Chapter 1

General introduction
Imagine a couple in love, totally engrossed in each other. They order the same ice cream, finish each other’s sentences and copy each other’s mannerisms. They are even emotionally in tune: When one smiles the other smiles, when one feels sad about a scene in a movie the other immediately starts to feel sad too. Then, the man says something which causes the woman to become angry with him. What will he do? Will he get angry with her as well? Or will he apologise and try to calm her down? What will happen if he does get angry? It will probably ruin the date and could possibly even be the end of their relationship....

As this example illustrates, people sometimes imitate each other. And indeed, especially people who are fond of each other, are in love with each other or like each other very much, have a tendency to copy each other’s behaviour (Lakin, Jefferis, Chang, & Chartrand, 2003; Stel, Blascovich, McCall, & Vonk, 2005). Although research shows people also imitate each other even when they are not especially close, mutual liking typically does increase imitation (Lakin et al., 2003; Stel et al., 2005). Lakin and colleagues (2003) have even argued that imitation benefits our liking for each other. Thus through imitating each other the couple in the example would get even more attracted to each other. Research shows that people indeed generally like each other more after they imitate each other (Chartrand & Bargh, 1999), and after being imitated even have an increased liking for people other than the imitator (Van Baaren, Holland, Kawakami, & Van Knippenberg, 2003).

On the other hand, even in a situation where imitation is very likely to be beneficial, such as for a couple in love, imitation is likely to have its limits. If the man in the example chooses an imitative approach and gets angry in return to the woman’s anger, it is far more likely that the date will end badly than that the date will end well. In this case a more non- or anti-imitative approach will probably have better results: If he reacts in an apologising, calming manner this is more likely to have a beneficial outcome (although you never know ...). This will almost certainly also be true for behaviour that transcends this imaginary example. It seems not to be too daring to state that ‘Imitation is unlikely to always have a positive effect on liking’ and ‘Liking will not always have a positive effect on imitation’.

It is interesting that in certain situations imitation is not likely to be beneficial for liking and vice versa. What determines whether imitation leads to more liking or liking to more imitation? In the example the negative effect on liking is expected when the imitated behaviour is an expression of anger. The expression of anger is of course not simply or only behaviour, but is clearly intended as a social signal: In this case it means ‘I do not like what you just said’. Some of the other behaviour in the example such as the way the couple speaks or their mannerisms is more similar to the behaviour that has been studied in previous research on imitation and liking. Imitating such behaviour typically has positive effects on liking. However, speech patterns and mannerisms are generally not social signals.
The social signals emotional behaviour may be sending are especially relevant in the context of imitation, since imitation is said to have an affiliative function. Behaviour that is inherently social, such as an emotional expression, can be expected to influence the affiliative function of imitation in a way that behaviour that is not inherently social can not. When people imitate such behaviour they are not merely copying behaviour, they are also sending the social signal associated with that imitated behaviour. If the man in the example reacts with anger towards the woman this is not just imitation: this behaviour will inevitably also send her a non-affiliative social signal in return. Sending each other such (non) affiliative signals can obviously be expected to have an impact on how much they consequently like each other.

To date, what has been missing in most research on imitation is a focus on the specific meaning of the behaviour being imitated. Previous research has predominantly studied imitation by looking at behaviour and mannerisms that are relatively meaningless, not behaviour that is social and rich in meaning. An important aim of this thesis is to show that such a focus on the specific meaning of the behaviour is necessary: If imitation is studied without considering the communicative meaning of the behaviour that is imitated, this may lead to overgeneralisations, such as the belief that there is an intrinsic link between imitation and liking. In order to show that such a focus on the social signals of behaviour is indispensable, this thesis focuses on imitation of behaviour that is inherently social: The expression of emotions.

The thesis will explore the following questions: ‘Will I like you more if I imitate your emotion?’ and ‘Will I be more likely to imitate your emotion if I like you more?’.

Will I like you more if I imitate your emotion?

An inspection of the literature reveals that in general imitation of behaviour has a positive effect on liking. People have been shown to imitate a variety of behaviours such as foot tapping (Chartrand & Bargh, 1999), increased forearm muscle tension when observing arm wrestlers (Berger & Hadley, 1975) and speech patterns and accents (Capella & Panalp, 1981; Giles & Powesland, 1975; Giles & Smith, 1979; Webb, 1969, 1973). When people imitate such behaviour this typically has a positive effect on liking (Chartrand & Bargh, 1999; Van Baaren et al., 2003). Mimicry has even been described as a ‘social glue’, binding people together and creating harmonious relationships (Lakin et al., 2003).

Is imitating emotions different from the behaviour examined in these previous studies? I contend that it is. If people imitate foot tapping this will lead to more liking. But can foot tapping be compared to expressing an emotion? Emotion expressions are obviously not just a part of the broad group ‘human behaviour’, but are part of the group of human behaviour with specific communicative meaning (Fridlund, 1994). Each specific emotion has a different meaning: each
expression exists for a reason, has a different communicative social signal value, and is therefore likely to have a different effect on the observer. This means that if people imitate someone’s emotion expression, they will not just be imitating that behaviour, but will inevitably also be sending the other the signal generally associated with such an expression. Sending each other such signals can clearly have an impact on whether people like each other.

What social signals do emotions convey? When someone is expressing an emotion it is usually with the purpose to reveal to others what he or she is feeling (Frijda, 1986). However, the emotional state someone is in is not the only thing an emotion reveals. It can also be communicative in other ways: for example, it can be intended as an affiliative signal (Fridlund, 1994; Hess, Blairy, & Kleck, 2000; Knutson, 1996). Smiles in particular are often shown to reveal friendly intentions. Whereas if people want to reveal to someone they are displeased with them, they might send that person an expression of annoyance, disgust, or, when they want to make themselves extremely clear, anger. Research shows that observers indeed rate facial expressions differently on affiliation. Happiness is seen by observers as highly affiliative (Hess, et al., 2000; Knutson, 1996). Disgust and anger are seen as highly non-affiliative with anger being the most non-affiliative. Fear and sadness are seen as neutral on ratings of affiliation (Hess, et al., 2000; Knutson, 1996).

What effect does this affiliative aspect of emotion have on imitation? The social signal each emotion is sending is especially relevant in the context of imitation since imitation is said to have an affiliative function. Because emotions are seen as affiliative they can be expected to influence imitation, in a way that simpler types of behaviour can not. Imitation often serves a goal to try to improve liking (Lakin & Chartrand, 2003). However, if the behaviour itself is also sending an affiliative or non-affiliative signal, this can interact or even interfere with the affiliative goal. Imitating a highly affiliative emotion, such as happiness, imitation will only amplify the affiliative aspect of imitation and result in more liking, because both sender and observer are sending highly affiliative signals to each other. However, imitating a highly non-affiliative emotion, such as anger, means that both sender and observer are sending highly non-affiliative signals to each other. This will probably lead to less liking even though the behaviour is imitative.

In short, I expect imitation of non-affiliative behaviour, such as anger, to have a negative effect on liking. However, I also argue that there is one precondition for such negative liking effects to occur. Social signals generally have a target: In the example at the beginning of this introduction the woman is angry and the man is the target of that anger. If the woman in the story would have been angry at a third person, her boss for example, the man could have safely imitated her anger by becoming extremely angry at her boss. She might even have liked him more after this (‘You and I are both angry at my boss’). Thus, if the highly non-affiliative signals
are not sent at each other, but at a third party, anger imitation may in fact serve an affiliative goal. This means that the expectation for anger imitation to lead to less liking only holds when the anger is, or can be perceived to be, directed at the observer. When the anger is clearly not directed at the observer, there will be no decrease in liking and there might even be more liking, because although the behaviour is non-affiliative, it is not non-affiliative towards the observer.

Another aspect that is likely to influence the effect of imitation of anger is the gender of the person sending the emotion. Gender has been shown to influence how anger is seen: Anger is seen as especially non-affiliative when shown by men (Hess, et al., 2000). Men are also in general seen as more likely to act aggressively (Swim, 1994), which might make an angry man more frightening than an angry woman. How will this influence how imitation of anger affects liking? It could signal to the observers how the emotion is to be perceived. Especially if it is unclear whether the behaviour is non-affiliative or affiliative towards someone, the simple fact that the person showing the anger is a man might signal that the emotion is non-affiliative. Thus imitating an angry man could result in a decrease in liking even when imitating the anger might otherwise have had a more mild effect on liking.

In sum: Will I like you more if I imitate your emotion? I expect that the answer will be ‘not always’. More specifically, people will indeed like each other more if the emotion is, or is seen as, affiliative. In contrast, if the emotion is, or is seen as, non-affiliative and is not directed towards a third party (away from the observer), then the other person will be liked less.

Will I be more likely to imitate your emotion if I like you more?

Researchers in the imitation and liking field do not only argue that imitation should lead to more liking but also argue that liking should lead to more imitation (for an overview, see Lakin et al., 2003). Studies on non-emotional behaviour show that an unlikable person is imitated less than a likable person (Stel et al., 2005), and more personal, intimate conversations lead to more imitation (Jefferis, van Baaren & Chartrand, 2008).

Disliking and Imitation

Although liking is often associated with imitation (Jefferis et al., 2008; Lakin et al., 2003; Stel et al., 2005), disliking is typically only argued to lead to less or at most no imitation, but not to the opposite of imitation or other dissimilar reactions. Theoretically, however, dissimilar reactions are not impossible. Lakin and Chartrand (2003) showed that an active affiliation goal leads to more imitation, and they argued that liking probably leads to more imitation because people generally are more likely to have an active affiliation goal towards liked others.
Although they did not mention the possibility of dissimilar reactions towards disliked others, such reactions would still be in line with their reasoning. One merely has to take Lakin and Chartrand’s (2003) reasoning one step further: Thus, I argue that it is possible that people do not merely have less or no desire to affiliate with disliked others, but might also have an active desire to **not** affiliate or even **distance** themselves from disliked others. Since imitation can fulfil an affiliation goal, such a desire to not affiliate could be fulfilled by dissimilar reactions. I therefore argue that dissimilar reactions towards disliked others are far more likely than similar (imitative) reactions. If a disliked person is showing happiness, for example, I expect people to react with distancing behaviour rather than with imitation.

Only one study has previously been done on the effect of liking on the imitation of emotions (Likowski, Mühlberger, Seibt, Pauli, & Weyers, 2008). This study showed that both happiness and sadness were imitated more when participants had a more positive attitude towards the other person. Importantly, they also found some subtle indications of dissimilar facial muscular reactions (smiling) towards disliked sad others. They did not show such effects for happiness. However, because their main interest was in imitation of happiness and sadness, they only focused on muscle activity consistent with sadness and happiness. I argue that the reactions to disliked happy others are likely to include distancing behaviour and unlikely to include sadness it is unsurprising that this study did not show any such effects. The dissimilar reactions towards the disliked sad others does however support the idea that people do not just imitate disliked others less, but can indeed show dissimilar reactions.

**Liking and imitation**

Even when the other is liked, however, it does not seem logical to always expect more imitation. The man in the example about the couple probably would not have reacted to the woman’s anger with imitation. He would probably be more inclined to calm the woman down than to get angry at her in return. Even though the relevant literature typically argues that liked others should be imitated more (Jefferis, et al., 2008; Lakin, et al., 2003; Likowski, et al, 2008; Stel, et al., 2005), a non-imitative reaction towards a liked other nonetheless makes perfect sense if the meaning of the behaviour is again taken into account. Anger is non-affiliative and thus showing anger in response to the other’s anger (imitation) is ambiguous: It could be construed as empathic behaviour (e.g., ‘together we are angry at someone else’), but could also be construed as a non-affiliative message (e.g., ‘I am angry at you’). I consequently expect, contrary to the research on non-emotional behaviour, that anger will **not** be imitated if the other is liked: People will be especially unlikely to risk sending a non-affiliative message towards someone they like. They will be more likely to want to be unmistakably affiliative, for example by trying
to help the other in some way. If the other person is not liked people are more likely to show non-affiliative expressions. However, as before, showing anger if the other is already showing anger (imitation) is ambiguous: as well as possibly being construed as a non-affiliative message it could also be construed as empathic behaviour. Therefore I do not expect people to imitate anger towards disliked people either. People will be more likely to want to be indisputably non-affiliative, for example by turning their back on the other person (disengaging).

In sum: Will I be more likely to imitate your emotion if I like you more? As with the previous question the answer is likely to be more complicated than a simple yes or no. If the emotion is affiliative or neutral on affiliation, liking will lead to more imitation compared to disliking. If the emotion is non-affiliative, there will be no imitation, regardless of whether the other is liked or disliked. However, when I say no imitation I do not mean inaction. Rather than inaction I expect non-imitative (dissimilar) reactions.

Overview of the empirical chapters

Above I have argued that the affiliative aspects of behaviour are extremely important when studying the effect of imitation on liking and the effect of liking on imitation. Especially for emotions, which are important social signals in and of themselves, these affiliative aspects are likely to play an important role when studying imitation. For both questions ‘Will I like you more if I imitate your emotion?’ and ‘Will I be more likely to imitate your emotion if I like you more?’, the expected differences are in large part due to whether the emotion is either affiliative or non-affiliative. In the following three empirical chapters I will test these expectations.

Will I like you more if I imitate your emotion?

In Chapter 2 the idea that the affiliative nature of the emotion will affect liking after imitation is tested. An affiliative emotion (happiness) and a non-affiliative emotion (anger) are pitted against each other.

In Chapter 3 the effect of target and gender of the sender of the emotion are explored. The intention being to show how the same behaviour, imitation of anger, can cause different effects on liking depending on how that anger is perceived.
Will I be more likely to imitate your emotion if I like you more?

In Chapter 4 the reverse side to the link between imitation and liking is investigated: Does liking affect whether people are more likely to imitate other people’s emotions? In order to investigate the influence of the affiliative aspects of emotions, three different emotions are used varying on how affiliative they come across: happiness, sadness and anger. These emotions are expressed by either an intensely disliked or an intensely liked person.