of cultural education activities which they wanted to improve. First, four secondary schools were chosen that were connected in some way to either the CiM team or the partners of the project: the national institute for curriculum development *SLO*, the *SKVR* and *Kunststation C*. These four schools in turn made suggestions for primary schools

that they were already affiliated with. The emphasis on continuity of cultural education throughout the different age groups makes it important to think beyond school-level and to look at how cultural education can be cohesive across the age groups of four to eighteen. Our partners in Rotterdam selected additional schools in the city of Rotterdam to make the range of schools more diverse. The CiM team and the directors of the schools chose the teachers that would take part in the research. The aim was to create teams of between two to six people who were motivated, could work well together and who were teaching the relevant subjects and age groups. The twelve schools together made a very heterogeneous group. Some have large numbers of pupils, some are very small. Both the teachers and pupils have various cultural and social backgrounds and the schools employ different learning methods. Although the sample of schools is not large enough by far to be fully representative of all Dutch schools, they do provide a good indication of the possibilities of working with the CiM theory.

I worked with four out of these twelve schools (school A, B, C and D). These were all primary schools, two in Groningen City, one in Groningen Province and one in Rotterdam. I worked with teachers of different age groups and observed lessons that were designed for groups one and two (ages four to six), groups three and four (ages six to eight), and groups five and six (ages eight to ten). One school for special education worked with groups that comprised children of different ages. During the one-and-a-half to two years I worked with the teachers, they designed two to three series of lessons. The length and nature of these lesson series varied and was determined by the teachers. All schools worked with themes. This was not specified by the CiM project but a choice by the schools. The themes were often school-wide and fixed beforehand. Some of these proved more difficult than others to work with for cultural education. The CiM project was specifically intended to follow the normal rhythm and routines of the schools and the teachers, as the theory of cultural cognition is a framework and not a method and therefore does not prescribe a specific didactic. Thus, all practical decisions such as those about content, method, involving external partners, trips and aims were taken by the schools themselves.



§2 COLLECTING: AGES 4-6, SCHOOL A

The theme of ‘collecting’ had already been chosen as a school-wide theme before the teachers joined the CiM project. The teachers who were involved in the research designed and executed various activities, for children aged four to six, related to collecting. The main goal of the project was to make the children aware of the fact that collecting is a way to categorize and order the world around you. The relevance of the theme for this age group was extensively discussed in the design sessions. The team agreed on several sub-questions

that aimed to stimulate the children's reflection on the subject, both on a personal and on a collective level. There would thus be activities that invited an individual perspective on collecting, centred around questions such as: what do you collect? Why do you collect this and not something else? What is the story behind your collection? What does your collection tell us about you? Other activities focused more on the societal aspects of collecting: why do we as a culture collect certain things? Is it important to collect things and display them? How does a museum present its collections? Although these questions served as guidelines for the activities, language was only one of the media used in this project. The team decided that all basic skills should be stimulated, with an emphasis on imagination, and that artefacts and language were to be the dominant media.

The project started with an exploratory 'intervention' as the teachers called it. A large chest was placed in the classroom and children could explore the inside in small groups during the week. The chest was filled with a large variety of objects such as beads, small toys, shells and everyday items. The team deliberately decided not to guide the children and not to tell them what to do with the objects as they wanted to see if and how the pupils would order the contents of the chest. As predicted by the teachers, the children immediately started to put things together and were very

excited by the mystery of the chest. It was interesting to see how differently the boys and girls played with the objects. The girls grouped together and tried to collect as many of the same objects as possible, neatly categorizing them by shape or colour. They worked together and shared marbles and beads. The boys grabbed the biggest and shiniest objects and fought over the most desirable pieces. They were particularly drawn to the set of silver trophies and immediately started to shout: "I'm the champion!". This activity did not yet have much to do with the children's metacognition, but was used as a starting point to discuss the how and why of collecting. It was also used as a reference point to see how the theme relates to the children. The chest activity showed that the pupils did not need to be told to group and order the objects and that they enjoyed playing with the collections they made.

The second activity involved all the pupils. Each child brought its own collection from home and told its classmates about it. The teacher asked the child about it and about why the child collected it. The collections varied from rocks to toys to bracelets. Interestingly, the children seemed to have a different view of collecting than adults. They seemed to care less about the rarity of the objects and had little sense of the possible scope of their collection. Egan describes that older children are very keen on collecting as it gives them a sense of mastering a piece of the world (1997, 87). They are very much aware that a collection ideally involves all varieties of that particular item. For these younger children however, this seemed less important. When the teachers asked them about it, they for instance stated that it did not matter to them if they had more than one of a particular object. For an adult or older child, this would matter very much as the duplicate has little added value for the collection. The children who participated in this project were mostly concerned

with the story behind the objects and what they looked like. A girl who collected rocks (common, grey rocks) could tell her classmates exactly where she found each one. A young boy collected all sorts of cards (fig. 1.1): from bank cards to library passes. When probed he explained that it did not matter if you had two identical cards as long as they were all rectangular. He liked to keep them in a wallet he got from his mother, as this is where cards belong. These observations fit very well into what one might expect of the cultural cognition of children of this age. Their strong imagination and preference for artefacts makes the concrete and imaginative characteristics of objects most important. The colour, shape, and size, and what you can do with them is what really matters. Most children said that they used their collection to play with. A boy who collected sharks' teeth told his classmates a heroic story about how he personally knocked the teeth out of a shark's mouth on his holiday. The pupils were equally interested in collections of dolls or toys as in collections of rocks or shells. Another assignment, where the children had to categorize pictures of objects into either the 'collection' circle or the 'no collection' circle showed that all photos of two or more things could be a collection according to the children. One boy even said that he collected dinosaur bones, although he did not have any yet. This was not seen as problematic by either him or his classmates.



fig. 1.1: Children reflecting on their collection

The teachers thought that the theme of the project suited the children's interests very well and that working with objects fitted their level of development. The difference between the four to five year olds and the five to six year olds was most obvious in their ability to articulate their thoughts in language and how long they could concentrate. In the evaluation the teachers expressed the wish to use the medium of the body more as they thought that this was very age-appropriate. It would be interesting to think of ways to incorporate the body into cultural education and to see how it could be used as a way to express ideas or feelings. One major disappointment in the 'collecting'-project was the class taught by an artist. The idea was to emphasize the children's self-imaginative skills even more by inviting an artist into the classroom. The artist had been briefed about the project and the main goals in terms of metacognitive development. However, the class disappointed both participating teachers. The artist had too little knowledge of the age group and the assignment was already so fixed by the artist that there was little room left for the children's imagination. Both teachers stated that although the children had carried out the artists' instructions they had seen no true signs of cultural consciousness or

reflection. This was an important learning point for all of us, as it showed that in order to really connect to the cultural cognition of a child, didactic skills are required, as well as an understanding of the cognitive abilities and interests of children, and a readiness to allow for their own reflection. It is sometimes thought that bringing an artist into a classroom is in itself an added value. However, this experience as well as many previous ones that were recalled by the teachers in this project showed that being imaginative yourself is no guarantee that you are also able to connect with children and can stimulate their fantasy. As soon as learning objectives move from children merely enjoying themselves and engaging in crafts, to stimulating their cultural metacognition, the standards you want a cultural education class to meet are likely to change as well.



fig. 1.2: A girl displaying her collection



§3 MY FAVOURITE BOOK: AGES 6-8, SCHOOL B

The theme ‘my favourite book’ was already fixed and originated from the reading method used at the school. The main objective of the project was to make the pupils reflect on the role books play in people’s lives. The teacher also wanted the children to be aware of the fact that a person’s favourite book tells you something about that person. The children all had to bring in their favourite book, wrapped in paper. Each child would then select a book from the pile, unwrap it and guess whose book it was and why. Some books were easier to guess than others. A boy who was very fond of tractors had wrapped a tractor catalogue (fig. 2.1) and a girl who liked to sing had chosen a book with songs. The teacher asked the children why the particular book suited the child and then asked the child whose book it was and whether the description was correct. Self-perception, self-imagination and self-analysis were used in this case to come to a self-concept: a definition of what this book says about you.



fig. 2.1. A boy with his favourite book about tractors

Another goal was to show the children that different types of books serve different purposes. A cookery book is a very different kind of book, with a different purpose, to a novel. The children reflected on types of books in a game where they acted out a certain character and then chose the corresponding book according to the needs of its profession or hobby. Again, their strong self-imagination was used to help them categorize and label. The pupils also visited the local library, learned about different writing styles (e.g. fiction, non-fiction, thriller) and interviewed a children's book writer who visited the class.

A final activity was designed to make the children reflect on the book as a way of communicating ideas and thoughts and to show them how every medium has its strengths and weaknesses. The class was divided into small groups of children who had to invite the other children to a party. The party was to take place on a certain day, at a specific time and involved a particular activity. One group could only act out this information using their bodies. One group could draw it without writing. One group was able to call the class on the phone and the last made a written invitation. The class had to guess all three pieces of information and then discussed how suitable this means of communication had been for this purpose (fig. 2.2). This activity triggered a lot of discussion among the group. All agreed that the call and the letter had been the easiest to understand, although they also pointed out that you need to be able to read to extract the information from the letter and that you could forget the time and date if you had only heard it on the phone and had nothing on paper (as with the letter and the drawing) to remind yourself. One child pointed out that you can only write something down if you are old enough and that you will otherwise need to ask your mother for help. The children also found the drawing very suitable for a festive event like a party and agreed that an invitation letter should also include a drawing.

Since the children in this age group were just learning to read, it was expected that the difference in development would show in their responses and in the products they made in this project. The teacher had pointed out in the design process that the children of group four (ages seven to eight) are much more comfortable with reading and writing than those of group three (ages six to seven) but that the younger children show their creativity very

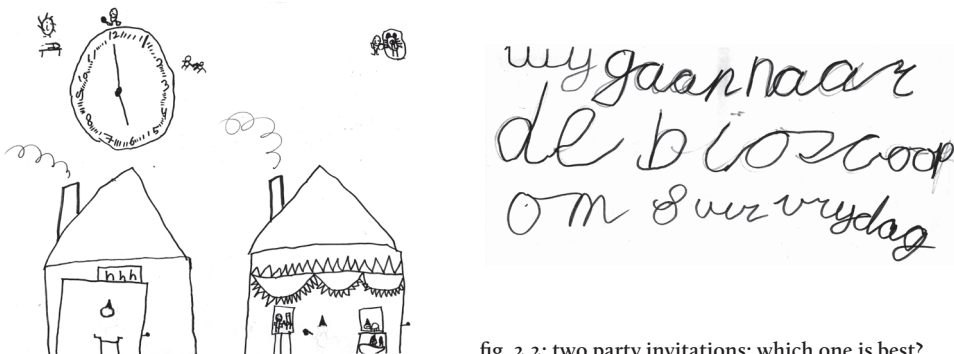


fig. 2.2: two party invitations: which one is best?

well in other mediums. The acting out was unsurprisingly the most difficult invitation to guess, although it was easy to see which activity would take place. It was interesting to see that the children acted out which day of the week it was by showing what they would normally do at school on that day (drawing and gymnastics). The children reflected on the pros and cons of every medium and thus became aware of a quite complex and abstract notion (the effect of the medium on a message) in a funny and accessible way. This project has shown that a difficult and analytical subject can be addressed even with children whose metacognition is more imaginative and conceptual. The assignment incorporated the skills and media that suited the cognitive level of the children so that they had the means to reflect on the topic. The subject of a party invitation was also close to the world of the child, which probably made it easier for them to reflect on the topic. They were able to imagine how they would react in real life to different kinds of invitations and reflect on the possible drawbacks of each mode of communication.



§4 WAR & PEACE AND ENERGY: AGES 8-10, SCHOOL C

The school that participated in the CiM project with group five and six (ages eight to ten) was the only one that had external teachers involved in the design teams. A music teacher was part of the project on 'war and peace'. The focus of this project was mainly on World War Two. In the music lessons, the children debated topics such as whether music and war actually go together, what kinds of music people would have liked to listen to in World War Two and why they would even listen to music. The teacher told the children that musicians often want to express an emotion with their music. The pupils were given a piece of paper with a happy, sad, angry and scared face and had to categorize short music fragments according to these emotions. Some children found it difficult to distinguish between the emotion that they felt while listening to the music and the emotion that the artist may have wanted to express. Afterwards, they were invited to find four different sounds that expressed the four emotions. They could use conventional musical instruments or make sounds with objects they found in the classroom. The pupils discovered that most instruments can be used in different ways to express various emotions. Then the children had to make a protest song and use one of the four emotions. Interestingly, all children chose the conventional musical instruments and preferred guitars and djembes over less common or less impressive instruments (e.g. a finger piano). This fits the more conventional preferences of this age group. The children seemed to find it easier to express their ideas in the lyrics in the song than in the music. Although one girl noted: "You can grab a guitar. Then you actually want to say something but you could also play instead". It would be interesting to see if younger children find these imaginative assignments easier than this older, more self-conceptual age group.

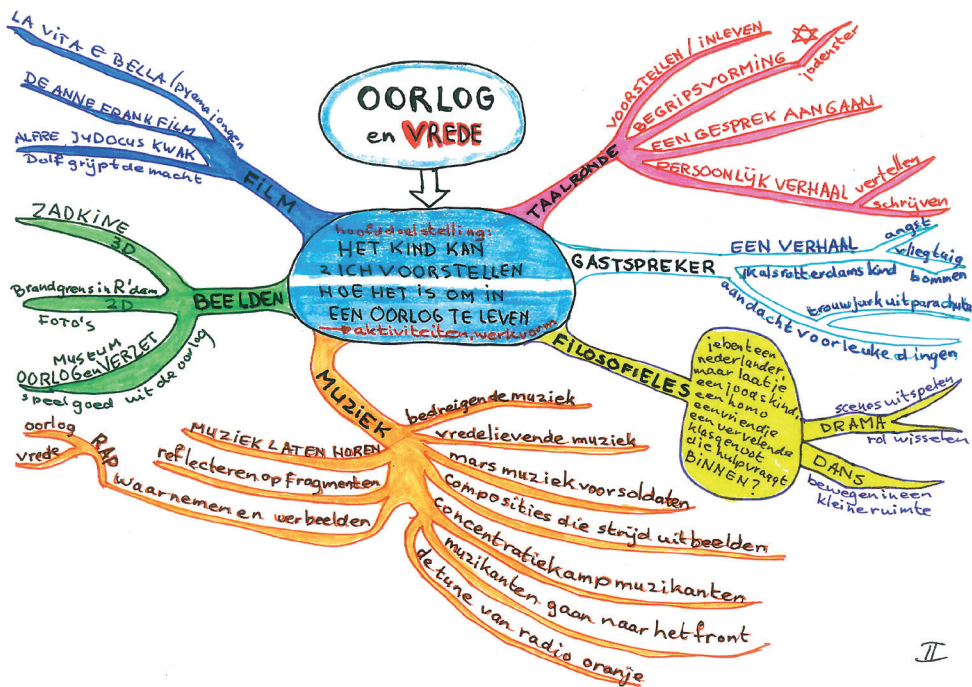


fig. 3.1 Mind map made by the teachers in preparation for the War and Peace project

The imagination of these children was also stimulated in another project on *Energy*. The artist who was invited to teach a series of lessons within the project (and who was also part of the CiM design team) wanted to reflect with the pupils on how art can express energy and movement. The artist introduced the children to Duchamp's *Nude Descending a Staircase No 2.*, and discussed with them how you can see that the woman is moving (some children did not see a woman in the painting but a soldier on a horse). She then told them about Futurism and how machinery inspired many artists to express movement and energy in their work. Pictures of works by Umberto Boccioni and Giacomo Balla gave the children an idea of how an artist can suggest movement through a motionless image or sculpture. In the subsequent lessons the children had to make their own paintings in which they conveyed energy and movement. These lessons were especially interesting because the theme of *Energy* was prefixed and is not necessarily a cultural theme. It was encouraging to see how the teachers made the theme work for metacognition. The topic of futurism is not one you would expect for a class of eight to ten year olds but it lent itself well to a reflection on how artists use their medium to express the speed and progress of their time. The children enjoyed seeing the different artworks and used them as examples for their own paintings (see fig. 3.2). Some children found it difficult to apply the techniques they saw in the futurist images (such as drawing multiple legs to indicate movement) as these clashed

with their own ideas of a beautiful painting. This again seems typical of the self-conceptual view that is dominant in this age group. A younger child might not be as concerned with these conventions.

fig. 3.2: Duchamps' *Nude descending staircase no.2* and a child's painting of a football game, showing movement and energy



§5 PLASTIC: AGES 4-12, SCHOOL D

The cultural education at school D took place in different 'workshops' in which children of various ages worked together in a range of activities. The workshops that joined the CiM project during the period in which the school worked on the theme of 'plastic' were the nature workshop and the art workshop. One of the main objectives was to see how cultural education and metacognition could be part of both art lessons as well as biology lessons and to create cohesion between the two. The children were free to choose from various assignments within the workshops. Some children in the art workshop chose to make clothes out of plastic materials such as shopping bags. After they had crafted their designs, they were invited to wear them and discover the advantages and disadvantages of wearing plastic. Most children liked the colours and aesthetics of their plastic clothes and claimed that they would readily wear them to school. They could also see how the plastic would repel snow and rain. However, when the teacher asked the children to run around the school in their designs, they also quickly discovered that the plastic does not ventilate and that you easily get very hot in it. The plastic also restricts movement and is thus not very suitable for active wear. By allowing the children to experience (self-perception) that the plastic clothes influence how you feel and what you can do, they could weigh up the positive aspects of plastic clothes (beautiful, recyclable and water-proof) against the negatives (hot and not very comfortable to move around in). Self-perception and self-imagination were thus used to generate an analytical view on the benefits of recycling plastic. In the evaluation the teacher could see the extra dimension that this exercise had added and how the pupils' metacognition had been stimulated more effectively than if they had been merely asked to design plastic clothes.



fig. 4.1: self-made plastic clothes: would you wear them?

However, she also argued that it would be good to look for ways to reflect with the children on the experience in a non-linguistic manner. She and her colleagues argued that teachers often want the children to articulate directly what they think and feel while in some cases this may not be necessary or even possible.

In the nature workshop it was more difficult to add the extra layer of cultural consciousness. The nature workshop is mainly

centred around biology and our natural environment and not around culture. The teacher wanted to focus on recycling and to elaborate upon the benefits and disadvantages of plastic. In the middle of her classroom she had placed a tank with worms and soil. On top of the soil the teacher had laid all kinds of organic material and also bits of plastic. The children could see during the weeks of the projects that the worms would eat the organic matter but not the plastic. This was the starting point for a discussion about food chains and what to do when animals cannot process man-made items. The children had already been made aware of how much around them is made out of plastic and how much they liked most of these items (such as their toys and computers). The next challenge was to reflect on how people can be made aware of the need for recycling all this plastic as the worms will not be able to do it for us. Some children made a poster on the need for recycling, while two girls started to make an installation about the need for recycling out of plastic on a light table. The girls made their own story about what the different bottles and containers represented and seemed completely immersed in their imaginative play (fig. 4.2). The children in school D have a range of learning disabilities which may make them apply the four skills and four media at different ages and in different ways to the general development as outlined in chapter three and four indicates. Further research would be needed to see how the development of the skills applied to for example children with autism or language disabilities.



fig. 4.2: recycling imagined

§6 THE SCIENTIST IN THE CLASSROOM: SOME OBSERVATIONS

To go from books and academics to the practical, and often down-to-earth daily hectic life of primary schools is like traveling to a foreign country. All that you can read and plan in libraries and offices will have to prove its worth in the real world. And that world is dynamic, exciting, unpredictable and often chaotic. It is a challenge to have all kinds of ambitious ideas about the ideal type of cultural education when teachers are sometimes trying just to get through the day. As one teacher said in an evaluation when I asked her about how she felt about a particular activity: “I was just happy that the children did not start to throw paint through the classroom”.

The main difficulties that I encountered when introducing the theory to the teachers were first and foremost to distinguish education in general from cultural education in particular. Very often, imagination or creativity are seen as necessarily contributing to cultural consciousness. The idea that it depends on the subject of reflection whether or not the skill can be classified as metacognitive was a very new and difficult one for most of the teachers to grasp. However, once the teachers got used to the idea and could see how an assignment can be both imaginative (or perceptive, conceptual, or analytical) and stimulate metacognition, they were often enthusiastic about what this could imply for their education. This coincides with the surprising observation that in many schools, making something and thinking (sometimes even called ‘cognition’) are often seen as separate domains. Likewise, I have noticed in school documents that ‘reflection’ and ‘active participation’ and ‘passive participation’ are sometimes defined as three separate things. When following Van Heusden’s theory of cultural cognition, there is no such thing as passive reflection. Reflection and metacognition always imply an active selection of memories and whether you are using your hands to make something to express your thoughts or sitting quietly in a corner listening to a teacher explaining something: your brain can be choosing, manipulating, combining, and comparing old and new information so that it makes sense to you. One’s cultural cognition can be expanded and developed in various ways. A child may be running around in plastic clothes, listening to the story behind a collection of rocks, drum a beat or pretend to be swimming while discovering new ways to think about itself or others.

An interesting phenomenon I noticed is that teachers who worked with the theory found that many more activities could be part of cultural education (because of the variety of skills and media) than they had previously thought, but also that not every class that involved crafts or drawing was stimulating cultural consciousness. In one group evaluation a teacher described how she adapted her class to include more metacognition: “...Many of them wanted to paint a poster, so...how can you explain to people how to handle rubbish. And...well...I had never got such an enthusiastic response [laughs] Yes, that then indeed appeals very much, that they are allowed to paint and then also are allowed to think! [group laughs] ” (D3 at EC1). This realization has led some of the participating schools to adapt

their documents and rethink some of the themes they use for cultural education. Especially the school-wide themes that are used may not always be the most natural topics for the development of cultural consciousness. It could be useful to consider which school themes can be used as starting points for cultural education and which themes are more suitable for other types of education. This could well eliminate some of the more far-fetched 'artistic' assignments and make it easier for teachers to come up with activities that truly suit the cultural consciousness of their pupils.

Another difficulty in working with the theory was the new set of concepts that go with it. Most teachers struggled to acquire the new labels and accompanying meanings. Especially the words 'self', 'reflection' and 'concept' generated a lot of confusion. It seemed that the term 'reflection' was often solely interpreted as a conversation with a child. In many evaluations, teachers argued that they would like to explore how to stimulate reflection without using language. However, once the participants acquired this new set of concepts and had learned how they interrelate, they also mentioned the benefits of having a new way to describe what happened in their classes. One teacher said: "That's what I like, something new that you have learned and which anchors itself in you and that you think: oh yes, this belongs to that, or this is that skill, people use this to look at that"(A1 at EC2). The theory can then be used as a communication tool to design and evaluate with different teachers and as a way to assess their own lessons: "I can imagine that if you, like us, have to work with all those themes, that you miss things...and then it is very nice, that you think: oh wait a minute, I have done this for a while, that for a while, that for a while: hey, this is something we don't do very often. See, then you can address that" (B1 at EC2).

Although the Culture in the Mirror project does not specify a particular didactic approach, we did encourage the teachers to work with a main goal. This was important because it is very difficult to evaluate whether the lessons were effective if you do not know what your objectives are. This in itself was sometimes a major change in perspective. Especially in the brainstorming phase, when many schools were used to freely associating around a given theme, it often proved difficult to assess *why* you would do a particular activity and why you would do it with this group of children. It proved very easy for teachers to come up with a range of activities that, for example, included plastic or had to do with water, but it was much more challenging to articulate its necessity or benefits. Although defining what your goals are is not inherent to Van Heusden's theory, I believe it to be an important prerequisite for (cultural) education. The theory of skills and media can be used to define more specifically what you want to achieve with the children (e.g. a certain type of conceptual thinking or mastering a specific technique). But it is the choice of subject that in the end is decisive for whether it builds on the memory of the child, and whether or not the skills and media are used metacognitively. In effect, this implies that a teaching goal can be specified on at least three levels: a subject (what do you want the children to learn about this topic?), a skill (how do the children reflect of this topic?) and a medium

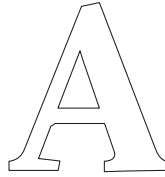
(how do they express their reflection on this topic?). The goals can be shared among teachers and used in the design, execution and evaluation of cultural education.

I have found videotaping a very useful way to evaluate the lessons. It helped to make the theory more concrete. The concepts of the theory became visible as I could help the teachers label their activities. Teachers could also see what their colleagues had done, which was a rare but often beneficial luxury. The children who I filmed were generally not distracted by the camera. It could be that because they are not yet in the truly conceptual phase, they are less concerned with their image. Some teachers however, did struggle a bit with the idea of having to watch themselves. This brings me to a final remark. The involvement in the CiM project required a lot of openness, time, effort, willingness, cooperation, teamwork and reflection from the teachers who participated. The daily routine of primary school teachers is often very busy and leaves little time for reflection. Just to be able to sit down together with colleagues and take a step back to look at your cultural education was seen by many as very valuable. In general, the teachers I worked with were not very keen to read large documents, or to fill out forms. Throughout the project, we have therefore aimed to keep these to a minimum. Ideally, to suit the different needs of teachers, a variety of instruments would have to be developed to design, execute and evaluate cultural education. Especially fewer linguistic and extensive tools, that still inspire in-depth assessment, would be very useful additions to the starting kit (see online appendix). Likewise, I noticed that the evaluations that were guided by an evaluation form alone were often less profound than group discussions guided by a chairperson. I believe that in order to ensure the development of children's cultural consciousness, the teachers who design and execute their lessons should be able to take a step back and reflect as well. This may be difficult to do in the dynamic world of the primary school where there are already so many other things to do. However, here again, the theory of cultural cognition may serve as a source of inspiration. Education is a vital aspect of our culture and it may thus be only natural that teachers are invited to perceive what they do, imagine alternatives, conceptualize their ideas and analyze what is going well and what can be improved.



CONCLUSION

LOOKING BACK



n important reason for starting the *Culture in the Mirror* (CiM) project was the Bamford Report (2007). Bamford's evaluation of the Dutch cultural education system revealed a lack of insight, among those involved, as to

what cultural education is, what it can do and how it should be taught. The aim of the CiM project was to find out whether the framework of cultural cognition developed by Van Heusden could contribute to tackling the problems and questions of the cultural educational field. In chapter one, I gave an overview of Van Heusden's theory and its main sources. According to the theory, culture consists of four main basic cognitive skills which serve to make sense of our environment, and related media groups. The skills also allow for reflection, which is what is called metacognition: the ability to think about oneself, others, and culture in general. From the work of Merlin Donald we gather that cultural cognition is cumulative. Likewise, the four metacognitive skills: self-perception, self-imagination, self-conceptualization, and self-analysis build upon each other's mechanisms. The media used can be divided into four main groups as well: the body, artefacts, language and graphic signs. In cultural education, the focus is on metacognition and the development of children's cultural consciousness. If we take Van Heusden's model as our guide, the child's ability to reflect on cultural cognition (both its own and that of others), whether productively or receptively, must be central to any type of cultural education.

The comparison of Van Heusden's framework with other main theories in the field, as described in chapter two, showed that the model certainly does not exclude the use of many of the already available concepts. Kolb's work is the only exception to this rule, as his learning theory proved incompatible with Van Heusden's approach. Interestingly, this analysis not only revealed Van Heusden's potential allies, but also showed a correlation between each scholar's characteristic mode of reflection and the focus of their work. Dewey, Egan, Parsons, and Gardner highlight perceptual and imaginative abilities in an often personal and imaginative manner, which emphasizes experience, as well as the great diversity in both adults and children. Bruner, Vygotsky, and Piaget are much more conceptual and analytical in their style of writing and likewise focus more on the power of concepts and abstract thought.

Chapter three revealed a transition in children's development, from self-perceptual, via self-imaginative, to self-conceptual metacognition, which seems to mimic the evolutionary stages distinguished by Donald. A bodily, concrete type of reflection quickly becomes more

imaginative in early childhood and the strong imagination of the young child forms the basis for its later, more conceptual thought. A dominant self-imagination leads to a concrete, motoric engagement with the cultural world. It seems to benefit the child on many levels, as it facilitates interactions with others, and helps to express new thoughts and ideas. Without it, children would have great difficulties in even processing second-hand testimonies, or understanding physical demonstrations, which are so central to teaching, as (self-) imagination helps the child to reflect on things that are not physically present at the time.

In chapter four I elaborated on the findings of the previous chapters and argued that the medium of the artefact is in fact the dominant means of metacognition in early childhood. A strong focus in research on self-analytical and self-conceptual skills has obscured the medium of the artefact. It is remarkable that the role and importance of objects in childhood cognition has hardly been researched, as the few studies available do in fact point to a link between early childhood and object-use. Inspired by the work of Wartofsky, I propose a broader view and definition of the artefact in cognition, one that is not bound by a three-dimensional physicality but signifies any concrete, imaginative ('made') medium. Such a medium is highly suitable for the period between the more perceptive 'here-and-now' outlook of the pre-school child and the abstract, increasingly social and collective world of middle childhood. Pasztory reminds us of the artefact's potential as a means of thought and behaviour. I also suggest, therefore, that there may be a correlation between the different types of culture that Pasztory describes and the development of childhood metacognition. By taking the artefact as the characteristic medium of cultural consciousness in early childhood, it became apparent that other media (e.g. language, and graphic signs) can also be used in an artefact-like way. Concrete modes of thought are not, therefore, restricted to physical or hands-on activities. I thus suggest that imaginative, concrete and motoric metacognition combines well with many types of media.

The last two chapters of this thesis were devoted to the research that was carried out at, and in cooperation with, four primary schools. The schools designed, executed and evaluated a series of cultural education teaching projects based on Van Heusden's framework. Although many of the teachers found the theory difficult to work with, my analysis of the evaluations revealed that almost all had developed a better understanding of cultural education. The improvement in the knowledge of the content of cultural education was the greatest, while the level of understanding of connection (how the education fits the development and culture of the child) remained more stable. The cohesion between cultural activities and between cultural education and other types of education was hardly addressed in the evaluations, despite the fact that it was incorporated into evaluation materials. Many teachers indicated the usefulness of the framework for their education and would like to continue using it.

Chapter six provided an illustration of the classroom practices during the projects in the schools. Despite its brevity, the overview shows how varied the uses of the model can

be. It inspired a wide range of lessons with different topics, skills, and media for different age groups. I feel that this is one of the strengths of the model: since it does not prescribe a specific didactic, theme, or approach, each teacher was able to develop those activities that they felt suited their pupils, school and personal beliefs best. The freedom of choice the theory provides is also, however, rather daunting and might call for a different type of teaching and education attitude.

BROADENING OUR PERSPECTIVE ON METACOGNITION, THE ARTS AND CHILDHOOD

While working with the teachers I discovered that some of them found that Van Heusden's framework made them aware of both the many ways in which they could engage with cultural consciousness (due to the diversity of the skills and media), as well as the restrictions that came with it. Not everything is metacognition and just making children draw a picture, or craft something does not mean that they are in any way stimulated to reflect on culture. Metacognition is a specific form of engaging with the (cultural) world and the fact that there is such a wide array of potential activities to incite cultural consciousness does not imply that 'anything goes'.

During my research I also discovered that metacognition in children is often associated with abstract modes of thought. Reflection is quickly linked to language and analytical abilities rather than to more concrete and motoric ways of thinking. The emphasis on conceptualization and analysis is not surprising, as they are dominant in our Western society. Waller thus argues that describing the development of the child is describing biases (2005, 57). One of the results of this potential bias in studying childhood metacognitive development is that the artefact might be overlooked too quickly. This is enhanced by the fact that several important theories, such as Bruner's and Donald's, hardly differentiate between (self)-perception and (self)-imagination. Van Heusden's framework highlights the range of skills and media that culture consists of and it would be very interesting to see what can be learned about the cultural consciousness of children in general and about cultural education in particular if self-imagination and the artefact were brought to the centre of our attention.

Another surprising finding was that there seems to be a link between the dominant mode of reflection and the object of study. In chapter two, a parallel was found between the type of cognitive skill used by a scholar and the aspect of cultural (meta)cognition highlighted in his work. This phenomenon could potentially explain why there is a lack of truly analytical perspectives on (self-)imagination. Influential scholars who have studied the arts or cultural education, such as Dewey and Gardner, tend to do so in a perceptive, imaginative, or conceptual manner. Theoretical models however, such as those of Piaget, seem to forget about the role of (self-)imagination in development and society altogether. It appears as

though one is only permitted to write about the arts or the imagination in either an experiential (e.g. Dewey) or judgemental (in the case of art critics such as Tilroe) way. True analytical reflection appears to be out of bounds when it comes to (self-) imagination. However, if we want to understand the mechanisms, function and workings of the self-imagination – and, both in the case of the arts in general as well as in cultural education in particular, I think we need to – such a theoretical approach is much needed.

LIMITATIONS

One of the findings from the empirical research is that self-conceptualization is very dominant in the evaluations. This is a bias in reflection and potentially also in the method used. It was difficult for the teachers to stay true to the analytical nature of the theory as it demands a highly abstract and complex way of thinking that may not always suit daily practice⁵⁷. Conceptual thinking seems to be the default mode of reflection in cultural education. A theoretical model is therefore not only difficult and unfamiliar, but is also not recognized as such. One perceives concepts instead of structures and the theoretical framework is likely to be conceived as a conceptual system instead. Gardner's *Project Spectrum*, which was mentioned in chapter two also pointed to the potential risk of labelling a child too quickly. I found that many teachers were indeed more comfortable with the new labels the theory provided and with the possibility they offered to communicate more effectively amongst each other about the goals and results of their cultural education, than with the theoretical structure of the framework as such. Most of the teachers found the theory very difficult, especially at first, and felt more comfortable with the less-theoretical tools that were developed later. Thus the 'circle of skills' (see appendix), which explains a part of the theory in a fairly conceptual way, became one of their favourites. Some teachers got to understand the theory better once they had watched video footage of lessons, seeing the skills and the metacognitive reflection on culture in everyday teaching practice. It could be that the understanding of a theory requires a similar stage-like progression from perceiving what it is, via imagining what it can do and labelling, to a factual analysis of one's own teaching and education.

From experience, I found that all four skills were needed to engage the teachers with the theory. One could discuss whether it is desirable for a theory to be translated into less complex and less theoretical parts. Arguably, this does affect its strength and would seem to deny its essence as a *framework* which can as such only be analytical. However, in this study I wanted the teachers to experience what working with the framework could do for them, even if this meant that it had to be stripped of some of its refinements and nuances. In effect this is an almost ethical choice of practice over theory and I tried to find the best compromise possible at the time. Such

⁵⁷ For more on the relationship and differences between theory and concepts in cultural education see Van Heusden and Van Es (2014).

considerations will probably continually have to be made when bridging the gap between the academic world and the reality of the school. Still, I think it is important to allow our teachers, who engage with the new generation of our society, time to stand back and reflect upon what they do and why. I feel that such opportunities for true, profound reflection are essential if we want to ensure that educational quality is not swallowed up by the hectic reality of everyday practice.

I would like to stress again that working with Van Heusden's framework does not guarantee a high-quality cultural education. The framework does not prescribe what are good topics to choose, which cognitive skills should be trained, or which media are most suited. These choices will have to be made by the teachers and the schools and as such depend on a variety of factors and circumstances such as: the pupil population, the type of school and the personal values of the teacher. More is needed for good education than a sound scientific basis, although I feel the latter is indeed an important prerequisite. What else is needed, and whether there is a didactic that is particularly suited to the theory remains to be investigated. Likewise, my empirical study does not tell us anything about the effects on teachers in primary schools in general or about long-term effects on pupils. Equally, chapters three and four offer only a small sample of all there is to know about children's metacognition. However, I hope that these studies will spark new initiatives and research that will benefit education in general and cultural education in particular.

LOOKING AHEAD

My empirical studies showed that much can be gained from working with the framework developed by Van Heusden, and that improvement in understanding in these particular teachers was the greatest when it came to the content of cultural education. The teachers who were part of this research already had quite a high level of understanding of the connection of cultural education to the development and culture of their pupils, but benefitted from more knowledge on what cultural education is about. Interestingly, this was also the part of the theory they struggled with the most: what is culture in general and what is cultural consciousness in particular. Although this may be a difficult distinction to master, it is also a crucial one as it highlights the cultural-cognitive skills that are at the heart of cultural education. As long as uncertainty reigns regarding the niche of cultural education among other types of education, it will remain very vulnerable to undervaluation and skepticism. I think it is important, therefore, to be very clear about what cultural education is, and what it is for, and to avoid vague but often-heard objectives such as cultural education contributing to 'self-worth', 'creativity', or 'expression'. These goals are definitely not the prerogative of cultural education alone and therefore do not showcase the key quality of cultural education, which is rather its potential to engage and develop children's cultural consciousness.

When metacognition truly takes centre stage in cultural education, this means that the distinction that is sometimes made in school documents between reflection, thinking and acting, or passive learning and active learning, needs to be reconsidered. Reflection always involves an active process in which memories are selected and used to make sense of one's (cultural) environment. Likewise, doing or making something can involve just as much cultural consciousness as sitting down contemplating. Furthermore, all the schools that I worked with used fixed school-wide themes that were not specifically tailored for cultural education. If we want to take cultural education seriously, we need to think about accommodating school topics and themes to the metacognitive skills and media rather than the other way around. This does not mean that every school theme must be used for cultural education, but it implies that the themes intended for the development of cultural consciousness should be truly suitable.

A surprising finding of the empirical study was that cohesion is hardly discussed in the evaluations. Cohesion is an important topic if a school wants to develop a continuous learning line or link cultural education to the other subjects in the curriculum. Although several teachers in this project explicitly mentioned the importance of cohesion, it seems that additional tools and methods will need to be developed in order to truly put in on the agenda.

Self-imagination, which is so prominent in early childhood (meta)cognition is likely to permeate all activities aimed at stimulating the cultural consciousness of young children. This means that even when other skills (such as self-conceptualization or self-analysis) are the focus of the assignment, self-imagination may serve as a scaffold. Some of the projects that took place during the CiM project, such as the one around the 'favourite book' theme in school B, suggest that it can be very beneficial to use children's imaginative strength to make them reflect on a higher level of abstraction as well. Likewise, self-imagination can mould the different media into artefact-like forms, which implies that language and graphic signs can be used in a less abstract way than we as adults are used to. Sensitivity towards these processes may greatly benefit (cultural) education. It is important to conceive of self-imagination not in terms of a lack – of abstract thinking –, but as a very strong and useful asset of early childhood. Focusing on young children's capacity for (self-)imagination, education can become more efficient and complex, as children are able to envision new experiences and digest knowledge from other sources than their own. They can start to form true friendships, explore new ideas and play with the vast world that is slowly becoming their own.

The emphasis, in our society, on self-conceptualization and self-analysis is a logical one from an evolutionary point of view, but may also blind us for the more concrete and motoric types of thought. A further investigation of the artefact as a source of reflection and thinking would seem a very useful one to broaden our view of what (meta)cognition is, especially in childhood. One can question whether theoretical thinking suits children's

minds best and, even if this is the case, whether offering them theoretical and conceptual outlets is the best way to achieve this. Similarly, I feel that there should be more awareness of the different preferences in cultural skills in adults as well. Not everyone is able to express him- or herself in language or theoretically, and it would be a shame if the views and ideas of these people were to get lost in our often highly abstract discourse.

The world of academia is a wonderful place, which offers a haven for in-depth analysis, which is rare and valuable. However, it is also a microcosm and in no way representative of the world outside it. Just as Van Heusden's theory teaches us, we constantly need to bridge the gap between our memory and our actuality and in the case of linking academics to school practice, this means crossing that bridge multiple times, from both sides, using every skill and medium that may come in handy. And the more often you move to the other side, the more familiar and the less intimidating that new world will become. And before you know it... you will find that you can walk straight across.



BIBLIOGRAPHY

A

- Adams, Kate. 2010. *Unseen Worlds: Looking through the Lens of Childhood*. London: Jessica Kingsley Publishers.
- Ahn, Jiryung and Margot Filipenko. 2007. *Narrative, Imaginary Play, Art, and Self*. Dordrecht: Kluwer Academic Publishers.

B

- Bamford, Anne. 2007. *Netwerken En Verbindingen: Arts and Cultural Education in the Netherlands*. <https://www.rijksoverheid.nl/documenten/rapporten/2007/11/13/rapport-netwerken-en-verbindingen-arts-and-cultural-education-in-the-netherlands>
- Bellah, Robert N. 2011. *Religion in Human Evolution. from the Paleolithic to the Axial Age*. Cambridge, Massachusetts; London, England: The Belknap Press of Harvard University Press.
- Berk van den, Tjeu. 2009. *Eigenzinnig Kunstzinnig; de Visie van Carl Gustav Jung op Kunst*. Zoetermeer: Uitgeverij Meinema.
- Bjorklund, David F. 2005. *Children's Thinking : Cognitive Development and Individual Differences*. 4th ed. Belmont, Calif., etc.: Thomson/Wadsworth.
- . 2007. *Why Youth is Not Wasted on the Young: Immaturity in Human Development*. Malden, MA etc.: Blackwell.
- Bjorklund, David F. and Amy K. Gardiner. 2011. "Object Play and Tool use: Developmental and Evolutionary Perspectives." In *The Oxford Handbook of the Development of Play*, edited by Anthony D. Pellegrini, 153. New York, N.Y., etc.: Oxford University Press.
- Bjorklund, David F. and Anthony D. Pellegrini. 2002. *The Origins of Human Nature*. Washington, DC: American Psychological Association.
- Bock, John. 2005. "Farming, Foraging, and Children's Play in the Okavango Delta, Botswana." In *The Nature of Play: Great Apes and Humans*, edited by A. Pellegrini and P. K. Smith, 254-281. New York: Guilford.
- Borko, Hilda. 2004. "Professional Development and Teacher Learning: Mapping the Terrain." *Educational Researcher* 33 (8): 3-15.
- Boyatzis, Richard. E. and David. A. Kolb. 1995. "From Learning Styles to Learning Skills: The Executive Skills Profile." *Journal of Managerial Psychology* 10 (5): 3-17.
- Breeuwsma, Gerrit. 2005. "Pleidooi voor Doelmatigheid Zonder Doel." *Cultuur+Educatie* 14: 36-51.

- Broek, Andries van den, Frank Huysmans, and Jos de Haan. 2005. *Cultuurminnaars en Cultuurmijders; Trends in De Belangstelling Voor Kunsten en Cultureel Erfgoed*. Den Haag: Sociaal en Cultureel Planbureau.
- Bruner, Jerome S. 2006a. "The Course of Cognitive Growth." In *In Search of Pedagogy, the Selected Works of Jerome S. Bruner*, edited by Jerome S. Bruner. Vol. I, 67-89. Londen; New York: Routledge.
- . 2006b. *In Search of Pedagogy, the Selected Works of Jerome S. Bruner*. Vol. II. Londen; New York: Routledge.
- . 2006c. *In Search of Pedagogy, the Selected Works of Jerome S. Bruner*. Vol. I. Londen; New York: Routledge.
- . 2006d. "Nature and Uses of Immaturity." In *In Search of Pedagogy, the Selected Works of Jerome S. Bruner*, edited by Jerome S. Bruner. Vol. I, 133-161. Londen; New York: Routledge.
- . 2002. *Making Stories. Law, Literature, Life*. Cambridge, Massachusetts; London, England: Harvard University Press.
- . 1985. "Narrative and Paradigmatic Modes of Thought." In *Learning and Teaching the Ways of Knowing*, edited by Elliot Eisner and Kenneth J. Rehg, 97-115.
- . 1966. *Toward a Theory of Instruction*. Cambridge, MA: Belknap Press of Harvard University Press.
- Bugrimenko, E. A. 2001. "Transitional Forms of Sign Mediation in Teaching Six-Year-Old Children." *Journal of Russian & East European Psychology* 39 (4): 34.



- Carroll, John M. 1991. *Designing Interaction: Psychology at the Human-Computer Interface*. Cambridge Series on Human-Computer Interaction. Vol. 4. Cambridge etc.: Cambridge University Press.
- Case, Robbie and Marta Bruchkowsky. 1992. *The Mind's Staircase: Exploring the Conceptual Underpinnings of Children's Thought and Knowledge*. Hillsdale, N.J., etc.: Erlbaum.
- Casler, Krista and Deborah Kelemen. 2005. "Young Children's Rapid Learning about Artifacts." *Developmental Science* 8 (6): 472-480.
- Cassirer, Ernst. 1944. *An Essay on Man: An Introduction to a Philosophy of Human Culture*. New Haven; London: Yale University Press; Milford, later Cumberlege, Oxford University Press.
- Cassirer, Ernst and Ralph Manheim. 1953. *The Philosophy of Symbolic Forms*. New Haven etc.: Yale University Press.
- Chatterjee, Anjan A. 2014. "Neuroaesthetics." *Trends in Cognitive Sciences* 18 (7): 370-375.
- Chen, Jie-Qi, Mara Krechevsky, Julie Viens, and Emily Isberg. 1998. *Building on Children's Strengths: The Experience of Project Spectrum*. Project Zero Frameworks for Early

- Childhood Education. Vol. ol. 1. New York etc.: Teachers College Press, Columbia University.
- Cillessen, Antonius H. N. and Amy D. Bellmore. 2010. "Social Skills and Social Competence in Interactions with Peers." In *The Wiley-Blackwell Handbook of Childhood Social Development*, 393-412: Wiley-Blackwell.
- Clarke, David and Hilary Hollingsworth. 2002. "Elaborating a Model of Teacher Professional Growth." *Teaching and Teacher Education* 18 (8): 947-967.
- Cole, Michael. 1996. *Cultural Psychology: A Once and Future Discipline*. Cambridge, Mass., etc.: The Belknap Press of Harvard University Press.
- Cole, M. and J. Derry. 2005. "We have Met Technology and it is Us." In *Intelligence and Technology: Impact of Tools on the Nature and Development of Human Abilities*, edited by R. J. Sternberg and D. Preiss. Mahwah, NJ: Lawrence Erlbaum Associates.
- Cole, M. and J. V. Wertsch. 1996. "Beyond the Individual-Social Antinomy in Discussions of Piaget and Vygotsky." *Human Development: An International Research Quarterly* 39 (5): 250-256.
- Crowther, Paul. 1989. *The Kantian Sublime: From Morality to Art*. Oxford Philosophical Monographs. Oxford: Clarendon.

D

- Damon, William and Daniel Hart. 1988. *Self-Understanding in Childhood and Adolescence*. Cambridge Studies in Social and Emotional Development. Cambridge etc.: Cambridge University Press.
- Danto, Arthur C. 2013. *What Art Is*. New Haven: Yale University Press.
- . 2009. "The Future of Aesthetics." In *Rediscovering Aesthetics; Transdisciplinary Voices from Art History, Philosophy, and Art Practice*, edited by Francis Halsall, Julia Jansen and Tony O'Connor, 103-116: Stanford University Press. Danto, Arthur C., Gregg Horowitz, and Tom Huhn.
- . 1999. *Philosophizing Art: Selected Essays*. Berkeley etc.: University of California Press.
- . 1998. *The Wake of Art: Criticism, Philosophy, and the Ends of Taste: Essays*. Critical Voices in Art, Theory and Culture. Amsterdam etc.: G+B Arts International.
- Debord, Guy and Donald Nicholson-Smith. 1994. *The Society of the Spectacle*. New York, NY: Zone Books.
- Debray, Régis. 2000. *Transmitting Culture. European Perspectives*. New York, NY etc.: Columbia University Press.
- Dennett, Daniel C. 1987. *The Intentional Stance*. A Bradford Book. Cambridge, Mass., etc.: The MIT Press.
- Dewey, John. 2005. *Art as Experience*. New York: The Berkeley Publishing Group.
- Donald, Merlin. 2007. "The Slow Process: A Hypothetical Cognitive Adaptation for

- Distributed Cognitive Networks.” *Journal of Physiology-Paris* 101 (4-6): 214-222.
- . 2006. “Art and Cognitive Evolution.” In *The Artful Mind: Cognitive Science and the Riddle of Human Creativity*, edited by Mark Turner. Oxford; New York: Oxford University Press.
- . 2001. *A Mind so Rare; the Evolution of Human Consciousness*. New York, London: W. W. Norton & Company.
- . 1991. *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*. Cambridge, Mass. etc.: Harvard University Press.
- Draaisma, Douwe and Arnold Pomerans. 2004. *Why Life Speeds Up as You Get Older: How Memory Shapes our Past* [Waarom het leven sneller gaat als je ouder wordt.]. Cambridge etc.: Cambridge University Press.

E

- Efland, Arthur. 2004. “The Arts and the Creation of Mind: Eisner’s Contributions to the Arts in Education.” *Journal of Aesthetic Education* 38 (4): pp. 71-80.
- . 2002. *Art and Cognition: Integrating the Visual Arts in the Curriculum*. New York, NY etc.; Reston, VA: Teachers College Press; National Art Education Association.
- Egan, Kieran. 2005. *An Imaginative Approach to Teaching*. San Francisco: Jossey-Bass.
- . 1999. *Children’s Minds, Talking Rabbits & Clockwork Oranges: Essays on Education*. Critical Issues in Curriculum. New York, N.Y., etc.: Teachers College Press.
- . 1997. *The Educated Mind: How Cognitive Tools Shape our Understanding*. Chicago etc.: The University of Chicago Press.
- Eijck, Koen van. 2015. “Culturele Smaakpatronen: Omnivoriteit en Ervaringshonger.” In *Cultuur Herwaarderen*, edited by E. Schrijvers, A. G. Keizer and G. Engbersen, 103-120. Den Haag: Wetenschappelijke Raad voor het Regeringsbeleid.
- Eisner, Elliot W. E. 1993. “Forms of Understanding and the Future of Educational Research.” *Educational Researcher* 22 (7): 5-11.
- Elkins, James. 2009. “Aesthetics and the Two Cultures: Why Art and Science should be Allowed to Go their Separate Ways.” In *Rediscovering Aesthetics; Transdisciplinary Voices from Art History, Philosophy, and Art Practice*, edited by Francis Halsall, Julia Jansen and Tony O’Connor, 34-50: Stanford University Press.
- El’Konin, B. D. 2001. “L.S. Vygotsky and D.B. El’Konin.” *Journal of Russian & East European Psychology* 39 (4): 9.
- Ellis, Bruce J. and David F. Bjorklund. 2005. *Origins of the Social Mind: Evolutionary Psychology and Child Development*. New York, NY etc.: Guilford Press.
- Engel, Susan. 2013. “Flux and Flow in Children’s Narratives.” In *The Oxford Handbook of the Development of Imagination*, edited by Marjorie Taylor, 212-223. Oxford etc.: Oxford University Press.

- . 1995. *The Stories Children Tell: Making Sense of the Narratives of Childhood*.
- Erp, Herman van. 2011. "The Genuine Sublime: Kant on the Sublimity of Moral Consciousness." In *The Sublime and its Teleology*, edited by Donald Loose, 13-41: Brill.
- Eskritt, Michelle M., Kang Lee, and Merlin Donald. 2001. "The Influence of Symbolic Literacy on Memory: Testing Plato's Hypothesis." *Canadian Journal of Experimental Psychology/Revue Canadienne De Psychologie Expérimentale* 55 (1): 39-50.

F

- Feinstein, Hermine. 1982. "Meaning and Visual Metaphor." *Studies in Art Education* 23 (2): 45-55.
- Feldman, Robert S. 2003. *Development Across the Life Span*. 3rd ed. Upper Saddle River, N.J.: Prentice Hall.
- Ferrari, Michel and Robert J. Sternberg. 1998. *Self-Awareness: Its Nature and Development*. New York, N.Y., etc.: The Guilford Press.
- Flavell, John Hurley, Frances L. Green, Eleanor R. Flavell, Paul L. Harris, and Janet W. Astington. 1995. *Young Children's Knowledge about Thinking*. Monographs of the Society for Research in Child Development. Vol. 243 (= vol. 60, no. 1). Chicago, Ill.: The University of Chicago Press.
- Friedman, Ori and Alan M. Leslie. 2007. "The Conceptual Underpinnings of Pretense : Pretending is Not 'Behaving-as-if'." *Cognition : International Journal of Cognitive Psychology* 105 (1): 12-12-2009.

G

- Gardner, Howard. 2006. *The Development and Education of the Mind : The Selected Works of Howard Gardner*. World Library of Educationalists Series. London etc.: Routledge.
- Geary, David C. 2006. "Getting it Wrong from the Beginning: Our Progressive Inheritance from Herbert Spencer, John Dewey, and Jean Piaget by Kieran Egan." *American Journal of Education* 112 (2): pp. 311-314.
- Gell, Alfred. 1998. *Art and Agency. an Anthropological Theory*. Oxford: Oxford University Press.
- Gelman, Susan A. 2009. "Learning from Others: Children's Construction of Concepts." *Annual Review of Psychology*, 115-140.
- Gelman, Susan A. and Paul Bloom. 2000. "Young Children are Sensitive to how an Object was Created when Deciding what to Name It." *Cognition* 76 (2): 91-103.
- Gergely, G. 2007. "Understanding Self and Agency." In *Blackwell Handbook of Childhood Cognitive Development*, edited by U. Goswami. Malden, MA: Wiley Interscience.
- Goldman, Laurence R. 1998. *Child's Play: Myth, Mimesis and make-Believe*. Explorations in Anthropology. Oxford etc.: Berg.

- Goldstein, Jeffrey H. 1994. *Toys, Play, and Child Development*. Cambridge etc.: Cambridge University Press.
- Goldstein, Thalia R. and Ellen Winner. 2011. "Engagement in Role Play, Pretense, and Acting Classes Predict Advanced Theory of Mind Skill in Middle Childhood." *Imagination, Cognition and Personality* 30 (3): 249-258.
- Golomb, Claire. 2011. *The Creation of Imaginary Worlds: The Role of Art, Magic & Dreams in Child Development*. London etc.: Jessica Kingsley.
- . 2002. *Child Art in Context; A Cultural and Comparative Perspective*. Washington: American Psychology Association.
- Goswami, Usha. 2008. *Cognitive Development, the Learning Brain*. New York: Psychology Press.
- Griffin, Susan. 1992. "Young Children's Awareness of their Inner World: A Neo-Structural Analysis of the Development of Intrapersonal Intelligence." In *The Mind's Staircase; Exploring the Conceptual Underpinnings of Children's Thought and Knowledge*, edited by Robbie Case, 189-206. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Groenendijk, Talita, Marie-Louise Damen, Folkert Haanstra, and Carla van Boxtel. 2015. *Assessment in Kunsteducatie*. http://www.nro.nl/wp-content/uploads/2014/05/Assessment-in-kunsteducatie_maart2015.pdf
- Grusec, Joan E., Paul Hastings, and Alisa Almas. 2010. "Prosocial Behavior." In *The Wiley-Blackwell Handbook of Childhood Social Development*, 549-566: Wiley-Blackwell.

H

- Haanstra, F. 2011. "Authentieke Kunsteducatie: Een Stand van Zaken." In *Cultuur+Educatie*, edited by R. R. Gerwen, L. Green, J. Gullikers, F. Haanstra and B. Wilson. Authentieke kunsteducatie ed. Vol. 31, 10-35. Utrecht: Cultuurnetwerk Nederland.
- . 2009. "Voor Altijd Vervreemd van Cultuur: Fabels en Feiten over de Effecten van Kunsteducatie." *Kunstzone* 8 (9): 40-41.
- . 2006. "The WOW Factor: Een Blijde maar Slecht Onderbouwde Boodschap over de Effecten van Kunsteducatie." *Kunstzone* 5 (9): 29-31.
- Handelzalts, Adam. 2009. "Collaborative Curriculum Development in Teacher Design Teams." Thesis.
- Harris, Paul L. 2000. *The Work of the Imagination. Understanding Children's Worlds*. Oxford etc.: Blackwell Publishers.
- Harter, Susan. 2008. "The Developing Self." In *Child and Adolescent Development: An Advanced Course*, edited by W. Damon and R. M. Lerner, 216-259. Hoboken, NJ: Wiley.
- . 1999. *The Construction of the Self: A Developmental Perspective*. New York etc.: Guilford.
- Hauser, Marc D. and Laurie R. Santos. 2007. "The Evolutionary Ancestry of our Knowledge

- of Tools: From Percepts to Concepts.” In *Creations of the Mind: Theories of Artifacts and their Representation*, edited by Eric Margolis and Stephen Laurence, 358. Oxford etc.: Oxford University Press.
- Hedegaard, Mariane. 2004. “A Cultural-Historical Approach to Learning in Classrooms.” *Outlines.Critical Practice Studies* 6 (1): 21-34.
- Helwig, Charles C. and Elliot Turiel. 2010. “Children’s Social and Moral Reasoning.” In *The Wiley-Blackwell Handbook of Childhood Social Development*, 567-583: Wiley-Blackwell.
- Heusden, Barend van. 2015. “Arts Education ‘After the End of Art’; Towards a New Framework for Arts Education.” In *Arts Education Beyond Art; Teaching Art in Times of Change*, edited by B. van Heusden and P. Gielen, 153-164. Amsterdam: Valiz.
- . 2010. *Cultuur in de Spiegel; Naar een Doorlopende Leerlijn Cultuuronderwijs*. Zwaneburg: Multiscreen.
- . 2009a. “Dealing with Difference: From Cognition to Semiotic Cognition.” *Cognitive Semiotics* 4 (Issue Supplement): 116-132.
- . 2009b. “Semiotic Cognition and the Logic of Culture.” *Pragmatics & Cognition* 17 (3): 611-628.
- . 2007. “Semiosis, Art, and Literature.” *Semiotica* 2007 (165): 133-147.
- Heusden, Barend van and Eelco van Es. 2014. “Tussen Waarheid en Waarde: Over Theorie-en Visievorming in Cultuuronderwijs.” *Cultuur+Educatie* 39: 93-104.
- Heusden, Barend van and Pascal Gielen. 2015. “New Directions in Arts Education.” In *Arts Education Beyond Art; Teaching Art in Times of Change*, edited by B. van Heusden and P. Gielen, 10-17. Amsterdam: Valiz.
- Hoerl, Christoph. 2007. “Episodic Memory, Autobiographical Memory, Narrative : On Three Key Notions in Current Approaches to Memory Development.” *Philosophical Psychology* 20 (5): 621-640.
- . 2008. “On being Stuck in Time.” *Phenomenology and the Cognitive Sciences* 7 (4): 485-500.
- Holland, Norman N. 1988. *The Brain of Robert Frost: A Cognitive Approach to Literature*. New York etc.: Routledge.
- House, Bailey R., Joan B. Silk, Joseph Henrich, H. Clark Barrett, Brooke A. Scelza, Adam H. Boyette, Barry S. Hewlett, Richard McElreath, and Stephen Laurence. 2013. “Ontogeny of Prosocial Behavior Across Diverse Societies.” *Proceedings of the National Academy of Sciences* 110 (36): 14586-14591.
- Hulit, Lloyd M., Merle R. Howard, and Kathleen R. Fahey. 2011. *Born to Talk : An Introduction to Speech and Language Development*. 5th ed. Boston, MA etc.; London: Allyn and Bacon; Pearson Education distributor.
- Huysmans, Frank and Jos de Haan. 2007. *Het Bereik van het Verleden; Ontwikkelingen in de Belangstelling voor Cultureel Erfgoed*. Den Haag: Sociaal en Cultureel Planbureau. www.scp.nl/dsresource?objectid=19473&type=org.

J

- Jacobs, Janis E., Martha M. Bleeker, and Michael J. Constantino. 2003. "The Self-System during Childhood and Adolescence: Development, Influences, and Implications." *Journal of Psychotherapy Integration* 13 (1): 33-65.
- Johnson, Mark. 1987. *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago etc.: University of Chicago Press.
- Jolley, Richard P. 2010. *Children and Pictures: Drawing and Understanding*. Oxford [etc.]: Wiley-Blackwell.
- Joy, Simy and David A. Kolb. 2009. "Are there Cultural Differences in Learning Style?" *International Journal of Intercultural Relations* 33 (1): 69-85.

K

- Kagan, J. and N. Herschkowitz. 2005. *A Young Mind in a Growing Brain*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Kagan, J., H. A. Moss, and I. E. Siegel. 1963. "Psychological Significant of Styles of Conceptualization." *Monographs of the Society for Research in Child Development* 2 (28): 73-112.
- Kant, Immanuel, Jacques de Visscher, and Jean-Pierre Rondas. 1978. *Over Schoonheid: Ontledingsleer van het Schone*. Boom Klassiek. Vol. 15. Meppel etc.: Boom.
- Karpov, Yuriy V. 2005. *A Neo-Vygotskian Approach to Child Development*. Cambridge etc.: Cambridge University Press.
- Kavanaugh, Robert D. 2011. "Origins and Consequences of Social Pretend Play." In *The Oxford Handbook of the Development of Play*, edited by Anthony D. Pellegrini, 296. New York, N.Y., etc.: Oxford University Press.
- Keil, Frank C., Marissa L. Greif, and Rebekkah S. Kerner. 2007. "A World Apart: How Concepts of the Constructed World are Different in Representation and in Development." In *Creations of the Mind: Theories of Artifacts and their Representation*, edited by Eric Margolis and Stephen Laurence, 231. Oxford etc.: Oxford University Press.
- Kindler, Anna M. A. 2003. "Visual Culture, Visual Brain and (Art)Education." *Studies in Art Education* 44 (3): 290.
- . 2000. "From the U-Curve to Dragons: Culture and Understanding of Artistic Development." *Visual Arts Research* 26 (2(52)): pp. 15-28.
- Kolb, Alice Y. and David A. Kolb. 2009. "The Learning Way: Meta-Cognitive Aspects of Experiential Learning." *Simulation Gaming* 40 (3): 297-327.
- Kolb, David A. 1984. *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, N.J. etc.: Prentice-Hall.

L

- Lakoff, George. 1987. *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind*. Chicago, Ill., etc.: The University of Chicago Press.
- Lakoff, George and Mark Johnson. 2003. *Metaphors we Live By*. 2 [updat ed. Chicago, IL etc.: The University of Chicago Press.
- Langer, Susanne Katherina. 1978. *Philosophy in a New Key: A Study in the Symbolism of Reason, Rite and Art*. Harvard Paperbacks. 3 , 10th printing ed. Vol. 17. Cambridge, Mass.: Harvard Univ. Press.
- Levin, Daniel T. 2004. *Thinking and Seeing: Visual Metacognition in Adults and Children*. Cambridge, MA etc.: MIT Press.
- Levine, Brian. 2004. "Autobiographical Memory and the Self in Time : Brain Lesion Effects, Functional Neuroanatomy, and Lifespan Development." *Brain and Cognition* 55: 54-68.
- Lockman, Jeffrey J. 2000. "A Perception-Action Perspective on Tool use Development." *Child Development* 71 (1): 137-144.
- Loose, Donald. 2011. "The Kantian Sublime and its Aftermath." In *The Sublime and its Teleology*, edited by Donald Loose, 1-11: Brill.
- Lucariello, Joan M. and Katherine Nelson. 2004. *The Development of the Mediated Mind : Sociocultural Context and Cognitive Development*. Mahwah, NJ etc.: Lawrence Erlbaum.

M

- Mascolo, M. F. and K. W. Fischer. 1998. "The Development of Self through the Coordination of Component Systems." In *Self-Awareness: Its Nature and Development*, edited by M. Ferrari and Robert J. Sternberg, 332-384. New York etc.: The Guilford Press.
- McKeough, Anne. 1992. "A Neo-Structural Analysis of Children's Narrative and its Development." In *The Mind's Staircase*, edited by Robbie Case, 171-188. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- McKown, Clark and Michael J. Strambler. 2009. "Developmental Antecedents and Social and Academic Consequences of Stereotype-Consciousness in Middle Childhood." *Child Development* 80 (6): 1643-1659.
- Meadows, Sara. 2006. *The Child as Thinker: The Development and Acquisition of Cognition in Childhood*. 2 [thoroughly rev a upd] ed. London etc.: Routledge.
- Meijer, Paulien C., Helma W. Oolbekink, Jacobiene A. Meirink, and Ditte Lockhorst. 2013. "Teacher Research in Secondary Education: Effects on Teachers' Professional and School Development, and Issues of Quality." *International Journal of Educational Research* 57 (0): 39-50.
- Meirink, Jacobiene A., Jeroen Imants, Paulien C. Meijer, and Nico Verloop. 2010. "Teacher Learning and Collaboration in Innovative Teams." *Cambridge Journal of Education* 40 (2): 161-181.

- Miles, Matthew B. and A. M. Huberman. 1994. *Qualitative Data Analysis*. 2nd ed. Thousand Oaks, London, New Delhi: SAGE Publications.
- Mitchell, Robert W. 2002. *Pretending and Imagination in Animals and Children*. Cambridge etc.: Cambridge University Press.
- Mottweiler, Candice M. and Marjorie Taylor. 2014. "Elaborated Role Play and Creativity in Preschool Age Children." *Psychology of Aesthetics, Creativity, and the Arts* 8 (3): 277-286.
- Mussen, Paul Henry. 1990. *Child Development and Personality*. 7th ed. New York: Harper Collins.

N

- Namy, Laura L. 2005. *Symbol use and Symbolic Representation : Developmental and Comparative Perspectives*. Emory Symposia in Cognition. Vol. [9]. Mahwah, NJ etc.: Lawrence Erlbaum.
- Nelson, Katherine. 2007. "Development of Extended Memory." *Journal of Physiology-Paris* 101 (4-6): 223-229.
- . 2005a. "Emerging Levels of Consciousness in Early Human Development." In *The Missing Link in Cognition; Origins of Self-Reflective Consciousness*, edited by Herbert S. Terrace and Janet Metcalfe, 116-141. Oxford: Oxford University Press.
- . 2005b. "Language Pathways into the Community of Minds." In *Why Language Matters for Theory of Mind*, edited by Janet W. Astington and Jodie A. Baird, 26-49. Oxford; New York: Oxford University Press.
- . 2003. "Self and Social Functions: Individual Autobiographical Memory and Collective Narrative." *Memory* 11 (2): 125-136.
- . 2000. "Narrative, Time and the Emergence of the Encultured Self." *Culture & Psychology* 6 (2): 183-196.
- . 1996. *Language in Cognitive Development : Emergence of the Mediated Mind*. Cambridge etc.: Cambridge University Press.
- Nelson, Katherine and Robyn Fivush. 2004. "The Emergence of Autobiographical Memory: A Social Cultural Developmental Theory." *Psychological Review* 111 (2): 486-511.
- Nguyen, Simone P. and Gregory L. Murphy. 2003. "An Apple is More than just a Fruit: Cross-Classification in Children's Concepts." *Child Development* 74 (6): 1783-1806.

O

- Oers, Bert van. 2012. "Developmental Education: Foundations of a Play-Based Curriculum." In *Developmental Education for Young Children. Concept, Practice, and Implementation*, edited by B. van Oers, 13-25. Dordrecht: Springer.
- Osborne, Robin and Jeremy Tanner. 2007. *Art's Agency and Art History*. New Interventions

in Art History. Malden, MA etc.: Blackwell.
Osiurak, François. 2014. "Tool use and Manual Actions: The Human Body as a Means Versus an End." *Cortex* 57 (0): 281-282.

P

- Paetzold, Heinz H. 2000. *Symbol, Culture, City: Five Exercises in Critical Philosophy of Culture*. Maastricht: Jan van Eyck Akademie.
- Paetzold, Heinz. 1993. *Ernst Cassirer Zur Einführung*. Zur Einführung. Vol. 80. Hamburg: Junius.
- Papalia, Diane E., Sally Wendkos Olds, and Ruth Duskin Feldman. 2009. *Human Development*. 11th ed. New York: McGraw-Hill.
- Pariser, David, Anna Kindler, Axel Van Den Berg, Belidson Dias, and Wan Chen Liu. 2007. *Does Practice make Perfect? Children's and Adults' Constructions of Graphic Merit and Development: A Crosscultural Study*. Vol. 33.
- Parsons, Michael J. 1987. *How we Understand Art: A Cognitive Developmental Account of Aesthetic Experience*. Cambridge etc.: Cambridge University Press.
- Pasterski, Vickie, Susan Golombok, and Melissa Hines. 2010. "Sex Differences in Social Behavior." In *The Wiley-Blackwell Handbook of Childhood Social Development*, 281-298: Wiley-Blackwell.
- Pasztory, Esther. 2005. *Thinking with Things; Toward a New Vision of Art*. 1st ed. Austin: University of Texas Press.
- Pellegrini, Anthony D. 2009. *The Role of Play in Human Development*. New York, NY etc.: Oxford University Press.
- Piaget, Jean. 1977a. "The Construction of Reality in the Child." In *The Essential Piaget*, edited by Howard E. Gruber and J. Jacques Vonèche, 250-294. London: Routledge & Kegan Paul Ltd.
- . 1977b. "The various Forms of Knowledge seen as Differentiated Organs of the Regulation of Functional Exchanges with the External World." In *The Essential Piaget*, edited by Howard E. Gruber and J. Jacques Vonèche, 842-860. London: Routledge & Kegan Paul Ltd.
- . 1977c. "Science of Education and the Psychology of the Child." In *The Essential Piaget*, edited by Jean Piaget, Howard E. Gruber and J. Jacques Vonèche, 695-726. London etc.: Routledge & Kegan Paul.
- Piaget, Jean, Howard E. Gruber, and J. Jacques Vonèche. 1977. *The Essential Piaget*. London etc.: Routledge & Kegan Paul.
- Piaget, Jean and Bärbel Inhelder. 1977a. "The Growth of Logical Thinking from Childhood to Adolescence." In *The Essential Piaget*, edited by Jean Piaget, Howard E. Gruber and J. Jacques Vonèche, 405-444. London etc.: Routledge & Kegan Paul.

- . 1977b. "The Semiotic Or Symbolic Function." In *The Essential Piaget*, edited by Jean Piaget, Howard E. Gruber and J. Jacques Vonèche, 483-507. London etc.: Routledge & Kegan Paul.
- Picard, Laurence, Isméry Reffuveille, Francis Eustache, and Pascale Piolino. 2009. "Development of Autonoetic Autobiographical Memory in School-Age Children: Genuine Age Effect or Development of Basic Cognitive Abilities?" *Consciousness and Cognition*.

R

- Raad voor Cultuur. 2014. *De Cultuurverkenning; Ontwikkelingen en Trends in het Culturele Leven in Nederland*. Rotterdam: Tripiti.
- Ramachandran, Vilayanur. S. 2011. *The Tell-Tale Brain: A Neuroscientist's Quest for what Makes Us Human*. New York: Norton.
- Raschick, Michael, Donald E. Maypole, and Priscilla A. Day. 1998. "Improving Field Education through Kolb Learning Theory." *Journal of Social Work Education* 34 (1): 31-42.
- Richerson, Peter J. and Robert Boyd. 2005. *Not by Genes Alone: How Culture Transformed Human Evolution*. Chicago, IL etc.: University of Chicago Press.
- Robertson, Erin K. and Stefan Köhler. 2007. "Insights from Child Development on the Relationship between Episodic and Semantic Memory." *Neuropsychologia* 45: 3178-3189.
- Rogoff, Barbara. 1998. "Cognition as a Collaborative Process." In *Handbook of Child Psychology*, edited by W. Damon. Vol. 2, 679-744. New York: Wiley.
- Rosch, Eleanor, Carolyn B. Mervis, Wayne D. Gray, David M. Johnson, and Penny Boyes-Braem. 1976. "Basic Objects in Natural Categories." *Cognitive Psychology* 8 (3): 382-439.

S

- Scarlett, W. George. 2004. *Children's Play*. Thousand Oaks, CA etc.: Sage.
- Schneider, Wolfgang and Merry Bullock. 2009. *Human Development from Early Childhood to Early Adulthood : Findings from a 20 Year Longitudinal Study*. New York etc.: Psychology Press.
- Schönau, Diederik. 2007. "Deugt Het Rapport Van Anne Bamford?" *SICAmag* (36).
- Shulman, Lee S. 1987. "Knowledge and Teaching: Foundations of the New Reform." *The Harvard Educational Review* 57 (1): 1.
- Siegal, Michael and Luca Surian. 2004. "Conceptual Development and Conversational Understanding." *Trends in Cognitive Sciences* 8 (12): 534-538.
- Siegler, Robert, Judy DeLoache, and Nancy Eisenberg. 2006. *How Children Develop*. 2nd ed.

New York: Worth Publishers.

- Singer, Jerome L. 1995. "Imaginative Play in Childhood: Precursor of Subjunctive Thought, Daydreaming, and Adult Pretending Games." In *The Future of Play Theory: A Multidisciplinary Inquiry into the Contributions of Brian Sutton-Smith*, edited by Anthony D. Pellegrini, 187-219. Albany: State University of New York Press.
- Singer, Dorothy G., Roberta M. Golinkoff, Kathy Hirsh-Pasek, and Inc NetLibrary. 2006. *Play=learning*. Oxford ; New York: Oxford University Press.
- Singer, Dorothy G. and Jerome L. Singer. 1990. *The House of make-Believe: Children's Play and the Developing Imagination*. Cambridge: Harvard University Press.
- Snow, Charles Percy and Stefan Collini. 2012. *The Two Cultures*. Canto Classics. [Two cultures and the scientific revolution.]. Cambridge, U.K ; New York: Cambridge University Press.

T

- Terrace, Herbert S. and Janet Metcalfe. 2005. *The Missing Link in Cognition: Origins of Self-Reflective Consciousness*. New York etc.: Oxford University Press.
- Tilroe, Anna. 2010. *De Ja-Sprong, Naar een Nieuwe Vitaliteit in de Kunst*. Amsterdam: Querido.

U

- Uexküll, Thure. 1984. "Zeichen Und Realität Als Anthroposemiotisches Problem." In *Zeichen Und Realität: Akten Des 3. Semiotischen Kolloquiums Der Deutschen Gesellschaft Für Semiotik E.V. Hamburg 1981*, edited by Klaus Oehler. Vol. Bd. 1, 61-72. Tübingen: Stauffenberg.

V

- Vaesen, Krist. 2012. "The Cognitive Bases of Human Tool Use." *Behavioral and Brain Sciences* 35 (4): 203-262.
- Vandekerckhove, Marie M. P. 2009. "Memory, Autothetic Consciousness and the Self: Consciousness as a Continuum of Stages." *Self and Identity* 8 (1): 4-23.
- Vasta, Ross, Marshall M. Haith, and Scott A. Miller. 1999. *Child Psychology, the Modern Science*. New York, Chichester, Weinheim, Brisbane, Singapore, Toronto: John Wiley & Sons, Inc.
- Veen, Klaas van, Rosanne C. Zwart, and Jacobiene A. Meirink. 2011. "What Makes Teacher Professional Development Effective? A Literature Review." In *Teacher Learning that Matters*, edited by M. Kooy and K. van Veen, 3-21. New York: Routledge.

- Verene, Donald Phillip. 2011. *The Origins of the Philosophy of Symbolic Forms: Kant, Hegel, and Cassirer*. Evanston, IL: Northwestern University Press.
- Verillon, Pierre and Pierre Rabardel. 1995. "Cognition and Artifacts: A Contribution to the Study of Thought in Relation to Instrumented Activity." *European Journal of Psychology of Education* 10 (1): 77-101.
- Verloop, Nico and Joost Lowyck. 2003. *Onderwijskunde: Een Kennisbasis voor Professionals*. Groningen etc.: Wolters-Noordhoff.
- Verloop, Nico, Jan Van Driel, and Paulien Meijer. 2001. "Teacher Knowledge and the Knowledge Base of Teaching." *International Journal of Educational Research* 35 (5): 441-461.
- von Uexküll, Thure. 1953. *Der Mensch Und Die Natur: Grundzüge Einer Naturphilosophie*. Sammlung Dalp. Vol. Bd. 13. Bern: Francke Verlag.
- Voogt, J., H. Westbroek, A. Handalzalts, A. Walraven, S. McKenney, J. Pieters, and B. de Vries. 2011. "Teacher Learning in Collaborative Curriculum Design." *Teaching and Teacher Education* 27 (8): 1235-1244.
- Vuyk, Kees. 2002. *Het Menselijk Teveel: Over de Kunst van het Leven en de Waarde van Kunst*. Kampen: Klement.
- Vygotsky, Lev S. 2004. "Imagination and Creativity in Childhood." *Journal of Russian & East European Psychology* 42 (1): 7-97.
- . 1978. *Mind in Society: The Development of Higher Psychological Processes*, edited by Michael Cole, Vera John-Steiner, Silvia Scribner and Ellen Souberman. Cambridge, Mass. ETC.: Harvard University Press.
- Vygotsky, Lev S., Eugenia Hanfmann, and Gertrude Vakar. 1965. *Thought and Language*. Cambridge, Mass.: M.I.T. Press.



- Waller, Tim. 2005. *An Introduction to Early Childhood: A Multidisciplinary Approach*. London: Paul Chapman Pub.
- Wartofsky, Marx W. 1979. *Models: Representation and the Scientific Understanding*. Boston Studies in the Philosophy of Science. Vol. ol. 129. Dordrecht etc.: Reidel.
- Waterhouse, Lynn. 2006. "Multiple Intelligences, the Mozart Effect, and Emotional Intelligence." *Educational Psychologist* 41 (4): 207-226.
- Wells, Gordon. 2009. *The Meaning Makers: Learning to Talk and Talking to Learn*. New Perspectives on Language and Education. 2nd ed. Bristol etc.: Multilingual Matters.
- Winner, Ellen. 2006. "Development in the Arts: Music and Drawing." In *Handbook of Child Psychology*, edited by W. Damon. Vol. 2, 859-904. New York: Wiley.
- Winner, E., M. McCarthy, S. Kleinman, and H. Gardner. 1980. "The Ontogenesis of Metaphor." In *Cognition and Figurative Language*, edited by R. P. Honeck and R. R.

- Hoffman, 341-361. Hillsdale NJ: Lawrence Erlbaum Associates.
- Winner, Ellen, Thalia R. Goldstein, and Stéphan Vincent-Lancrin. 2013. *Art for Art's Sake?* Organisation for Economic Co-operation and Development.
- Winsemius, Aletta. 1999. *De Overheid in Spagaat: Theorie en Praktijk van het Nederlandse Kunstbeleid*. Amsterdam: Thela Thesis.

Z

- Zeki, Semir. 1999. *Inner Vision: An Exploration of Art and the Brain*. Oxford etc.: Oxford University Press.
- Zijlstra, Halbe. 2011. *Meer dan Kwaliteit: Een Nieuwe Visie op Cultuurbeleid*. Den Haag: Ministerie van OCW.



SUMMARY

THE RESEARCH

In the Netherlands, the government makes public funds available to stimulate and support cultural education in primary schools. What is lacking, however, is a motivation as regards content. Research by Anne Bamford

from 2007 shows that, despite the available funds and the dedication of the teaching staff involved, cultural education in the Netherlands is fragmented and not fulfilling its potential. In particular this is due to a lack of insight into the nature of cultural education. Schools do not always know what cultural education actually consists of (the content), which of the children's abilities can be addressed (connection) and how cultural education relates to the rest of the curriculum (cohesion). Van Heusden has developed a theoretical framework based on insights from, among others, semiotics, biology, neurosciences and psychology which describes the functioning of human cultural cognition. This framework should be able to offer greater clarity in relation to content, cohesion and connection within cultural education.

Beside a scientific framework which provides insight into cultural education in general it is important to know how cultural education can be tailored to specific age groups. Childhood is the time when brains are developing very rapidly. Furthermore, the child is taking part in an increasingly large social and cultural world which also causes his or her reflection on culture to be subject to continuous change. It is important to know how children develop on a (meta)-cognitive level in order to adapt cultural education to this development. Finally, the question needs to be asked whether primary school teachers are able to work with Van Heusden's theoretical framework and whether this actually increases their insight into cultural education in terms of content, cohesion and connection.

My research consists of three main questions:

- ▶ What is cultural education about and why?
- ▶ Which cognitive developments in childhood could or possibly should cultural education link up with?
- ▶ Did working with Van Heusden's theoretical framework influence the understanding of content, connection and cohesion of cultural education among the primary school teachers who took part in the *Culture in the Mirror* project? How and why?

These three main questions are examined in the three parts of my thesis. In asking these questions the theme of 'cultural education' will be further elaborated on and studied on theoretical, developmental psychology and empirical levels.

The theoretical part of this thesis shows that the leaving behind of the traditional canon

has made the question of function and the value of the arts more urgent. The discussion regarding the importance of the arts is also being held in the political sphere. Despite a lack of hard evidence for the benefits of art and cultural activities these continue to be considered important for a child's education, both in The Netherlands and abroad. However, within these political decision-making processes there is a lack of a clear scientific foundation which provides insight into the way human cultural cognition and reflection on culture works. An interdisciplinary perspective offers possibilities for providing a better understanding of human culture. Van Heusden uses studies by, among others, Von Uexküll, Cassirer and Donald as biological, semiotic and evolutionary building stones enabling him to elucidate on our cultural cognition and metacognition. The theoretical framework that emerges provides insight into the abilities that can be addressed in cultural education, how these abilities relate to the skills that are needed for other subjects and how they relate to one another. In chapter two Van Heusden's theory will be compared to other theories and concepts which at this time are current in (our thinking on) cultural education.

The second part of my research is about children's development. The *Culture in the Mirror* project which this study is part of, takes as its starting point three age categories. My research concerns the youngest group of children, aged four to ten, and their teachers. Chapters three and four describe the literature study which I carried out into what is known up to the present from the perspective of developmental psychology about the development of cultural cognition, and in particular about the cultural consciousness (metacognition) of children which is central in cultural education. In the first chapter of this part I focus on the skills which are characteristic of this period and what this means for cultural education. In the second chapter I indicate which media are dominant in young children's cultural consciousness.

The third and last part of my thesis is dedicated to the empirical research. In chapter five I report on the research which I carried out in four schools in Groningen and Rotterdam. Twelve teachers of groups one to six developed lessons, taught them and evaluated them using Van Heusden's framework and the resources derived from this theory. The schools are extremely diverse in terms of, for example, pupil population, didactics, location and teachers. Two or three projects were carried out at each of the schools where the teachers initially received support and then designed, carried out and evaluated their final project entirely independently. Beforehand, the schools followed a learning trajectory in which they attended lectures given by Van Heusden and were given homework. The evaluation of each design cycle was recorded, written out and decoded using *Atlas.ti*. I compare the measure of understanding of cultural education in the areas of content, cohesion and connection, how the teachers judge their own understanding, what they say about the usefulness of the framework and how they value the process at various measuring points. I place these results in relation to current didactic insights into teachers' professional development. The final chapter is an illustrative part which gives a view into a number of the lessons developed by the participating schools.

RESULTS

Van Heusden shows that cultural education is ultimately suitable for addressing the metacognitive skills (also cultural consciousness) of children (chapter one). That means that reflection on oneself, others, one's own culture or that of others is central to cultural education. This reflection can take four different forms (the basic skills of cultural metacognition): self-perception, self-imagination, self-conceptualization or self-analysis and are expressed in four media groups: the body, the artefact, language and graphic signs. The analysis in chapter two shows that (the use of) Van Heusden's framework excludes virtually none of the theories or concepts in the cultural education field, but can be used successfully to relate different insights to one another. The only exception to this is Kolb's learning theory in which a number of basic hypotheses turn out to be problematic.

If Van Heusden's framework is used as a pair of glasses to view studies from developmental psychology, it turns out that the metacognitive skills of self-imagination, in particular, are central in childhood (chapter three). The self-perception which is still prominent around the age of four, is soon relegated to the background by the more motorial, manipulative way of giving meaning which is so characteristic of this period. This means that if cultural education is used to stimulate children's cultural consciousness, one must take into account the strong self-imagination which many young children have. Around the age of seven, children's thinking becomes increasingly conceptual and self-imagination gradually fades into the background. It is likely that neurological as well as social factors are involved in this process.

The strong self-imagination also determines the medium which characterizes childhood, namely that of the artefact (chapter four). Wartofsky's theory and Pasztory's studies offer possibilities for interpreting the artefact more broadly than just as a physical, three-dimensional object. I argue that the artefact can also be used to refer to a motorial and concrete manner of media use. Thinking with and in artefacts on the one hand fits in well with the concrete way in which children reflect but on the other hand also shows increasing abstraction in their thinking. The development of play, language and drawing in children between the ages of four and ten suggests that children even use other media (language and graphic signs) in an artefact-like manner. This means that young children probably use the media which dominate in our culture (and in education) namely language and graphic signs differently from the way we assume.

The empirical research shows that among almost all participating teachers there is a clear positive development in understanding. That is to say that knowledge as to what cultural education consists of (the content), how the subjects are related to one another (the cohesion) and how the lessons fit in with the child (the connection), increases during the design cycles. This increase in understanding is the greatest in terms of the content. The schools which carried out the largest number of projects have the highest scores, regardless

of their participation in the theoretical learning trajectory. This trend is consistent with educational studies which show that active participation and designing one's own teaching material is the most effective method in the professional development of teachers. The research method which was used did probably allow those teachers who were better able to express their ideas in words to obtain higher scores than those who evaluated in a more observational or imaginative way.

The illustrative chapter six shows how differently Van Heusden's framework was used in the participating schools. Using the framework, the teachers made their own choices from the riches of skills and media which lend themselves well to the development of cultural consciousness. As far as I am concerned, this also illustrates one of the most important characteristics of the theory namely that it is not prescriptive and does not impose a particular method of working. The teachers are able to make their own choices in the type of cultural education which suits them, their school and their pupils best. The result is a wide range of activities: some good and some less good, some surprising and some more conventional. But all of them flowing from actual considerations of content and underpinned by a scientific foundation.

Metacognition is often associated with linguistic and analytical forms of thinking both within and outside the world of science. However, with this thesis I hope to show that other forms of reflection, such as self-imagination, are also appropriate for giving meaning to oneself, others and culture in general. As far as that is concerned childhood is very suitable as a subject for further study. Young children's cultural consciousness is characterized by making and doing, creating and shaping, manipulating and exploring. This way of thinking no doubt deviates from the abstract way of assigning meaning which is so prevalent in our theoretical culture, but is therefore not necessarily inferior. With the artefact as a natural ally, self-imagination is actually a very fitting and effective way of enlarging one's world and widening one's horizons. This is exactly what the young child does when, in increasing measure, it becomes a part of the large collective of his or her culture. Further research into the exact function and operation of the self-imagination and the artefact would be a welcome addition to the debate about the importance of the arts for children and adults. In this research, in my opinion, the arts should neither be mystified nor marginalized as forms of expression in human cognition. Self-imagination is nothing less and nothing more than one of the four metacognitive skills which we as human beings possess to reflect on culture. That is quite something.



HET ONDERZOEK

In Nederland stelt de overheid middelen beschikbaar om cultuuronderwijs op basisscholen te stimuleren en te ondersteunen. Wat echter ontbreekt is een inhoudelijke motivering. Onderzoek van Anne Bamford uit 2007

laat zien dat, ondanks de beschikbare financiën en de inzet van de betrokken leraren, het cultuuronderwijs in Nederland versnipperd is en zijn potentieel niet waarmaakt. Dit komt met name door een gebrek aan inzicht in de aard van cultuuronderwijs. Scholen weten niet altijd wat cultuuronderwijs eigenlijk is (de inhoud), welke vermogens er bij kinderen kunnen worden aangesproken (de aansluiting) en hoe cultuuronderwijs zich verhoudt tot de rest van het curriculum (de samenhang). Van Heusden heeft een theoretisch kader ontwikkeld vanuit inzichten uit onder andere de semiotiek, biologie, neurowetenschappen en psychologie dat de werking van de menselijke culturele cognitie beschrijft. Dit kader zou meer duidelijkheid moeten bieden met betrekking tot inhoud, samenhang en aansluiting van het cultuuronderwijs.

Naast een wetenschappelijk kader dat inzicht geeft in cultuuronderwijs in het algemeen is het van belang om te weten hoe cultuuronderwijs kan aansluiten bij een specifieke leeftijdsgroep. In de kindertijd zijn de hersenen volop in ontwikkeling. Daarnaast neemt het kind deel aan een steeds grote sociale en culturele wereld waardoor ook zijn of haar reflectie op cultuur aan continue verandering onderhevig is. Het is belangrijk om te weten hoe de (meta)cognitieve ontwikkeling van het kind er uitziet, zodat het cultuuronderwijs zich hiertoe kan verhouden. Ten slotte is het de vraag of leerkrachten in het basisonderwijs in staat zijn met het theoretische kader van Van Heusden te werken en of dit hun inzicht in cultuuronderwijs op het gebied van inhoud, samenhang en aansluiting daadwerkelijk vergroot.

Mijn onderzoek bestaat uit een drietal hoofdvragen:

- ▶ Waar gaat cultuuronderwijs over en waarom?
- ▶ Bij welke cognitieve ontwikkelingen in de kindertijd zou cultuuronderwijs kunnen, c.q. moeten aansluiten?
- ▶ Heeft het werken met het theoretisch kader van Van Heusden invloed op het begrip van de inhoud, samenhang en aansluiting van cultuuronderwijs van leerkrachten basisonderwijs die hebben deelgenomen aan het *Cultuur in de Spiegel* project? Hoe en waarom?

Dit drietal hoofdvragen wordt behandeld in de drie delen van mijn proefschrift. Het thema 'cultuuronderwijs' wordt hiermee zowel op theoretisch, ontwikkelingspsychologisch als empirisch vlak verder uitgewerkt en bestudeerd.

Het theoretisch deel van dit proefschrift laat zien dat het afwerpen van traditionele canons de vraag naar de functie en de waarde van de kunsten urgenter heeft gemaakt. De discussie over het belang van de kunsten wordt ook in de politiek gevoerd. Ondanks een gebrek aan harde bewijzen voor het nut van kunstzinnige- en culturele activiteiten worden deze, zowel in binnen- als buitenland, nog wel van belang geacht voor de scholing van het kind. Een duidelijk wetenschappelijk fundament dat inzicht geeft in de werking van de menselijke culturele cognitie en reflectie op cultuur ontbreekt echter in dergelijke politieke besluitvormingen. Een interdisciplinair perspectief biedt mogelijkheden om menselijke cultuur beter te begrijpen. Van Heusden gebruikt de studies van o.a. Von Uexküll, Cassirer en Donald als biologische, semiotische en evolutionaire bouwstenen om onze culturele cognitie en metacognitie te kunnen duiden. Het theoretische kader dat hieruit ontstaat geeft inzicht in de vermogens die in het cultuuronderwijs kunnen worden aangesproken, hoe deze vermogens zich verhouden tot de vaardigheden die in andere vakken aan bod komen en hoe ze onderling met elkaar samenhangen. De theorie van Van Heusden wordt in hoofdstuk twee naast andere theorieën en visies gelegd die op dit moment gangbaar zijn in het (denken over) cultuuronderwijs.

Het tweede deel van mijn onderzoek gaat over de ontwikkeling van kinderen. Het project *Cultuur in de Spiegel*, waar deze studie onderdeel van is, gaat uit van een drietal leeftijdscategorieën. Mijn onderzoek gaat over de jongste groep kinderen, van vier tot tien jaar, en hun leerkrachten. De hoofdstukken drie en vier beschrijven de literatuurstudie die ik heb uitgevoerd naar wat er tot op heden bekend is vanuit de ontwikkelingspsychologie over de ontwikkeling van culturele cognitie, en met name het cultureel bewustzijn (metacognitie) van kinderen, dat centraal staat in cultuuronderwijs. In het eerste hoofdstuk van dit deel ga ik in op de vaardigheden die kenmerkend zijn voor deze periode en wat dit betekent voor cultuuronderwijs. In het tweede hoofdstuk geef ik aan welke media dominant zijn in het cultureel bewustzijn van jonge kinderen.

Het derde en laatste deel van mijn proefschrift is gewijd aan het empirisch onderzoek. In hoofdstuk vijf geef ik het onderzoek weer dat ik op een viertal scholen in Groningen en Rotterdam heb uitgevoerd. Twaalf leerkrachten van groep één tot en met zes hebben lessen ontwikkeld, uitgevoerd en geëvalueerd met behulp van het kader van Van Heusden en de daarvan afgeleide hulpmiddelen. De scholen zijn zeer divers in termen van bijvoorbeeld leerlingpopulatie, didactiek, locatie en leerkrachten. Op elke school zijn twee of drie projecten uitgevoerd, waarbij de leerkrachten eerst begeleiding kregen en het laatste project geheel zelfstandig ontwierpen, uitvoerden en evalueerden. Vooraf hebben de scholen een leertraject gevolgd waarbij ze colleges volgden van Van Heusden en huiswerkopdrachten

kregen. Van elke ontwerpcyclus is de evaluatie opgenomen, uitgeschreven en gecodeerd met *Atlas.ti*. Ik vergelijk de mate van begrip van cultuuronderwijs op het gebied van inhoud, samenhang en aansluiting, hoe de leerkrachten zelf hun begrip beoordelen, wat ze zeggen over de bruikbaarheid van het kader en hoe ze het proces waarderen op de verschillende meetmomenten. Deze resultaten plaats ik ten opzichte van huidige onderwijskundige inzichten over professionele ontwikkelingen van leraren. Het laatste hoofdstuk is een illustratief deel dat een doorkijkje geeft in een aantal van de lessen die door de deelnemende scholen zijn ontwikkeld.

RESULTATEN

Van Heusden laat zien cultuuronderwijs zich bij uitstek leent voor het aanspreken van de metacognitieve vaardigheden (ook wel cultureel bewustzijn) van kinderen (hoofdstuk één). Dat betekent dat de reflectie op jezelf, anderen, je eigen cultuur of die van anderen centraal staat in cultuuronderwijs. Deze reflectie kan vier verschillende vormen aannemen (de basisvaardigheden van culturele metacognitie): zelf-waarneming, zelf-verbeelding, zelf-conceptualisering of zelf-analyse en uitgedrukt worden in een viertal mediagroepen: het lichaam, het artefact, taal en grafische tekens. De analyse in hoofdstuk twee laat zien dat het kader van Van Heusden (het gebruik van) vrijwel geen van de besproken theorieën en visies in het cultuuronderwijsveld uitsluit, maar wel goed gebruikt kan worden om verschillende inzichten met elkaar in verband te brengen. De enige uitzondering hierop is de leertheorie van Kolb, waarbij enkele basisaannames problematisch blijken.

Wanneer het kader van Van Heusden gebruikt wordt als een bril om naar studies uit de ontwikkelingspsychologie te kijken, blijkt dat met name de metacognitieve vaardigheden van de zelf-verbeelding centraal te staan in de kindertijd (hoofdstuk drie). De zelf-waarneming, die rond het vierde jaar nog prominent is, wordt snel naar het tweede plan verdrongen door de meer motorische, manipulatieve manier van betekenisgeven die zo kenmerkend is voor deze periode. Dat betekent dat wanneer cultuuronderwijs ingezet wordt om het cultureel bewustzijn van kinderen te stimuleren, er rekening gehouden moet worden met de sterke zelf-verbeelding die veel jonge kinderen hebben. Rond een jaar of zeven wordt het denken van kinderen steeds conceptueler en verdwijnt de zelf-verbeelding geleidelijk meer naar de achtergrond. Waarschijnlijk spelen zowel neurologische als sociale factoren hierbij een rol.

De sterke zelf-verbeelding is ook bepalend voor het medium dat kenmerkend is voor de kindertijd: die van het artefact (hoofdstuk vier). De theorie van Wartofsky en studies van Pasztory bieden mogelijkheden om het artefact ruimer op te vatten dan enkel als fysiek, driedimensionaal voorwerp. Ik betoog dat het artefact ook goed gebruikt kan worden om een motorische en concrete manier van mediagebruik te benoemen. Het denken met en in artefacten past enerzijds goed bij de concrete manier van reflecteren van kinderen, maar

laat ook toenemende abstractie in hun denken zien. De ontwikkeling van het spel, taal en tekenen bij kinderen tussen vier en tien suggereert dat kinderen zelfs andere media (taal en grafische tekens) inzetten op een artefact-achtige manier. Dit betekent dat jonge kinderen de media die in onze cultuur (en in het onderwijs) domineren, de taal en grafische tekens, wellicht anders gebruiken dan wij veronderstellen.

Het empirisch onderzoek laat zien dat er bij vrijwel alle deelnemende leerkrachten een duidelijke positieve begripsontwikkeling is. Dat wil zeggen dat de kennis van wat cultuuronderwijs is (de inhoud), hoe de vakken met elkaar in verband staan (de samenhang) en hoe de lessen passen bij het kind (de aansluiting), toeneemt gedurende de ontwerp-cycli. Deze begripstoename is het grootst op het gebied van de inhoud. De scholen die de meeste projecten hebben gedaan scoren het best, ongeacht hun deelname aan het theoretische leertraject. Deze trend is in lijn met onderwijskundige studies die laten zien dat actieve participatie en het ontwerpen van de eigen lesstof het meest effectief is bij professionele ontwikkeling van leraren. De onderzoeksmethode die gebruikt is maakt wel dat leraren die makkelijk hun ideeën kunnen verwoorden waarschijnlijk beter scoren dan diegenen die op een meer waarnemende of verbeeldende manier evalueren.

Het illustratieve hoofdstuk zes toont hoe verschillend het kader van Van Heusden is gebruikt op de deelnemende scholen. Leerkrachten hebben met behulp van het kader hun eigen keuzes gemaakt uit de rijkdom aan vaardigheden en media die zich goed lenen voor de ontwikkeling van het cultureel bewustzijn. Dit illustreert wat mij betreft ook één van de belangrijkste kenmerken van de theorie: deze is niet voorschrijvend en legt geen methode van werken op. De leerkrachten kunnen hun eigen keuzes maken voor het soort cultuuronderwijs dat het beste bij henzelf, hun school en hun leerlingen past. Het resultaat is een breed scala aan activiteiten, goede en minder goede, verrassende en meer conventionele. Maar allen voortgekomen uit daadwerkelijk inhoudelijke overwegingen en gestoeld op een wetenschappelijk fundament.

Metacognitie wordt, zowel in de wetenschap als daarbuiten, vaak geassocieerd met talige en analytische vormen van denken. Ik hoop echter met dit proefschrift te kunnen laten zien dat ook andere vormen van reflectie, zoals die van de zelf-verbeelding, geschikt zijn om betekenis te geven aan jezelf, anderen en cultuur in het algemeen. De kindertijd is wat dat betreft bij uitstek geschikt als onderwerp voor verdere studie. Het cultureel bewustzijn van jonge kinderen wordt gekenmerkt door het maken en doen, door het creëren en scheppen, het manipuleren en exploreren. Deze denkwijze wijkt wellicht af van de abstracte manier van betekenisgeving die zo gangbaar is in onze theoretische cultuur, maar is daarmee niet noodzakelijkerwijs inferieur. Met het artefact als natuurlijke bondgenoot is de zelf-verbeelding juist een heel passende en effectieve manier om je wereld te vergroten en de horizon te verbreden. Dit is precies wat het jonge kind doet wanneer het in toenemende mate

onderdeel wordt van het grote collectief van zijn of haar cultuur. Verder onderzoek naar de precieze functie en werking van de zelf-verbeelding en het artefact zou een welkome aanvulling zijn op het debat over het belang van de kunsten voor kinderen en volwassenen. De kunsten zouden hierbij naar mijn mening noch gemystificeerd noch gemarginaliseerd moeten worden als uitdrukkingsvormen van menselijke cognitie. De zelf-verbeelding is niets meer en niets minder dan één van de vier metacognitieve vaardigheden die wij mensen hebben om te reflecteren op cultuur: iets heel speciaals dus.

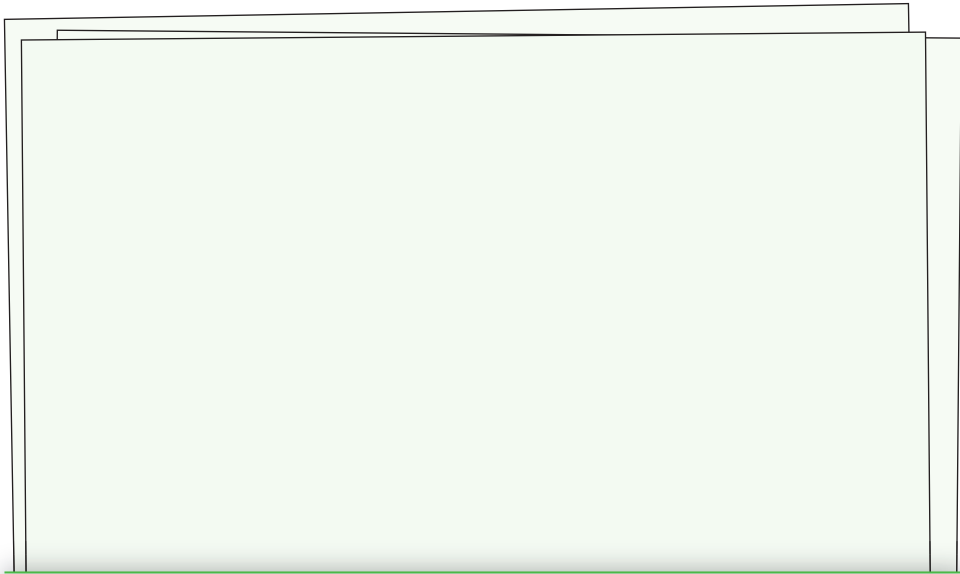


CURRICULUM VITAE

Theisje van Dorsten (Leiden, 1983) grew up in Vierakker, a small village near the historic city of Zutphen. She obtained her *doctorandus* degree in Arts and Culture from the University of Maastricht (*cum laude*), specializing in arts' practice and cultural theory. During her studies she went to the University of Jyväskylä, Finland on an Erasmus exchange. In 2005 and 2006 Theisje lived in Norwich, Great Britain where she received an additional Master's degree in World Art Studies from the University of East Anglia. Her years in Maastricht and Norwich laid the foundations for a keen interest in interdisciplinary research which crosses the borders between art history, neurosciences, biology and evolutionary psychology.

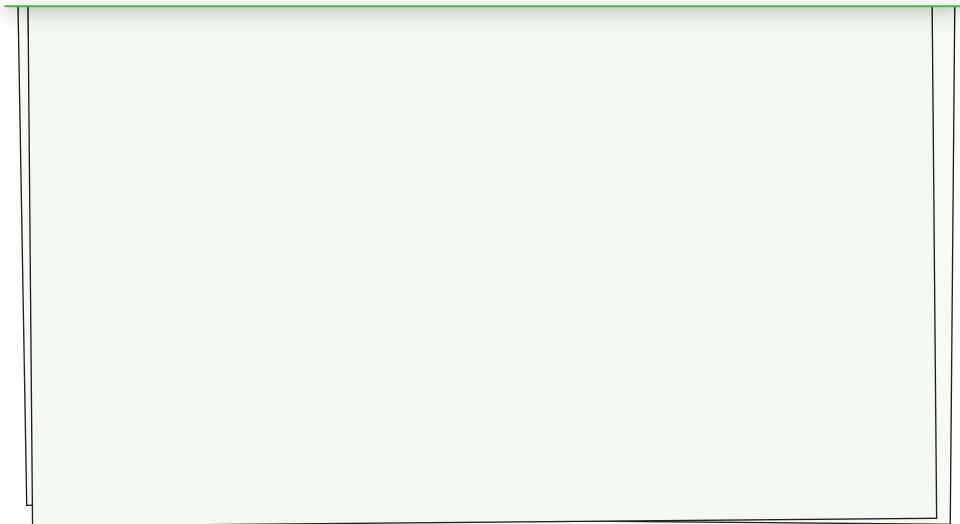
During her PhD research, Theisje joined various boards and committees such as the advisory committee of the culture coaches and the advisory board for cultural education and amateur arts of the Council for Culture. She has presented her work at various congresses and symposia.





APPENDIX IS AVAILABLE ONLINE:

<http://www.rug.nl/cultuuronderwijs/bibliotheek/onderzoek/>



COLOPHON

Mirrors in the Making
*Culture, education, and the development
of metacognition in early and middle
childhood (4-10)*

October 2015

This thesis (part one of three) is part of the
Culture in the Mirror project (2009-2014).
(Part two: ages 10-14 by Welmoed Ekster,
part three: ages 14-18+ by Emiel Copini.)
This project was funded by the VSB Fund,
SNS Reaal Fund (now Fund 21) and
the Dutch Ministry of Education,
Culture & Science.

Graphic design: JUSTAR.nl
Printing: Chris Russell, Groningen
ISBN: 978-90-367-8206-7 (printed version)
ISBN: 978-90-367-8205-0 (digital version)

Copyright © 2015 Theisje van Dorsten,
Groningen.





