Chapter 3

Expert-apprentice relations in other times and cultures

Understanding how types of expert-apprentice relations are, used in other times and cultures, can be beneficial in determining how the expert-apprentice relation is of use to contemporary organisations to. Looking at the past can also help understand how expert-apprentice relations can help knowledge sharing in modern organisations. Many situations are known where juniors learn from seniors: for example, parent-child relations and mentor systems. Chapter three examines examples of expert-apprentice relations. The two examples were chosen because the expert-apprentice relation is or was a structured part of business in a certain society and the relation lasted for a substantial period. Also, these examples are relatively well documented. They are particularly interesting because they cross both time and culture.

Firstly, the medieval master-apprentice relation will be considered. This master-apprentice relation was used in European guilds from the 14th till the 16th century. The Japanese Sempai-Kohai relation is discussed as a second example. This ancient relation is still practised today and is an example of a non-western expert-apprentice relation. Not all aspects of the master-apprentice relation and the sempai-kohai relation are covered in this chapter: the focus remains on the aspects that are relevant for today’s use in expert-apprentice relations. Because these examples appear in different environments than contemporary Western society, the relevant findings for today’s use which result from the master-apprentice relation and the sempai-kohai relation will be combined and analysed.

3.1. The medieval master-apprentice relation
The master-apprentice relation originated in guilds in western and southern Europe. The master-apprentice relation in medieval Europe was closely related to the guild system in that period, therefore before discussing the master-apprentice relations, the medieval guilds are examined.

3.1.1. Medieval guilds
Epstein (1991) made an extensive study of guilds in southern Europe and England. Epstein describes the medieval guilds as ‘associations of employers who banded together to foster their self-interest’. The mission of guilds was to promote a specific trade in a specific locality. Guilds existed in various political, regional and economic settings. They had a
wide range of standings in law and contained members who pursued almost every conceivable means of earning a living (Wolek, 1999). Guilds are a group of persons bound together by common rules or laws. The guilds share their name with money (gelt or gilda), and this is no coincidence because it is associated with the concept of mutual obligation (Epstein, 1991). The twelfth century provides the first documentary evidence for the existence of professional guilds in Western Europe and by the thirteenth century they had developed a complex set of rules and practices.

Very few documents give clues about when a group of people formed a guild. The common interpretation about when and why guilds were formed, is that trade and urbanization brought people in the same line of work into close proximity with one another, creating rivalries but also the first reasons for cooperation (Epstein, 1991). The craft and professional guilds first appeared in the cities and small towns along the newly thriving trade routes of medieval Europe. The guild was capable of mediating on behalf of its members with ruling lords or other local authorities. Guild members needed legitimacy and protection from entrenched powers. The urban economy and the ways interurban and international trade affected it, were also important stimuli in the creation of guilds. All of these factors external to the daily lives of merchants and artisans, produced strong incentives to band together for mutual support. Wolek (1999) adds social status as a function of guilds, besides personal security and assurance of a reasonable livelihood. Inside the crafts and professions competition existed, whether for raw materials or customers, but it was an equally strong incentive to cooperate. The guildsmen wanted local monopolies partly to allow their crafts to survive in the face of long-distance trade, but also to provide for an orderly division of the local market. The calculus of different factors seems to have weighed in favour of emphasizing quality and individual craftsmanship at the expense of competing on the basis of price (Epstein, 1991). This is in accordance with the fact that guilds were some form of confraternity – members of a guild shared the same religion and values. People did not see a clear distinction between their roles as masters in a craft guild and as brothers in a confraternity. In the guild, masters obligated themselves to adhere to standards of proper conduct and to support each other in sickness and in health. This meant that, for example, masters were obliged to attend the funerals of fellow masters and to look after the widow of the deceased guild member. There is a current discussion in literature about whether guilds encouraged, or stifled technological innovation. Standards may have resulted in a routinised and uninventive pattern of production, but they may have also provided masters with the incentive to reduce their costs by improving efficiency and maintaining the prescribed quality (Epstein, 1991).

In the Middle Ages a labour market as such did not exist for enterprisers and craftsmen who had succeeded to the point of requiring extra help beyond the means of the supply of their family group (Epstein, 1991). Thus, other ways of finding labour had to be used. Employers divided up the labour market into several broad categories and treated potential employees
in different ways. The clearest issues were the contract duration and the age of the worker. Apparently, three general classes of workers existed: apprentices, seasoned mature workers and casual workers. Apprenticeship is listed as one of the guild’s greatest contributions and attained this status because ‘it fosters both an understanding of how to work and the arduous practice needed to develop novices into both competent workers and proud members of respected trade groups’ (Wolek, 1999).

There is also some criticism of apprenticeships within the guilds: some suggest that guilds were powerless in responding to the physical abuse and narrow-mindedness practised by many masters and that apprenticeships did not help workers understand why and how their practices worked, but simply insisted on imitation. According to this criticism apprentices were not able to think for themselves thereby impeding their ability to adapt to new conditions and technologies (Wolek, 1999).

3.1.2. Apprenticeship in medieval guilds

Apprentices generally worked for long periods of time, reckoned in years, that varied according to two factors: (1) the age of the apprentice as he (or she) entered into the agreement, and (2) the level and complexity of skill required in a particular craft. The word apprentice is an Old French term that slipped into English usage. In Latin that was usually used in contracts in those days, the word used for apprentice was *discipulus*, a student. With the second category of worker contracts, it was assumed that the employee possessed the skills necessary to practice the trade. This emerging group were called *journeyman* and were not full members of the guild, since they themselves employed no one and had no apprentices – these were skilled workers (Epstein, 1991).

The apprenticeship system existed in part to pass on skills, and hence the ability to meet certain standards, from one generation to the next. Journeymen sometimes had the opportunity to prove that their work was in keeping with the reputation of a local craft by making a masterpiece. When a masterpiece was impractical, some guilds used tests to see ascertain skills. However, records suggest that a formal measurement of skills was the exception rather than the rule (Epstein, 1991).

The apprenticeship consisted of learning through observation and practice. According to Wolek (1999), to be accepted as an accomplished artisan, apprentices were expected to internalize a process of work by watching a master artisan and repeatedly producing the same simple or partial, piece of work in exactly the same way as the master. When the master judged the simple pieces as satisfactory, the apprentice could advance to more difficult and complete items. Because the apprentice was near the master at all times, he could see and notice all aspects of the master’s work. He could ask questions about why and how things were done, and then try to imitate it. One of the purposes of apprenticeships was to pass on skills that had been used by generations of craftsmen. It was a very stable
and static economic environment, with few needs for innovation or change and almost no technological advance. This was especially the case within the crafts and art: when the apprentice had mastered the knowledge of a specific craft, this knowledge was sufficient to last him a lifetime.

The contract used for apprenticeships varied in conditions and content. However, in the typical apprenticeship contract, an adult, usually the father or mother if living, had to make the promise because the apprentice had not reached the age of majority and often was not old enough to swear to abide by the terms of the contract. In short, the adult guaranteed that the apprentice would observe the terms of the contract, almost invariably under a serious cash penalty. The standard conditions were that the apprentice would serve a specific term for the purpose of learning and working the art, in good faith and without fraud. Details, depending on the particular craft or profession, often described what kind of services this work entailed. The agreement bound the apprentice not to run away or to marry without the permission of the master. Only in a few cases, was the family of the apprentice obliged to pay the master for taking on the apprentice or to provide some material support for the pupil during the term of service. The master in turn promised to teach the apprentice and keep him for the agreed-upon number of years. The master was also obliged to feed, clothe, and house the apprentice for the term. In addition, the master promised not to place any insupportable burden on the apprentice but at times specifically reserved the right of correction. The same cash penalty applied to the master if he failed to fulfil the terms of the agreement.

What distinguishes an apprenticeship from all other work contracts is that it is an agreement in which the master was obliged to teach and the apprentice was obliged to learn (Epstein, 1991). Apprenticeship sometimes reflected a quasi-parental nature, with a close emotional tie and apprentices themselves were a mixed bag of relatives and strangers. As stated, the central obligation between a master and an apprentice was to teach and learn. This was the most pervasive method of education that the pre-modern European world ever developed. An art required years of patience practice and instruction. The amount of time required to become proficient at a trade depended on the difficulty of the craft and the kinds of skills required. Some apprentices stayed with their master for a decade, others for five years or even twelve. The statutes also stated in some cases that no one could become a master until completing a certain amount of time with a master. Also in some cases, the statutes stated that the apprentices should be ‘prudent and wise’ (Epstein, 1991).

A necessary part of the master’s obligation to teach the apprentice, was his right of correction. It was a general idea that some form of corporal punishment was an inevitable part of education. All contracts that survive today invoke the daily rhythm of chores, instruction, occasional beatings and the acquisition of specialized skills that marked the life of the apprentice. For his part, the apprentice promised to learn and perform any and all
services the master might require. In some cases day and night. The kind of training the apprentice received was connected to the questions of where the apprentice should live and of whether the master offered some payment to the apprentice, or whether the family of the pupil should pay the master. Food and clothing were the minimum compensation the masters offered for service. Some masters, further, explicitly promised to provide shelter to the apprentice, making him a full-resident in the master’s establishment. Learning a craft or trade went therefore hand in hand with learning about becoming an independent adult (Fuller & Unwin, 1998). There were few rules about paying apprentices or the terms of the agreements: the guilds left the matter of apprenticeship to the individual decisions of the master. A few apprentices received regular wages, but it was assumed that the most important form of remuneration that all apprentices received was their training and implied ability to become a journeyman or master.

An important notion of the guilds was that the guild reserved for itself the right to determine who was capable of practising a craft, and nothing guaranteed that a particular number of years would ensure that the apprentice had acquired the requisite skills (Epstein, 1991). A young person hoping to enter the guild was therefore occasionally asked to produce a masterpiece to demonstrate competency. The word of his masters did not usually suffice, nor did simple years of work. The task of the master was to teach the pupil the actual manual skills or learning necessary to maintain quality. The statutes left the content of the training to the experience of the master (Epstein, 1991), although according to Elbaum (1989) in Britain the guilds carried out periodic inspections of job performance, work conditions, and quality of instruction. Since the guild was intended to regulate the relations among masters, they were properly anxious that no one should lure away another’s apprentice. So the statutes generally insisted that no apprentice should depart from a master’s service without the express permission of the master.

The guilds were social and charitable institutions and the masters took a natural interest in the moral welfare of the apprentices. This role sprang from the quasi parental authority of the master, who housed, fed, clothed and trained the young people. Hence the master assumed some overall responsibility for the apprentice. Those parents allowing the young boy or girl to leave home, probably for good, expected the master to foster the well-being of their children. Many contracts contain the master’s promise to keep the apprentice ‘in sickness and in health’. The parental role of the masters extended to other spheres of activity, the most common rule of moral nature was not to marry without the permission of the master. Assuming that the arrival of a husband or wife would disrupt the master’s own domestic life. To summarize, everything known about apprenticeship supports the conclusion, according to Epstein (1991), that it was a hard lot and that it inculcated work habits as well as skills in those who survived it. Apprentices worked alongside their masters, and they apparently had few opportunities to shirk work, unless at the master’s sufferance. Services by day and by night, inside and outside the shop: the master’s right to
inflict corporal punishment; the knowing provisions about runaways – all indicate rigorous and sustained work

The master-apprentice relation was practised in medieval times - and times have changed. Therefore design requirements of contemporary expert-apprentice relations should be based on the medieval master-apprentice relation translated to modern organisations. To understand which parts of the master-apprentice relation are out-dated and will not be effective in the 21st century. By making these parts explicit and presenting alternatives for use in contemporary organisations, requirements for the design of expert-apprentice relations will surface. The translating of the medieval master-apprentice relation to contemporary organisations is the subject of the next section.

3.1.3. Translating the master-apprentice relation to contemporary organisations

When the characteristics of the medieval master-apprentice relation are placed in modern times, the first and most obvious difference that stands out, are the differences in economical environmental requirements. Where in medieval times the economic environment was static with almost no technological change within the crafts, nowadays technological changes are part of everyday life. Even more so, it is said that in no time in history have technology changes been so common as in the twenty-first century. This observation has important consequences for the relation between an expert and his apprentice. In the ‘old’ days, the knowledge of a master would serve a lifetime: the skills he had learnt as a young person were almost the same as the skills he was using by the time he could retire. Once a person had become a master, he would always stay a master. So, when an apprentice wanted to acquire the skills that were required to become a master, it would have been sufficient to stay and observe a master for a certain amount of time and copy the master’s knowledge. These days, with all the technological changes and innovations, the new master would have to go into re-training within a year to keep on top of his knowledge domain: knowledge that was just acquired is instantly made old-fashioned by new inventions and changes (Hertog & Huizenga, 1997). The half-life of knowledge has shortened enormously compared to medieval knowledge (see chapter 2). To become and stay a master in this day and age one is required to follow life long learning in order to keep up with change. A consequence of these rapid changes, is that the interest in knowledge has increased: we now live in a knowledge economy or knowledge society. The environment and society are more and more determined by technology. And every (technological) change leads to an increasing need for knowledge acquirement. Another characteristic of the modern economical environment is that young people accept technological inventions quicker than do older people. For instance the use of new instruments of communication has been taken to the next level by young people, with the ‘elderly’ adopting it at a later stage. In this day and age, a student can probably tell a professor a lot about how to fully use a computer and how to put more music on a MP3-player. This is a new phenomenon in history: throughout all of history the young have learnt their knowledge from the old, in this
day and age in some areas it is the other way around: the old get their knowledge from the young. This is an important distinction: the young are teaching the old in some areas, but not in all. There is still that kind of knowledge that makes a person an expert. As it was said in the introduction: when a young person enters a company, it is possible that he knows more about computers than any other employee in the organisation, but he can still learn a lot from an expert: the young person still does not know how to act, how to play the political games and so on. It is the tacit knowledge of the expert that the young person is lacking.

The expert-apprentice relation in contemporary organisations can no longer just be about imitating the master: in a world where knowledge ages fast, a person – and especially an expert – needs to learn (i.e. acquire new knowledge) constantly. Secondly, the observation that young people often adopt new technology and changes earlier than older employees, makes it possible that an expert can learn from an apprentice as well. Kram (1996) suggests a form of co-learnership in which junior employees can share updated information concerning new technologies and issues at other levels of the organisation. Besides that, a new employee or apprentice usually enters the organisation with a fresh look and without prejudices. This makes it possible for an apprentice to see faults or blind spots within the company that an employee is no longer aware of. The apprentice can counter the rigidity of the expert. An apprentice however, still can learn from the expert’s tacit knowledge: skills take longer to acquire than do most theoretical knowledge. Skills have to be learnt in training and practice, just as attitudes and values and norms (Nonaka & Takeuchi, 1995).

So, when comparing the needs of the contemporary organisation to the characteristics of the medieval master-apprentice relation an adjustment has to be made away from knowledge transfer (one-way from expert to apprentice) to knowledge sharing (two-way from expert to apprentice and from apprentice to expert). A consequence of this adjustment is that both expert and apprentice should be obliged to both teach and learn.

Besides the shortened half-life of knowledge in the modern age, there is also a shift in contracts: these days it is no longer customary to stay with the same company for years and years. Most employees are so-called ‘job-hoppers’, who change jobs every few years or so. It can no longer be expected that an apprentice stays with one expert for several decades – even though this could be a good experience. This means that an expert-apprentice relation in a contemporary organisation is probably a short-term relationship.

The medieval master-apprentice relation is one example of the use of expert-apprentice relations. The sempai-kohai relation is another example. This Japanese relation is subject of the next section.
3.2. The Japanese sempai-kohai relation

Japan has a well developed concept of what Nakane (1972) terms ‘personal relationships in a vertical society’. These ‘vertical relationships’ are predicated on the notion of an older, more experienced person being predisposed to help a less experienced and younger person in work and personal matters (Bright, 2005). Although Japan has a variety of one-to-one vertical relationships, there is one type that is useful when examining expert-apprentice relations because it exists in all walks of life, but especially in professional settings: this relation is called the sempai-kohai relationship.

3.2.1. Characteristics of the sempai-kohai relation

The sempai-kohai relation is, as all vertical relations in the country, descended from feudal Japan. A cultural characteristic of Japan is that there is a strong social hierarchy in almost all structures – both in the workplace and in families. The Japanese society can be described as a strong vertical society (Nakane, 1970), with sempai-kohai relationships determining the role of a person in most situations. This hierarchical system controls Japanese social life and individual activity, making it an important aspect of everyday life.

The term ‘sempai’ can be translated as ‘senior’ and ‘kohai’ as ‘junior’. The sempai-kohai relation is a system that in the West can best be compared to the relationship between parent and child. It influences the relation between employer and employee, teacher and student. A person can be sempai to some and remain kohai to others for life. The sempai-kohai relation is strong within families and companies: each newcomer in an organisation is kohai to his or hers sempai, an older more experienced worker within the company. The sempai mentors his kohai and tutors him. According to Nakane (1970) in Japanese organisations, social integration results from strong bonds between status unequals rather than among peer groups. Rohlen (1974, p.23) describes the relationship in this way: “Ideally, the sempai will represent, advise, console, teach and discipline their kohai. Kohai, in return, will confide in, listen to, depend upon, follow, and respect their sempai”. A sempai is a senior person within an organisation (often chosen by the junior) who guides the junior recruit in the customs, behaviours and competencies required to undertake their role, while also being a source of guidance on personal matters. The sempai is chosen based upon personal qualities and the relationship between sempai and kohai is both informal and unofficial (Bright, 2005). Rohlen (1974) studies different sorts of sempai-kohai relations and identifies five basic characteristics of this relation:

1. The sempai is older than his kohai, has worked longer, and is in a position of power relative to him. This power enables the sempai to assist the kohai in one or more ways. It also means that the sempai is secure and established compared to his kohai;
2. The sempai is beneficially disposed towards the kohai;
3. The kohai accepts the benefits bestowed by the sempai;
4. These acts and related feelings are the basis of the relationship, though no explicit agreement is stated;
Ideally, the kohai feels gratitude to the sempai for his beneficence, and this feeling is accompanied by a desire to return the favour along with a commitment to become, in turn, a good sempai for someone younger.

An important - if not the most important - aspect of the sempai-kohai relation is the strong emotional bond between sempai and kohai (Bright, 2005). The bond between parties is emphasised over instrumental intervention of what know-how passes from sempai to kohai (Bright, 2005). A kohai knows that his sempai will protect him if something goes wrong, and is more willing to be fully devoted to the work. The relationship is not restricted to business, as the partners are expected to discuss their personal lives with each other as well. According to Bright (2005), frankness, trust and honesty could be said to represent the ingredients that forge the bond. Social activities can provide the environment for frankness.

However, some scholars present a more hierarchical view of the sempai-kohai relation. In Fling’s (1998) study about the way of tea in Japan, some characteristics of the sempai-kohai relation are described: obedience without argument or questioning and correction, accepted without excuses, is expected. The most proper response seems to be ‘hai!’ (‘yes’). Ideally relationships are characterised by respect for the sempai and benevolence and guidance for the kohai. In the martial arts training this sempai-kohai relation can be well observed: it is most often based on who has been training the longest, or rather, who has the most experience. Regardless of physical skills, the person with the most experience is always regarded as sempai and the person with lesser experience is regarded as kohai. The sempai has responsibilities for the development of the kohai and the kohai has responsibilities for tending to the needs of the senior members. The kohai always carries the sempai's bags, for example, and the sempai will never try to escape from the responsibility of offering advice and criticism to the kohai. As is put on a website of a school of karate:\footnote{http://home.mweb.co.za/al/alinc/sempaikohai.htm}：“We believe that there are no equals in our dojo and everyone has a relationship with those who are senior or junior to them. […] Therefore, when a new student starts studying at the dojo, those already studying there are senior to the new student - Sempai, and those who come after the new student are the Kohai. This is our policy regardless of rank, age or experience. Kohai have a duty or obligation towards the Sempai because of the Sempai’s willingness to pass on the knowledge that they have gained to the Kohai. […]The responsibility of the Sempai is huge. The responsibilities of the Sempai include assistance with training, advising, encouraging the Kohai when he/she becomes lazy and being a confidant to the Kohai. The Kohai who has been tutored and taken care of by his Sempai becomes an ONJIN, a person under obligation”. Whether the sempai-kohai relation is very strict or consists of the sempai and kohai often ‘drinking together’ (Rohlen, 1974), this relation emphasises the emotional bond between a senior and a junior within a particular setting.
In this section it was concluded that the vertical relationships in Japan are characterised by the bonded relationship between seniors and juniors. In Japan this bond is an important part of the relation to such an extent that, if there is no strong emotional bond, then the relation between senior and junior is of no significance (Bright, 2005). The question arises if and how this method can be of help in designing expert-apprentice relations for Western organisations. The next section analyses the sempai-kohai relation from a Western point of view in order to extract design requirements.

3.2.2. Translating the sempai-kohai relation to western organisations

When the characteristics of the Japanese sempai-kohai relation are placed in a Western society, the first and most obvious difference that stands out, is the difference in cultural and structural hierarchy. Where in Japan there is a strong vertical structure, where most relations are among unequals, in most Western European countries (e.g., The Netherlands) there is a horizontal structure: relations are among peers. When applying the ideas of Hofstede (1980) on national cultural differences, based on differences in Power Distance, Individualism, Masculinity, Uncertainty Avoidance and Long-Term Orientation, we find that in Japan Masculinity is the highest characteristic. The lowest ranking factor is Individualism, which coincides with their high ranking in Uncertainty Avoidance. Japan is a more collectivist culture that avoids risks and shows little value for personal freedom (Hofstede, 1980). When compared to the Dutch ranking, in the Netherlands the Hofstede Dimension Individuality is highest, indicating that the Netherlands has a society with more individualistic attitudes and relatively loose bonds with others. The populace is more self-reliant and looks out for themselves and their close family members. Due to the importance of the individual within the society, individual pride and respect are highly held values and degrading a person is not well received, accepted, or appreciated. Another distinct outcome is a low score on Masculinity. This may be indicative of a low level of differentiation and discrimination between genders. In this culture, females are treated more equally to males in all aspects of society. This low Masculinity ranking may also be displayed as a more openly nurturing society (Hofstede, 1980). Thus, there are cultural differences between the Japanese and the Dutch society. Or as Hofstede puts it: "In my comparisons of over more than 50 countries, few of them were as culturally distant as Japan and the Netherlands" (Hofstede, 2001).

The above findings suggest that the vertical relation between a sempai and a kohai may not work in The Netherlands, where horizontal relations are more common. This indicates that for an expert-apprentice relation to work in a culture such as the Netherlands, the basic assumptions of an expert-apprentice relation should be adjusted to the culture of the society where the relation is placed. For the Netherlands this means that an expert-apprentice relation will function better when the assumption is that it is a relation between (some what) equals, rather than focussing on the expert and the apprentice being unequal. The
cultural findings also suggest that the relation should focus not on correction, obligations and blind acceptance, but on mutual agreement and positive feedback.

According to Creighton (1998) people become sempai by length of membership in a particular frame of reference. This is linked to an implied assumption in Japan that one gains knowledge and skills over time and hence length of involvement should mean that one has gained greater competency. In Western organisation this seniority based expertise does occur, but is less accepted than is in Japan. Therefore when translating the sempai-kohai relation to Western organisations, the criteria for acceptance of an expert is modified: where in Japan a person is accepted as an expert based for the most part on his length of involvement, in western organisations a person is accepted based on his expertise.

Bright (2005) compared the Japanese mentoring system with Western mentoring, and concluded that in Western organisations when a senior and a junior are brought together for mentorship this is viewed as a strategic concern, where as the sempai-kohai relation in Japan is viewed as an emotional one. Bright illustrates this difference by naming the terms that are typically used to explain the sempai-kohai relationship and US and European views of mentoring: “The sempai-kohai relationship is typically explained in such terms as protection, socialisation, human feelings, frankness, benevolent actions, gratitude, assistance, informality and relaxation. Such terms are absent from US and European views of mentoring. Terms such as support, guidance and self-esteem characterise the relationship component of Western mentoring”. Bright further argues that the support and guidance underpinning Western mentoring becomes more effective if a strong personal bond exists between mentor and mentee. In other words, the quality of the support and guidance is defined by the quality of the bond (Bright, 2005). This also influences the selection of sempai and kohai: in this selection ‘the sempai is chosen based upon personal qualities’, and therefore not on the level of expertise alone.

3.3. Overview of the relevant findings

In the previous paragraphs, the medieval master-apprentice relation and the Japanese sempai-kohai relation were discussed. As was concluded in previous paragraphs, both relations contain applicable parts, but are also products of their time and culture. The relevant findings for expert-apprentice relations in contemporary Western society are summarised next.

In medieval master-apprentice relations there was a strong, parental tie between a master and his apprentice. The relation consisted not only of the transfer of the expert skills to the apprentice, but also of the moral welfare of the apprentice and other aspects of their lives. The apprentice often became ‘part of the family’ and was raised by his master. These facts indicate that there was a strong bond between master and apprentice, which could result in
both positive (care) and negative outcomes (abuse). A second conclusion resulting from the medieval master-apprentice relation is that it is useful to use a contract. A formal contract in which the expectations of the expert and apprentices are made clear and the obligations are stated will result in both the expert and apprentice being aware of the partner’s expectancies. The translation from the use of master-apprentice relations in medieval times to contemporary organisations, results in a shift from one-way knowledge transfer to two-way knowledge sharing. That is, a modern relation is not just about the apprentice imitating the master, but about the master and apprentice both sharing their knowledge and being critical about each other’s knowledge and actions.

In the Japanese sempai-kohai relation, the emphasis is on the emotional bond that exists between the senior and junior that goes beyond the boundaries of the organisation. The translation of the sempai-kohai relation from Japan to the Netherlands (or: Western cultures), shows the influence of the horizontal culture of Western organisations on the relation between expert and apprentice. In Western relations there is less emphasis on hierarchy then in Japan. In table 1, the characteristics of the two relations are summarised.

<table>
<thead>
<tr>
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<th>Medieval master-apprentice relation</th>
<th>Japanese sempai-kohai relation</th>
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<tbody>
<tr>
<td><strong>Knowledge sharing</strong></td>
<td>Knowledge Transfer (Cheap labour (m) and advanced skill training (a))</td>
<td>Knowledge Transfer (Place in organisation, knowledge acquirement, respect)</td>
</tr>
<tr>
<td></td>
<td>Acceptance of the expert when accepted as a master in the guild</td>
<td>Acceptance of the expert is based on length of experience in particular profession</td>
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<td></td>
<td>Master is obliged to teach, apprentice is obliged to learn</td>
<td>Sempai is obliged to teach and support, kohai to learn and respect.</td>
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<tr>
<td><strong>Social bond</strong></td>
<td>A quasi parental relation</td>
<td>A strong emotional bond</td>
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<td></td>
<td>Long-term relation</td>
<td>Long-term relation</td>
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<td></td>
<td>A formal contract</td>
<td>No agreement is stated</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>Demonstrating skills, observing and imitating. Correction and obedience.</td>
<td>Demonstrating skills, observing and imitating. Respect, obedience, social activities</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>Static economic environment with no technological change</td>
<td>Dynamic economic environment with a lot of technological change</td>
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Table 2 Characteristics of master-apprentice relation and the sempai-kohai relation

Table 2 ends this chapter. The next chapter presents the results of the exploratory case studies, in which six expert-apprentice relations were observed.