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The Science of Seduction

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1 Introduction

As of yet, little research has been done to explore the effectiveness of seduction techniques in human courtship. This is fairly remarkable as humans have used techniques to improve their chances with the other sex ever since the dawn of humanity. While all living kinds try to get ahead in the evolutionary race, it is inherently human to reflect on one's behaviour. Some of the earliest written documents that give clues on seducing the other sex are the *Kamasutra* by Vatsyayana Mallanaga and the *The Art of Love* by Publius Ovidius Naso, both written in the first century AD. Over time, all cultures have developed a rich literature of seduction. In the European tradition some of the best-known are the Don Juan theme, Giacomo Casanova's *Story of my Life* and Søren Kierkegaard's *Diary of a Seducer* (Haustedt, 1992).

In 2005, the "Seduction Community" was brought into mainstream, when Neil Strauss published his book *The Game: Penetrating the Secret Society of Pickup Artists*. Dating back to the 1970's in the U.S., the community is dedicated to finding methods on how to succeed with women. It is mainly organised through the Internet even though these days there are so called "lairs" in most big German (and some Austrian) cities, which refer to the group of pickup artists in a particular city. Beside the self-organised exchange of information, there is a flourishing market of self-help literature and seminars, which promise to transform anybody into a women seducing Casanova (Clift, 2007).

The idea to help others with their dating skills has become an industry that makes millions of Euros per year. On the internet one can find seminars that cost between 500 and 2000 Euro for one weekend. Amazon.com and Amazon.de have a category on its own called "dating" and "Flirten & Verführen" (flirt & seduce) accordingly. And so called *flirt gurus* make a lot of money with personal coaching, by promising not just to change one's relationship status but one's whole life. The new attention and the outrageous claims of the industry make it time to put their methods to the test.

To see if there is a scientific foundation for the claims the industry makes, I took the most common advices and compared them with current scientific findings. Is it really good to play hard to get, how do I overcome approach anxiety, and is it possible to get somebody to think he or she is in love with me?

An important role in the pick-up community plays neuro-linguistic programming (NLP). It is supposed to be a tool to manipulate others but also to develop oneself. Academic psychologists often refer to NLP as a classical pseudo-scientific therapy (see e.g. Singer & Lalich, 1997). Unfortunately, I will not be able to discuss the combination of seduction and NLP in this thesis. The high status NLP has in the seduction community has to be mentioned, however.

Because the literature does not offer a satisfying psychological seduction model, I offer a new seduction model in this work. It is called the 5-A model and oriented on Givens' step model (1978), Mooris' seduction model (1978), and the emotional progression model of Benedict (2009). The 5-A model describes seduction as a psychological process that can be broken down into five steps: attention, approach, attraction, affection, and arousal. I will discuss the model in depth in the subchapter "seduction".

Evolutionary psychology forms the foundation of this work. Thus, the first quarter of my thesis will focus on evolution and its implications for a psychology of seduction. Current research will be introduced and critically reviewed. The feminist position on sex and gender will also be heard, and its critics considered.

The empirical part of the thesis focuses on the application of seduction. If the reviewed studies do not just apply for laboratory situations, it must be possible to use the knowledge to be more successful in the dating game. I developed a training based on techniques that are predicted to work by the seduction community and evolutionary psychology alike, in order to improve the dating skills of university students. To operationalize success, male participants had to acquire as many phone numbers as possible from members of the opposite sex within one hour, before and after the training. Women had to obtain as many drink invitations as possible, respectively.

The short-term intervention as well as the form of operationalization for success are new and have not been tested before. The target group is also new. Till now research solely focused on individuals with problems such as dating anxiety. In my study, I invited all university students at Klagenfurt campus, regardless of their perceived dating skills to participate in the training because I presumed that everybody can improve their dating skills, no matter how successful they are already with the opposite sex.

Furthermore, a gender specific training for women has not been described in the scientific literature yet. To do such training was a challenge because there is not as much literature available as for men. This applies to scientific studies and self-help books alike.

As a result of the training, men as well as women improved their skills significantly, received more numbers or drink invitations, and felt more confident in dating situations than before the training. However, no follow-up measure was taken so the stability of the effect cannot be assumed.

The whole work focuses solely on heterosexual seduction. There is a rich literature on same-sex dating, but I did not consider it in my work, as it would make a thesis on its own. Yet, one could easily incorporate adjustments for any cultural and individual differences into the seduction model and the skills training.

2 Theoretical Background

2.1 Sexual differences in human mating

It seems evident that sex differences exist in human mating. Many empirical studies have shown these effects (e.g., Buss, 1989; Feingold, 1992; Goffman, 1994). However, where the differences come from remains a research question. For us, these differences are crucial because they illustrate what people want from the opposite sex. There are two main competitive explanation models. The evolutionary models postulate a strong biological determination of sex specific mating strategies, while the social theories assume that gender is a construction and different mating strategies are a consequence of role conformism. In the following, I will discuss both approaches and their implications.

2.1.1 Evolutionary Theory

When Charles Darwin published his book *On the Origin of Species* in 1859, he started a controversy that continues up to today. It was not so much the theory of evolution itself but the idea of natural selection that the scientific world misunderstood and rejected. After the publication of *The Descent of Man, and Selection in Relation to Sex* in 1871 and the introduction of the idea of sexual selection, many of Darwin's colleagues attacked him. The theory of sexual selection fell into oblivion. It took almost a century to rediscover and acknowledge Darwin's work (for a more detailed history, see, Miller, 2000).

Buss (2004) pointed out that even though natural and sexual selection are easy to explain, they still cause a lot of confusion. He identified some of the most important aspects of selectivity at which we will look now.

First of all, natural and sexual selection are not the only reason for evolutionary change. Variations can emerge because of genetic drift which is defined as random alteration in the gene pool. The variations result from different processes, including mutation, the population bottleneck, and the founder effect. Mutation is a random change in DNA. In contrast, population bottleneck occurs after a radical and rapid declination of the population size, which leads to a reduction of the genetic variation. The founder effect occurs when a very small group migrates from the original

population to form a separate population. The new population will misrepresent the original population and differ from it at least in some respect.

Secondly, evolution, through natural selection, is not goal-oriented. It cannot see into the future or anticipate further needs. The giraffe does not see the delicious leaves first, and then develops a longer neck like Lamarck (1809) postulated. Rather, the giraffe with the longer neck from inherited traits has an advantage in food acquisition over others.

Furthermore, evolution is a gradual development, which does not emerge within one generation. The time in which an alteration occurs varies, but even fast alternations need generations to appear in even small steps. See Hoffrage and Vitouch (2002) for a good overview of the evolutionary theory applied to psychology.

2.1.1.1 Sexual Reproduction

Darwin based his first introduction of the sexual selection theory on female selectivity as most important intersexual and the male competition as most important intrasexual selection mechanism. Cunningham and Birkhead (1998) found that this traditional description of sex roles is based on the gamete size. Competitive, non selective males have small gametes while cautious, discriminating females have big gametes.

The chapter “Sexual Reproduction” is roughly oriented on Kappeler (2009). He asserted that the original evolutionary reproduction was asexual, and not sexual, as it is for most species today. Asexual reproduction is characterized by not having distinguished sexes i.e. no female and male sex cells. This form of reproduction has the advantage of a high reproductive ratio and the possibility to reproduce without the need of finding a partner. Why sexual reproduction prevailed is not clear. Though there are many theories, the only empirical proof could be found in the “reed-queen effect” (Bell, 1982). Bell postulates an evolutionary race between pathogens and their hosts. The host produces new genotypes through sexual reproduction again and again so that there is a better resistance against parasites and pathogenic germs. For a more detailed analysis of the advantages of sexual reproduction see West, Lively, and Read (1999). Sexual reproduction was originally isogamic, which means gametes were the same size. Now isogamy only exists in basic protozoa. Almost all other sexual reproducing animals and plants reproduce anisogamic, which describes

the fusion of gametes with heterogenic size. In anisogamic reproduction, male gametes (sperm) are small, mobile and nutrient-poor while female gametes (egg cells) are big, immobile and nutrient-rich (Kappeler, 2009).

To explain why two sexes (male and female) exist, Parker et al. (1972) conducted a computer simulation. They presumed that in the beginning all gametes were the same size. The selective pressure gametes were exposed to affect firstly the fitness of the zygotes, which resulted from the fusion of two gametes. The fitness of a zygote is defined as the probability with which it will reproduce itself in the shortest possible time and is directly connected with its volume (Grammer, 1992). Parker et al. assumed further, that when two big gametes fused, the emerging zygote had a higher fitness and a better chance of survival than when two small gametes fused. This could have started an evolutionary trend towards big gametes. But big gametes were immobile and would need a lot of energy to find another big gamete. Small gametes were mobile and could be produced in large numbers. The consequence was that more small gametes existed and it was more likely that a big gamete and a small gamete met than that two big gametes met. This could have started an evolutionary trend toward small gametes. The gametes of middle size died off eventually because they neither had the advantage of a big nutrition reserve nor of a big number. In the end of this race only two gamete types existed, eggs and sperms. Females produce a few big gametes, males many small ones. This means that a male is able to fertilize more eggs than are available. As a consequence, eggs become a limited resource for which males compete as their limited number constrains the male reproductive success. To higher his reproduction success, the male has to find as many females as possible in order to fertilize their eggs. This leads to a high reproduction potential, but also to strong competition. The female cannot higher her reproduction success by more copulation. Her only way is to raise the egg production. The fitness of a female is therefore limited by access to resources that allow higher egg production and investment in the development and care of her offspring.

Bateman (1948) demonstrated this fundamental sex difference first in a groundbreaking experiment with *Drosophila melanogaster*. He put four males and four females together for mating. Bateman could show that although most of the females had one or two partners, the variance within the male group was higher. While some males mated with up to all four females, others could not pair at all.

Bateman deduced the so called *Bateman's principle* from this study. This principle states that the sex which faces stronger sexual selection has a higher standardised variance in the number of mates and in the number of offspring (Arnold, 1994).

Trivers (1972) looked at what Darwin defined as typically male or female. He widened the definition and clarified that the parental investments in the offspring and not the sex or the size of the gametes defines which sex is competitive and which is selective. Trivers defines parental investment as the investment of the parents in their offspring, which raises the chances of the offspring to survive while lowering the ability of the parents to invest in further offspring. This means, if one sex invests significantly more in the offspring than the other, this sex will become an object of competition for the other sex.

It is often difficult in praxis to compare the degree of parental investment. Thus, Clutton-Brock (1991) introduced the idea that the role in the mating process is determined by the potential reproduction rate for both sexes. The potential reproduction rate arises from the number of offspring each of the parents can produce independently. Clutton-Brock bases this conclusion on the understanding that copulation and its consequences mean different handling times for both sexes. While one sex spends a certain amount of time pregnant and, after birth, often has to invest more time with care giving the other sex just has to invest its gametes. Hence, the faster sex regarding the reproduction rate has to compete for the slower sex, which can be selective.

Berglund and Rosenqvist (2003) pointed out the strength of the model by Trivers and Clutton-Brock to explain sexual selection. While all 4,000 mammals reproduce by fertilizing females, species with reverse sex roles do exist (Buss, 2004). For example, the male seahorses raise the offspring all by themselves; whereas the female seahorses are bigger and more aggressive than the males and compete for them with other females. Recently, researchers discuss that the variance in mating success also has a random component. Individuals show flexible reproduction strategies to changing social or environmental conditions (Hubbell & Johnson, 1987). Factors such as high predation risk, high parasite burden, old age, or few potential mates lead females to be less selective. At the same time, scientists observed that males had lower reproductive success when they were forced to pair with a female they did not prefer (Gowaty, 2004). As a result, Clutton-Brock (2007) concluded that both sexes can be competitive and selective under certain circumstances.

2.1.1.2 Female Preferences

The chapter “Female Preferences” and “Male Preferences” are roughly oriented on Buss (2004). Buss points out that previously, intercourse meant a significantly higher handling time for females than for males because females had nine months of gestation and up to another three or four years when the offspring need intense care. As a logical consequence, both sexes developed distinguish mating strategies.

Human females who preferred males that brought them advantages and avoided males that brought disadvantages were more successful. Females who displayed these preferences displaced those who did not develop this behaviour. By carrying the higher reproductive costs, women had to be careful when choosing a mate. They had to solve several adaptive problems including finding a partner that could and was willing to invest in them and their offspring, was physically capable of protecting them, would make a good father, was compatible with them, and was in good state of health (Buss, 2003).

One of the best-researched preferences women display is the preference for economic capacity and the one for earning potential (Eastwick & Finkel, 2008). The female preference for males who offer resources can also be found pervasively in the animal kingdom (Kappeler, 2009). In human evolution, the women gained access to more resources for their offspring by mating with one partner rather than having impermanent sexual relations. While the females of most primate species must rely solely on their own efforts to acquire food, the human male feeds his wife and children (Smuts, 1995). Men also provide protection, defend their territory, and assist in parenting their children. Such benefits are unlikely to be secured by a woman from a temporary sex partner.

To support the universality of this preference among human females, Buss (1989) surveyed 10,047 participants spread across 37 different cultures. Male and female participants were asked to rate the importance of eighteen different characteristics in a potential partner from unimportant to indispensable. In all 37 cultures, Buss was able to document consistent differences in sexual preference concerning the value of good financial prospects. Women valued financial resources roughly twice as high as men. While the exact numbers varied in the different cultures, the ratio of sexual preference remained the same. Women always desired higher earning potential in their partner than did men.

Scholars conducted various other empirical studies that prove the consistence of this preference. Townsend and Wasserman (1998) asked women to evaluate photographs of men. They were able to show that earning prospects indicated by different clues affected the women's likeness for the men. Wiederman (1993) found in a content analysis of 1,111 personal ads that female advertisers are looking for financial resources eleven times more often as male advertisers. Hitsch, Hortaçsu and Ariely (2006) found a similar effect for online dating. They showed a man's income correlates to the number of opposite-sex emails he receives.

To find out how important earning perspective is for men and women, Kenrick, Sadalla, Groth, and Trost (1990) asked American college students how much their potential spouse should earn. On average, female students state the minimum acceptable earning potential for a husband would be above 70% of all men. That means that a future husband has to earn more than 70% of all men. For men the minimum acceptable earning potential for a wife was above 40% of all women. Even for short term sexual relations, women would not accept men that earn less than 50% of all men. In contrast, men were content with a sex partner that does not belong to the lowest 20%. In reality however, men most likely do not even think about the earning potential when considering a one-night stand.

Another common preference women display is social status. Evolutionary psychologists argue that social status is a universal indicator for control of resources (Buss, 2003). A higher status leads to better nutrition, bigger territory, and better healthcare. Children with a higher social status have chances that children of fathers with a low social status lack. Betzig (1986) showed these effects in a study conducted in 186 societies. Men from higher social status were always wealthier, had more wives and had the capability to better provide for their children.

In an attempt to create an experimental setting, Townsend and Levy (1990) asked 112 undergraduate female students to evaluate photographs of two males, one generally described as attractive, the other generally described as unattractive. The pictures existed in three different versions that indicated the different social statuses of the two men. In the first, they were dressed in Burger King uniforms. In the second, they were dressed neutrally. And in the third, the men were wearing a suit and an expensive watch. The subjects were asked to rate what kind of relation they would be willing to have with the persons seen in the photos. The study showed that women were more willing to commit to a long-term relationship or marriage with

the unattractive male that represented high social status than with the attractive one who had a low social status. However, the female students were from the white American upper class and the observed effect might be explained by homogamy.

To avoid criticism on a college sample, Grammer (1992) reviewed data from a video-dating agency over four years. The collected records contained 1,079 women and 1,590 men. To obtain data, Grammer used a questionnaire which contained the partner profile for personality developed by Buss and Barnes (1986). Additionally, he added a leisure time profile and collected demographic data. The analysis showed that the social status of a partner was quite important to women. They ranked social status as the third most important criterion for choosing a partner. Men did not think social status was that important and placed it on the tenth position. At the same time, women valued the social status of a potential partner higher than men did. Furthermore, women take their own status into account. The higher their status becomes, the higher the status of the future spouse has to be.

The importance that women grant to social status in their partner was also discovered in Buss' cross-cultural study (1989). In most of the 37 cultures, women rate the social status of a potential mate significantly higher than men do. This is an indicator for the universality of a predilection for high social status among women and therefore a genetic determination for this preference.

In Buss' data (1989), we find that women around the world consistently prefer a man that is older than they are. This is true for modern western societies as well as traditional societies as the Australian Tiwi tribe. One explanation lies in the fact that older men usually hold more resources and a higher social status.

The results are consistent with the study of Grammer (1992). In his analysis of dating-videos, women tend to look for older men. With increasing age, this preference does not disappear or reverse. However, women will adapt to their own loss of partner value (being less attractive to the other sex) and broaden their search field. This might lead towards an older woman mating with a younger male.

All these preferences (economic resources, social status and older age) add up to the ability of the men to gather and hold onto resources that women can use for themselves and their offspring. However, even if a male is in possession of various resources, the woman cannot be sure that he is going to invest the resources in her and her children; therefore, females should have developed mechanisms to detect hints that indicate if it is likely that males will support the offspring after birth.

Animals have developed several tactics to spot indicators for parental investment. In the Stickleback population, the differences between males concerning care for the offspring correlates to the size of their pectoral fin (Künzler & Bakker, 2000). The male Sedge Warbler has a rich song repertoire that correlates positively with how often he feeds the offspring. The more complex his song, the more often he will come to the nest with food (Buchanan & Catchpole, 2000). But have humans developed similar tactics? For our female ancestors, to choose a mate that is willing to invest in their children would have been a direct advantage. One indicator women might have used is to observe how a male generally acts around children.

In fact, La Cerra (1994) found that women rated men as more attractive when they interact positively with children. As stimuli, 240 women were shown photographs of a man and a baby. The same man was displayed alone, with a baby, caring lovingly for that baby, ignoring a crying baby, or a man who is hovering. Women rated the man caring for the baby the most positive while rating the man ignoring the crying baby the worst. The women did not show the same preference for the man who was involved in domestic work. Participants even rated the man worse than when he was presented alone. To exclude that the preference for people who care about little children is universal, La Cerra showed similar pictures with a woman and a baby to 240 male students. The male rating was fundamentally different from that of the female. In none of the situations – woman being alone, positively interacting with the baby, ignoring the crying baby, neutral and hovering – were the women rated significantly different. The men rated the attractiveness of the woman in all of the pictures the same.

Another preference that can be found worldwide is the female preference for good health (Buss, 1989). This makes sense considering the disadvantages a woman would experience by choosing a diseased spouse. The risk is that the mate gets weaker or dies, therefore, losing his adaptive advantages by not being able to deliver protection, food supply and investment in the offspring. There is also a risk that the disease is contagious or heritable, which would lower the chances of survival of the woman or her children.

In the animal kingdom, good health is indicated mainly by state and colour of the fur, plumage, skin, the asymmetry of bilateral symmetric characteristics, or through olfaction (Kappeler, 2009). Probably the most famous example of an animal presenting a healthy condition is the fan of the peafowl. The brighter the plumage of

the male peafowl is, the less is the male's parasite burden. Therefore, female peafowl prefer males with brilliant plumage (Loyau, Saint Jalme, Mauget, & Sorci, 2007).

In humans, signs of ill health such as open sores, lesions, and unusual pallor are universally described as unattractive (Ford & Beach, 1951). In contrast, the symmetry of body and face is an important physical cue for solid health and seen as attractive (e.g., Gangestad & Thornhill, 1997; Grammer & Thornhill, 1994). Scientists argue that the symmetry of an organism indicates more mixed genetic material and therefore, stronger resistance against parasites. At the same time, asymmetry can be observed when, during the period of growth, defects in the cell division occur, so that one part of the body develops more or less than the others. Organisms that carry a parasite burden also tend to be asymmetric. Therefore, symmetry is a very powerful signal for health that cannot be faked like other cues.

Since Sadalla, Kenrick, and Vershure (1987) published evidence indicating that women are more attracted to men who are high in dominance compared to men that are low in dominance, this has become an often quoted fact in popular psychology. Though numerous studies have shown the limitation of this result, the simplistic version of their conclusion – “women prefer dominant males” – is often heard (Synder, Kirkpatrick, & Clark Barrett, 2008).

The benefits of choosing a dominant male can be overshadowed by the costs. A dominant male might be no better than a less dominant male in providing food, resources or parental care. At the same time the women risk injury, death or lower fecundity because they or their children might become the victim of the high-dominant male's aggressive behaviour.

To understand the confusion, we have to define dominance and separate it from prestige. Henrich and Gil-White (2001) suggest that scientists frequently mix up these two. Ellis (1992) defined dominance as “a measure of one individual's ability to prevail over another in competitive encounters that involve a face-to-face physical component, whether implicitly or explicitly” (p. 274). We know that to prevail over another often involves violent behaviour. While this can be observed in intrasexual hierarchy fights between animals, humans have developed other ways to climb the social ladder. That is where prestige comes into play. Prestige usually includes recognition of certain abilities that leads to freely endowed status. Dominance, however, is characterized by forced compliance to leadership.

Snyder, Kirkpatrick, and Barrett (2008) presented 234 female college students stories of males with a high or low level of prestige and dominance. The students rated different traits such as attractiveness, sympathy and the interest to engage in a long or short-term relation with this male. Snyder and his colleagues showed that women prefer high to low prestige but low to high dominance. Only in the context of an athletic competition are high-dominant males preferred over low-dominant males and only for short-term mating.

Almost all of the preferred traits in men sum up to the ability to achieve and hold resources in a way that does not bare the risk to become excluded by their social peer. This is important as being expelled clearly lowers the chances for a social creature like the “zoon politikon” to survive in a prehistoric society which shows in the deep fear of most people of not being accepted (Kurzban & Leary, 1995). In light of this, other findings such as the female preference for intelligent (Prokosch, Coss, Scheib, & Blozis, 2009) and humorous (Kaufman, Kozbelt, Bromley, & Miller, 2008) mates can be seen. Intelligence can help to gather resources as well as integrate in a hierarchy while humour is an important social skill that includes various functions.

A factor that I have not addressed yet is short vs. long-term mating. It is a tricky business for women because they do not archive the advantages by casual sex they would get from a long-term mate. Clark and Hatfield (1989) could show that a huge difference between the sexes exists in receptivity of sexual offers. While 75% of the men that where approached on a U.S. campus and asked for casual sex agreed, zero percent of the women did. Though it was a small sample of three men and three women approaching in total 32 members of the opposite sex, the effect is highly significant. It indicates that women apply certain criteria for casual sex that men might not. On the other hand, men could not have developed a tendency towards promiscuity if females had always denied their desire (Smith, 1984). The biologist Alfred Kinsey found in the fifties in the U.S. that roughly one quarter of the married women in his sample have had extramarital sex by their forties (Kinsey, Pomeroy, Martin, & Gebhard, 1953). Wiedeman (1997) found this number to be still valid today with a range from 11 to 38%, depending on the study. Furthermore, according to the Durex Sexual Wellbeing Global Survey (2007) 48% of German women engaged in casual sex at least once in their life, which is 10% less than the international average of 58%.

So the question is: if women carried such a high risk by having casual sex e.g. by getting pregnant without securing the support of a male or getting infected by diseases, how could it evolutionary prevail? To explain this, Fisher introduced the *sexy-son* hypothesis (1958). A temporary partner might be able to offer better genes than the long-term partner that gives advantages to the women's offspring i.e. because the male involved in the affair is more attractive which will also appear in the children who themselves will have more success in reproducing. In that case it would make sense to keep the actual supporter but engage in casual sex to give their offspring a head start into the evolutionary race. Gangestad and Thornhill (1997) could show that women place higher value to physical attractiveness in a short-term relationship, which supports the theory of Fisher. Even if the women did not have a long-term mate, casual sex could make sense. This was if she could not find an acceptable long-term mate, but had the chance to pair with an attractive male. She could then raise the children with the help of her kin, making sure that her genetic line does not die out.

Another key benefit for women is immediate access to resources (Symons, 1979). Exchanging sex for materialistic goods could have been a powerful drive in prehistoric times. Besides, women had the chance to conceal the true father of the offspring by having multiple affairs and therefore secure the resources from more than one male (Hrdy, 1981). Smith (1984) proposed that women can gain protection from short-term mates and can raise their social status by mating with a male who holds a better hierarchical position. Affairs also provide the opportunity to evaluate potential husbands. If the woman already has a husband, it still makes sense to look for someone better and explore possibilities through extramarital affairs (Fisher, 1992).

We have learned that women who randomly mated with males have lower reproduction success than the ones who have higher standards and chose wisely. Empirical evidence supports the hypothesis that modern women have inherited various preferences from their successful ancestors. What about men? The same studies as quoted above found that men do not have a special interest in partners that have a high social status nor are particularly intelligent. So what are men looking for?

2.1.1.3 Male Preferences

If we apply Trivers' theory (1972) to humans, the male should be the one who is more interested in short-term mating. Contrary to women, men can increase their reproductive success by having multiple partners. The evolutionary prediction would be thus, that men seek situations that lead to casual sex.

The evolutionary motivator in men to secure sexual access to a variety of partners is lust (Symons, 1979). Men do not always act on this desire, but nonetheless lust exists to motivate sexual intercourse. The male interest in short-term mating was demonstrated impressively by Clark and Hatfield (1989). Three quarter of the men who were randomly approached on a campus were willing to have sex with a woman they just met. To verify an existing sexual difference in the desire of having multiple sex partners, Buss and Schmitt (1993) asked American college students to state how many sexual partners they would ideally like to have in a range from one month to the whole life. It turned out that men like to have more sexual partner than women in any given time. Within the next year, for example, men desired on average six sex partners whereas women only wanted ideally one. Over their lifespan, men would like on average eighteen sex partners and women only four or five. These findings are backed up by Schmitt (2004). He found in an intercultural survey with 16,954 participants in fifty-three nations that men worldwide want more sexual partners than women do. Furthermore, it can be observed that mostly men pay in exchange for plain sex (Symons, 1979).

Another psychological solution to secure sexual access to a range of partners is to let little time pass by before seeking sexual intercourse (Buss, 2004). The longer a man courts a woman, the more likely he is to invest more resources. But that is what he wants to avoid in a short-term sexual encounter. Buss and Schmitt (1993) asked college students to rate how likely they would be to engage in intercourse with a person they find desirable after knowing that person a certain time ranging from one hour to five years. Men and women both rate it likely to have sex after knowing the other person for five years. While women reported to have neutral feelings about having sex after six month, men were still positive about having sex after one week. In sharp contrast, women rated it as most unlikely to have sex after knowing someone for one week. Though this results must be interpreted with some care. In the survey men on average rated it as unlikely to have sex in less than a week. Clark

and Hatfield (1989) however were able to show that most men consent to sex with a woman they have known for just a few seconds. But the fact that men are more willing to have sexual intercourse after a short time remains firm and has been replicated in various studies (e.g. Schmitt, Shackelford, & Buss, 2001).

Yet another psychological solution to support the initiation of casual sex for men is to lower their standards for acceptable partners (Buss, 2004). Glaude and Delaney (1990) found evidence for this assumption in single bars. Men and women were approached in the course of a night and asked to rate the attractiveness of the members of the opposite sex on a scale from one to ten. Men's judgement of women's attractiveness shifted from an average of 5.5 to over 6.5 as closing time arrived, no matter how much alcohol they had consumed. Also, women's rating of men increased, it just went from 5.0 to 5.5. This indicates that not just the alcohol takes effect but a psychological mechanism run down which secures that men lower their standards when opportunities for casual sex decrease.

Buss and Schmitt (1993) found a similar effect for college students. In forty-one out of 67 characteristics that are potentially desirable in casual partners men express significant lower standards than women do. Characteristics such as charm, athleticism, education, generosity, honesty, independence, kindness, intellectuality, loyalty, sense of humour, sociability, wealth, responsibility, spontaneity, cooperativeness, and emotional stability are rated lower by men than by women. At the same time, men are less adverse to undesirable characteristics such as mental abuse, violence, bisexuality, dislike by others, excessive drinking, ignorance, lack of education, possessiveness, promiscuity, selfishness, lack of humour, and lack of sensuality in a casual mate. Just four out of 61 negative characteristics are rated as significantly more undesirable by men than by women: a low sex drive, physical unattractiveness, need for commitment, and hairiness. This relaxed standard for short-term mating made it possible for our ancestors to include a range of females for casual sex and therewith higher the males reproductive success.

When all an ancestral man needed to do to reproduce successfully was to impregnate a woman, this raises the question why men commit to long-term relationships. There must have been a noticeable adaptive advantage for men to develop the desire to commit time and resources for one partner over a long time. To answer this question we have to look into the routes of monogamous cohabitation.

Monogamy among mammals is fairly rare. It can be observed in about 3% of the species. In non-human primates the rate reaches 15%. And in birds, monogamy is the dominant way of life (Reichard & Boesch, 2003). Murdock's Atlas of World Cultures (1981) reveals that around 83% of the 560 listed human societies allow polygamous marriage. Yet only about 20% of marriages in these societies involve more than one husband and wife. The most common reason for that is given as men do not obtain sufficient wealth or status to have more than one wife. This makes most humans actually live socially monogamous, which refers to an exclusive partnership with one partner at the time.

Many different species exist which are genetically not connected but live socially monogamous. Because there is no clear genetic line between those species it is safe to assume that social monogamy developed independently in all of them. To develop social monogamy van Schaik and Kappeler (1997) see two requirements of which one must be given. Either both sexes prefer such a relation or one of the sexes prefers it and the other cannot change it to its advantage. In the second case it is assumed, that the partner who prefers another way of life adapts to this biology of reproduction and changes it so a fixed partner also raises their own fitness. In the end the socially monogamous relationship is beneficial for both sexes.

Social monogamy must not be confounded with sexual or genetic monogamy. Social monogamy refers to an exclusive partnership in which two animals or persons live together, have sex with each other and cooperate in basic activities such as obtaining food or raising children. In contrast sexual monogamy is defined as having exclusive sex with just one partner and genetic monogamy refers to two partners that only have offspring with each other. For many animals that form pairs to mate and raise offspring, extra-pair copulation can be observed (Reichard & Boesch, 2003). Thus when talking about monogamy, it must be specified. The data found for humans indicate that sexual and genetic monogamy is not always given in our species either. Wiedeman (1997) shows that roughly one third of married people engage in extramarital intercourse with a higher percentage of men. To explore genetic monogamy Bellis, Hughes, Hughes, and Ashton (2005) conducted a meta-analysis and found a huge range between different studies varying from one to 30%. After carefully selecting studies with high quality, the remaining research showed an average paternal discrepancy of 3.7% with a higher rate for disadvantaged people, people with more than one sex partner at a time, and for younger women.

We cannot derive human behaviour directly from animal behaviour. But the behaviour of animals gives us important cues to the origins of human behaviour. Similar to monogamy in the animal kingdom, monogamy in humanity probably emerged because men had to adapt to the female requirement for long-term relations. Men who did not meet this demand most likely died out. Over time men must have adapted to this form of reproduction and have found ways to raise their own fitness by doing so. One benefit of committing to one spouse certainly is the possibility to observe the female and reduce the chances of extra-pair copulation (Reichard, 2002). Unlike most animals human females can be sexually active at any time of the year so the best strategy to secure the fatherhood for the men is to mate with one partner over a long time. This raises his chances that he does not invest in a baby that is not his. Another adaptive advantage lays in the probability of survival for his offspring. In ancient times, children who did not grow up with the support of both their parents had lower chances of survival (Hill & Hurtado, 1996).

If a man mated with one woman over a lifetime, he was reproductively more successful when he looked for youth and health in a potential partner. Old or unhealthy women clearly could not bear as many children as young, healthy women. Evolutionary we can therefore predict a male preference for these traits (Buss & Schmitt, 1993; Symons, 1979).

Indeed, men around the world uniformly express a desire for youth. In all 37 cultures examined, Buss (1989) found men to prefer wives who are younger than themselves. These data are equal to the findings of Grammer (1992). In his analysis of video-dating, the men wished for younger women. Both scientists observed that the preferred age men state is usually not the youngest possible age where the woman has the highest reproductive value but rather a higher age of around 25 years. Chrisholm (1991) explains this by the higher fecundity a woman has with age twenty-five. Reproductive value is defined as the number of children a person of certain age and sex can have in the future. In contrast, fecundity is understood as the real reproductive capacity and measured by the living offspring a person is able to produce. So it is argued that women in their mid-twenties produce the qualitatively highest offspring with the lowest mortality rate. Lancaster and Hamburg (1986) point out that the teenage mothers are not the best parents in many societies and their children carry many risks.

This argumentation seems somewhat artificial and if we look closer for the matter we will find two flaws. The first problem concerns most of evolutionary psychology. We know very little about how our ancestors lived thousands of years ago. For other assumptions, there is proof like a clear line from animals to humans. This does not apply here. There is no reason whatsoever to presume that teenage mothers were worse parents than their adult counterparts. Most problems teenage mothers encounter today are of socioeconomic nature (Lawson & Rhode, 1995) and it is invalid to compare their situation with a time when neither monetary nor education systems existed.

The other objection comes from what is commonly known as the attitude-behaviour gap. Discovered by the sociologist LaPiere (1934), it describes the discrepancy between what people say and do. Just because most men say they want to date women that are approximately twenty-five years old does not mean they actually do so. In the computer age it is possible to track what kind of profiles men contact in online dating. OkCupid.com, a U.S. based online dating site, evaluated data from 100,000 men and women and the router protocols revealed the truth (2010). Most men constantly send messages to women that are younger than their stated minimum. The author summarizes that “no matter what he's telling himself on his setting page, a thirty year-old man spends as much time messaging 18 and 19 year-olds as he does women his own age. On the other hand, women only a few years older are largely neglected.” Note that eighteen is the minimum age to join the webpage. These findings indicate a male preference for a high reproductive value rather than high fecundity. That men constantly state a desire for a higher age than they are actually looking for has multiple reasons such as sociocultural norms, knowledge of their own partner value, or the lack of introspection.

Youth is just the most obvious preference linked to women's reproductive capacity. Evolutionary logic leads to another set of expectations for universal standards of beauty. What is seen as attractive in a female should embody cues to women's reproductive capacity. A female body holds several such hints. In fact, a woman with a very pretty body and an unattractive face gets a higher attractiveness score than women with a very pretty face and an unattractive body (Alicke, Smith, & Klotz, 1986). While the preferences for plump or slim bodies vary across cultures (Symons, 1979), Singh (1993) discovered a preference for body shape that is universal. The ratio of waist size to hip size in western society is rated the most

attractive for women with 0.7 and for men with 0.9. Before puberty the waist-to-hip ratio is similar for both sexes. Yet after puberty women's hip fat deposit causes their waist-to-hip ratio to significantly decrease. For men, this is a reliable indicator of the female reproductive status. Furthermore, a low waist-to-hip ratio is a good cue for a women's long-term health (Buss, 2004).

Newer studies found the preference vary in other cultures ranging from 0.6 in China (Dixson, Dixson, Li, & Anderson, 2007) to 0.8 or 0.9 in parts of South America and Africa (Dixson, Dixson, Morgan & Anderson, 2007; Marlowe, Apicella, and Reed, 2005). However it must be noted that in these studies only the preference of the frontal waist-to-hip ratio was tested. Circumferential measurements might have led to other results, due to different body fat storage patterns in different population groups. Since the results are ambiguous, further research will be needed to clear the existence of a universal preference for a certain body shape.

We have learned already from female preferences that symmetric faces and bodies are rated as more attractive than asymmetric faces and bodies. Symmetry is a universal trait that is preferred across cultures, for both sexes and in many animals as it indicates health and mate quality (e.g., Polak, 2003; Thornhill & Gangestad, 1999). The same seems to be true for averageness (e.g., Møller & Swaddle, 1997; Thornhill & Gangestad 1993). Because of the sheer number of studies conducted around facial attractiveness, Rhodes (2006) carried out a meta-analysis including twenty two studies about averageness and twenty studies about symmetry.

She found a stable effect for averageness. Average faces are constantly rated as more attractive. Critics suggested that the process of making computer generated average faces might bring some sight effects such as a reduction of facial asymmetry and smooth skin. However, composites remained attractive when these confounding factors are statistically controlled. It was also tried to converge towards a more realistic rating of facial attractiveness. Therefore pictures of real, unmanipulated faces were used. These studies showed that faces which are closer to the population average are uniformly rated as more attractive. Rhodes notes however that these results do not mean that all attractive faces are average or that average faces are optimally attractive. Symmetry also is a solid indicator for attractiveness. In both studies, with computer generated and normal faces, facial symmetry is rated consistently as more attractive than facial asymmetry. Symmetry remains attractive

when the effect of averageness is statistically controlled which indicates that both traits contribute to attractiveness independently.

We have learned that men had an advantage in committing to a long-term relationship. However, they were confronted with the adaptive problem to find a mate that is physical capable of delivering healthy offspring with a high chance of survival. Therefore they developed criteria for attractiveness which contain information about a woman's reproductive capacity. Cues of youth and health are thus still seen as desirable by today's men.

2.1.2 Feminist Theories

After I discussed the evolutionary orientated explanation models for the differences in mating between men and women I explore the feminist theories. I will analyze where they came from and introduce their arguments. Afterwards a discussion of their criticism on evolutionary arguments follows.

In daily life we tend to answer questions about differences between men and women with biology. This comes in part from the huge success of popular science books with titles such as *Why Men Don't Listen and Women Can't Read Maps* (Pease & Pease, 2001). To reduce all differences between the sexes to biology is problematic, however, as we will learn.

In the fifties, with the conceptually and linguistically separation from sex and gender, a first step was done to understand the complex social interaction of culture and nature (Stoller, 1968). This differentiation was picked-up by the feminist studies in the seventies. Sex was defined as the biological raw material while gender was standing for the social gender in the sense of cultural and social imprint. The social order and especially the social inequality of gender were not seen as consequence of physical differences but put into the context of sociocultural normalizing. At the same time, the general division of society into men and women stood unquestioned – it was seen as natural (Rubin, 1975).

This led to the thinking that the body as the biological foundation is something natural and therefore non-cultural. Hence it was left to the hard science to study this subject. As a consequence, nature and culture were seen as two separate things at which nature was understood as the biological foundation of the cultural characteristics (Gildemeister, 2008).

In the German-speaking countries the differentiation between sex and gender was not as successful as in Anglophone countries. However, the goal of equality implicitly contained the separation of nature and culture. Equality was tried to be achieved by the reduction of sociocultural norming and of the discrimination of women. Feminists around the world saw socialization, and with it culture, as the cause for observed gender differences. Quite early in the discussion it was also pointed out that *being different* is a quality in its own (Diotima, 1989).

With the strengthening of the feminist movement in the late seventies it was more and more understood that women belong to a *female collective*. By belonging to that, gender, abilities, interests and traits are supposed to develop and form in all females. Concepts such as *female life context*, *female thinking*, and *female moral* were widely spread. From a modern perspective this can be interpreted as an attempt to raise the value of femininity as a reaction to the *subordinate role* of women firmly anchored in our society. The goal was not equal treatment with male imprinted conditions but a value of women in their own (Gildemeister, 1990). By pointing out that women are something special, the demand for equal treatment lost importance. Without accepting the “specific female” the demand for equality does not make sense in any case. And by that we are back at the start of the criticism: the special treatment of the woman as the *second sex* (de Beauvoir, 1951) and her exclusion of the *general human* that was equated with male in the history of the occident (Gerhard, 1994).

In 1990, with the publication of Judith Butler’s *Gender Troubles*, the concept of social constructivism of gender became popular in German speaking countries. In her work she developed an idiosyncratic social philosophy on the background of Foucault’s theory of discourse and Lacan’s theory of psychoanalysis. In further works of other authors constructivism and theory of discourse were often wrongly equated. In addition at that time other studies to the phenomena of social construction of gender were published and led to further confusion in the literature (Gildemeister, 2008).

An important work was conducted by Laqueur (1990). He shows how the *one-sex theory*, ranging back to the ancient world was replaced by a *two-sex theory* in the eighteenth century. Before, the female genitals were seen as the inward-pointing counterpart of the male ones but made from the same material albeit not as complete. Now men and women were seen as fundamentally dissimilar. The

differences were based on the primary sexual organ. Male and female bodies became in the modern enlightened thinking model two completely different things.

In 1991 Claudia Honegger makes this clear in her history of anthropology. In the science of humanity, founded in the eighteenth century, the male as “cultural being” represented humanity *per se*. The *special anthropology of women* can be dealt with in the gynaecology however. For females as *natural beings* the uterus becomes the central organ. From that the *natural destination of the woman* can be derived. For this reason, gynaecology becomes the authority when it comes to females, whether it is physical, psychological, social, or political (Wetterer, 2008).

The importance of two sexes in the eighteenth century can also be seen in Linné’s classification system of species. Even plants get sexual organs, lie in a *bridal bed* and *espouse*. Next to the *intimate life of the plants* it is quite informative, where the plants got their names from. The social history and the political discussion of the time, e.g. the debate about the wet nurse system, the breast feeding and the *natural mother love* show an obsession with the female breast at that time. This reaches its zenith in the term *mammalian*, a Latin terminus that just describes half of the species and is not consistent with the rest of Linné’s classification system (Schiebinger, 1993).

A lot more studies were published at that time with a specific view on constructivism. As an example, take the dissertation of Hirschauer (1993) about the social construction of transsexuality or the work of Haraway (1989) reanalyzing primate studies. What all these studies have in common is that they rethink the relationship of nature and culture. They agree on the view that these two cannot be separated properly. This means the biological sex cannot be seen as given and stand on the beginning of an analysis. From that point of view, genitals do not make a sex or an order of sexes. On the other hand, an order of sexes can lead to genitals gaining importance and becoming *gender signs*. This shows that there is no plain connection between the term sex and the therewith reflected subject. Terms are no simple imprint of reality. Objects or facts are not simply given but are constructed which is also true for gender (Villa, 2006).

In 1967, Garfinkel published his studies about transsexuality that were extended by Kessler and McKenna (1978). Those studies built the foundation for the newly emerged concept of *doing gender*. One of the central findings of these studies are three essential attitudes towards gender most grown-up, fully socialised people have:

there are two, and only two, genders (female and male); gender can be clearly identified on the body (genitals are the essential sign; and one's gender is invariant (if you are female/male you always were female/male and always will be female/male).

The concept of doing gender was developed in an explicit contrast to the sex-gender differentiation. It basically states that gender is a production process which takes place in all human interactions and is strongly institutionalized. Sex and gender is seen as a result of complex social processes and not as natural base for distinction in human action, behaviour and experience. This means for example that these processes are the reason for the separate and disadvantaged status of women on the base of their ability to achieve pregnancy – and not the other way around. Basing the incident in the nature (*naturalize*), the process of social construction becomes invisible. The result of that seems so highly self-evident that the question of its production modus already causes irritation (Douglas, 1986).

2.1.3 Controversy

There is an ongoing discussion about which theory is more plausible. On the one hand we have the extreme of reducing sex differences to an adaption to prehistoric times; on the other hand the extreme of denying the category sex as an artificial construction. Both theories have their strong points and the truth lies most likely somewhere in between. Hence, more moderate scientists argue that the theories can profit from each other and are not mutually exclusive. In the following chapter we will particularly look into evolutionary psychology and its pros and cons because it is the most influential theory when it comes to mating in modern scientific literature.

One point often criticised by feminist writers is the specious objectivity of evolutionary psychologist. It is a well known epistemological problem that we are as scientists part of the system we are trying to investigate. Smith puts it this way: “the only way to know a socially constructed world is knowing it from within. We can never stand outside it.” (2004, p. 28) As an example she gives the view out of a window during a train ride. When you look out of the window you will see the entire world from this point. You might see a family watching the train pass by and already make a lot of assumptions. Maybe it is not a family and maybe they are watching something else. From our point of view it is a family watching a train, however. Is our standpoint now dominant to that of the others, e.g. because we live in the western

world, we are in danger to rewrite the world of the others. As we belong to a culture, a social group, a gender, a peer, and so on, we tend to produce science from a certain point of view. Even if we have data from all around the world, it is usually a small group of scientists who carry out the interpretation of these data. And so, despite the huge effort to collect intercultural datasets, the work of evolutionary psychologist seems to reflect the established power dynamics of the western world.

An important method of evolutionary psychology is to use the knowledge of the so called *environment of evolutionary adaptedness (EEA)* to generate hypothesis of psychological adaptations. The environment of evolutionary adaptedness represents the prehistoric past in which most of the human evolution happened. The concept of the EEA is criticised by many scientists as we know very little about our prehistoric past (and what we know, we see through the eyes of a twenty-first century scientist). Richards highlights this with the fear of spiders (2007). It seems logical that this fear is an adaption to the dangerous environment ten thousands of years ago. Spiders are venomous and often dangerous for humans, especially in the wild jungle of Africa, the cradle of human life. Hence, our ancestors who had a genetically determined fear of spiders were more likely to survive and pass on this fear to their offspring. So far it is the argumentation of evolutionary psychologists (e.g. Pinker, 1997). If we look at hard facts, we will find that spiders do not deserve such a reputation. There are over 30,000 species of spiders of which just approximately 200 species from twenty genera worldwide that can cause severe damage to humans. Hardly any spider that is dangerous to humans is native to Africa (Diaz, 2004). The chances our ancestors met a highly venomous spider in the African savannah are little. The chances they had a deadly encounter with wasps or bees was probably even higher. However, an inherited fear of wasps and bees is not promoted by evolutionary psychologists.

Hagen (2005) noted that it is not necessary to have an exact picture of the living conditions in the past to make solid assumptions. Certain facts, like women becoming pregnant, built the foundation for evolutionary theories. He argues, that our hunter-gatherer ancestors had to deal with conditions that are predictable because physics, chemistry, geography and ecology were the same as they are today on an abstract level. In particular they had to find a mate, take care of their offspring, organise food, deal with intergroup and interpersonal aggression and assistance, and

face diseases. Further he refers to historians, archaeologists, and paleoanthropologists who can supply us with their findings.

Another point of criticism often given by feminists is the fact that intragroup variance within a sex is bigger than intergroup variance between men and women. It is true that for most psychological characteristics that are statistically different between the two sexes, the distributions for the two groups overlap for the most part. That does not mean that the differences are not significant though. To get an idea, I will give a simple example inspired by Bischof-Köhler (2006). Let us assume, in a test for spatial ability a female group reaches an average T-score of 50. The male group manages a slightly better result of 53. If we move on the T-score scale one standard deviation to the left to a T-score of 60, we will find three males for two females. The ratio increases rapidly as we move further to the left. On a T-score of 63, one standard deviation away from the male mean, we find already a rate of almost two to one for the men. If we took that score as the minimum requirement to enter a technical school, we would have at least double as much men as women in that school. Bischof-Köhler (2006) points out the problem with such an example. Generally what we have here is a statistical calculation. It gives us the possibility to make assumptions on probabilities and deviations. It does not mean that all men have a better spatial ability than women. In fact, in the example given above 38% of men lie underneath the average of women. Yet in the simplified group thinking of humans the empirical “more-or-less” tends to become a normative “all-or-nothing” that soon transforms into a social norm (e.g. “all men want sex and all women love”).

All the empirically found differences between women and men could be, however, from different socialization. We know that our socialization has a strong impact on how we see the world around us. We develop stereotypes that are useful in an environment we do not know but might get in our way when we try to understand complex reality. If we are raised to believe women and men are different we will treat them differently. And so, a newborn baby which is still a *tabula rasa* when it comes to gender is formed into one of the two sexes that society approves. That is meant by de Beauvoir’s famous quote “on ne naît pas femme, on le devient”; one is not born a woman, one becomes one (in Schwarzer, 2007, p. 161).

To test this hypothesis, in the seventies a large amount of studies were conducted that came to be known as baby x studies. In these studies toddlers were dressed gender neutral and presented to participants of whom half knew the right sex

and half of them did not. It was shown that grown-ups presented the toddler gender adequate seeming toys e.g. dolls for girls and cars for boys. The real sex of the toddler did not play any role in their decision. It was also argued that interaction style and attribution of traits such as aggression and shyness are conform to the role of what the participants thought the sex of the baby would be. Meta analysis of these studies (e.g. Stern & Karraker, 1989) showed however, that attribution of traits did not have a significant correlation with the sex of the baby. Participants did not attribute traits continuous according to the stereotypes. Yet interaction style and the choice of toys were according to the sex of the baby, independent of his or her real sex. It would be wrong to draw the conclusion from these data that parents just behave different towards boys as towards girls, because they know the sex of the child. Parents have certain stereotypes by knowing the sex of their child but they do not act like soulless robots and just do whatever they think is gender adequate. In the baby x studies, participants interacted with strange toddlers. Most adults who first encounter an unknown child will try to get to it by what they think might work best. The sex of the toddler is an important cue for that. If they realize that the offer they make does not work they most likely would change it. The baby x studies observed the participants just over a short period of time. In real life it's most likely true that children make a behavioural offer to which adults try to respond to. If a grown-up tussles around with a child who reacts afraid, the grown-up most likely is going to calm and is try something else (Bischof-Köhler, 2006).

To make a child conform to a role the desired behaviour has to be reinforced and/or the undesired behaviour has to be punished. For very young children that would be done by their parents as their primary attachment figures. Lytton and Romney (1991) did a meta-analysis of research concerning parents' differential socialization of boys and girls including studies from 1952 to 1987. They found that in most areas there was no significantly different treatment of boys and girls by their parents. The only significant difference was found in the reinforcement of role conforming activities such as playing with certain toys. No significant difference was found in the parental treatment of aggression, one of the best proven gender differences. The authors conclude that the hypothesis, gender typical behaviour has its origin in differential education in families, must be dismissed. It is a factor but it is certainly not the reason for well proved differences between women and men.

2.2 Seduction

After we have learned the basis for sex differences and a lot about what humans seek in other humans and why, we are going to observe the process of seduction. I went through a huge amount of self-help literature and compared it with state-of-the-art science to figure out how this process works and how it can be manipulated. Before we get into the anatomy of seduction, however, I want to take a step back and look at the function of flirting as part of the seduction process.

Flirting is somewhat of a complicated matter. It is hard to tell when it starts and hard to detect if you are not involved. And even if you are involved it is no guarantee that you are aware of the flirting going on around you. And why are we flirting anyway? Evolutionary speaking, that is an easy one. We flirt to find a partner and reproduce (Grammer, 1992). But then people flirt with others for whom they do not have any romantic feelings. They flirt to test their mate-value. They flirt with their boss to get their career started. They flirt out of boredom. So can we really assume the purpose of flirting is sex? Yes, because the purpose of flirting is another than the intention with which people flirt (Grammer, 1992). It is like a game of soccer. People go to play soccer for many reasons, e.g., to have fun with friends or to stay in shape. But the nature of the game is to score (like in the evolutionary game), even though people might enjoy just passing the ball around without shooting at the goal once.

So one can flirt without following a sexual intent but sex is important to flirting. It gives it a direction, a final destination. The goal of flirting is not intercourse however; it is to communicate interest without saying it. To say "I want to have sex with you" is not flirting anymore. Flirting lives from its ambiguity. Interest can be shown without commitment. This starts a push-pull movement, in which more interest is shown (push) in turns with less interest (pull). At the same time data can be collected. The value and intentions of the potential partner can be assessed and values and wishes can be adjusted.

So what are the rules of the game? Sabini and Silver (1982) take a game of chess to illustrate the rules of flirting. They point out that there are good moves and bad moves. However, they state, there is no wrong move. I would disagree on that matter. That is because I define wrong differently. The set of rules people follow in the courtship process are usually the same that can be observed in a non-romantic interaction. These are the rules of the society or the peer group people belong to.

The only difference between the two forms of communication lies in the ambiguity you indicate when you flirt. As soon as open interest in the other person is shown (which would be normally inappropriate) the flirt ends and a new phase of interaction starts. Thus a wrong move would be something that would not be allowed by social convention such as talking for hours on your mobile while you are having a date and therefore ends the dating game immediately and/or for good without one intention to do so. Of course, it is debatable if it was rather a bad than wrong move. However, in a soccer game the people you are playing with enforce the given rules. They also might create new rules. If you violate these rules it is a wrong move. The same is true for social situations. The people you are interacting with enforce the given rules and create new ones. If you violate rules that are important to the person with whom you are flirting, the flirting is most likely over.

So what sets seduction apart from flirting? To find out we will have to look at the etymology of seduction. It most likely comes from the Latin verb *seducere* which has many meanings. One is “to lead astray,” which has a clearly negative connotation. In classic writing, seduction was seen as an inescapable force, a trap that was usually leading onto the wrong path. The authors distinguished the image of a cold hearted seducer, a cruel hunter from the victim, the seduced prey that was misled by his or her own feelings. The seducer presents the ratio and is driven by his head while the seduced is victim and driven by his heart. Another meaning of *seducere* is “to be led along” (which in German means *ver-führen*). Here, the seduced is attracted and led to another place. In an interpersonal relationship, it is pointed out that seduction is meant to create an apt setting and the conditions to get to know one another. The borders between seducer and seduced melt down since seductive roles exist in both interacting persons. In contemporary literature, as well as in my thesis, seduction falls under this meaning of being the prelude to a relationship or special encounter (Ciceri, 2001).

Looking at different models (e.g. Dindia, 2000; Hewes, 1995; Kendrick & Trost, 1987; Perper, 1985), we find that courtship interaction generally goes through a sequence of steps that unfold over time. Givens (1978) for example introduces an influential model that consists of five steps: attention, recognition, interaction, sexual arousal, and resolution. In the attention phase a person tries to make another person who he or she finds attractive aware of him or her. It is characterized by an ambivalent, tentative, and hesitant approach. Usually the attention phase is initiated

by a female. In the recognition phase the receiver (usually the male) becomes aware of the signals the interested person sends. A non-verbal invitation to make contact is sent or signals of disinterest are displayed by the receiver. The interaction phase goes from the first approach over a length of time, where both partner assess each other. If they survive this phase, the two shift to sexual arousal. In that phase, both exchange a series of caring and affectionate gestures. After copulation, the couple's relationship may suddenly change. Flirting becomes scarce and both might separate psychologically and physically for a period of time.

Mooris (1978) introduces a model that focuses less on universal courtship behaviour and more on the seduction process. Interestingly, it has five steps as well. Step one consists of choosing a partner based on attraction and interests. Secondly, the subject tries to make contact through exhibition and catching his or her attention. The subject then tries to assess realistically the degree of attraction and interest he feels towards the other person (third step). Step four is the reduction of uncertainty with the aim to establish a more intimate relationship. Finally, in step five, the whole process ends by building a solid bond (in Ciceri, 2001). However, as I see it, this model does not cover all of the seduction process. For example, how attraction is produced is left out. Nevertheless it gives us a foundation of what the seduction process might look like.

In the self-help literature, especially in the pickup literature, we find similar models that evolve over time, step-by-step. An example for such a model is the emotional progression model by Benedict alias Savoy (2009). The model fits solely for males. Benedict limits the model further, pointing out that it has to be seen rather as a strategy than a fixed model. And for any strategy to work you need well trained players that can apply the model. It is like in a basketball game where some teams shoot a lot, other pass more. But all players know the fundamentals like dribbling and shooting. The emotional progression model consists of six steps which are: Opening, Transitioning, Attraction, Qualification, Comfort, and Seduction. In the opening phase a *target* is chosen and approached. In the transition phase the subject changes the topic from the initial opening topic to a more personal one. Then attraction has to be built so the target is interested in the subject. Now the target has to qualify for the seducer so that she becomes aware of that she likes him. In the comfort phase, the target is touched and an intimate relation is built. If the aim was the phone number, the seduction process ends here with the exchange of contact details. If the aim was

intercourse, the model proceeds to the seduction phase. The target would then be brought to a place where intercourse could happen. The model ends with the seducer and the target having sex.

There are some problems with these kinds of models. Usually, they are just made for one sex, in this case for men. That means we cannot generalize them and adapt them universally. Furthermore most of the models are embedded in a cultural context. This is unavoidable because they tried to give actual suggestions which are missing in most scientific literature. However, the biggest problem is that they are based on opinions, psychologically superficial knowledge, and anecdotic evidence rather than on empirical findings and scientific concepts. Or, as Davis (2011) puts it:

My main problem with this [self-help] industry is the fact that the authors feel they have the right to make outrageous claims that they can't back up with solid evidence. Sometimes they'll give a few anecdotes of times their advice worked – as if that's supposed to mean something – but often, all you get is pure unsubstantiated opinion, in-between layers of hyperbole.

To close the gap between self-help and science, I'm going to introduce a model that is based on Givens' step model (1978), Mooris' seduction model (1978) and the emotional progression model of Benedict (2009) (see Figure 1). It is valid for both sexes and is as well descriptive as explanatory. The process itself will be based on empirical evidence psychologist have gathered around the world.

The model is called the 5-A model. It is based on five steps: attention, approach, attraction, affection and arousal. The attention phase is the combination of the attention and recognition phase of Givens model. In this phase, signals are sent out to a specific person to either check if he or she is ready to be approached or to make that person to approach the sender. The approach phase sums up what Benedict calls opener and transition and is the second step in Mooris' model. In Givens model approach as well as attraction and affection falls in the interaction phase. In this phase the name is program. The seducer approaches a person he or she is interested in and starts a conversation. The third phase is where the seducer makes the person he chose attracted to him or her. This phase overlaps with the attraction phase in the model of Benedict. The affection phase is characterized by bonding. In that phase seducer and seduced start to build a unit. It is a combination of the third

and fourth step in the model of Mooris and of the fourth and fifth step in the model of Benedict. The model finishes with arousal and the sexual act (which does not represent a step in its own right because it represents the climax of the seduction). The arousal phase can be found in the model of Givens as sexual-arousal phase and in the model of Benedict as seduction phase.

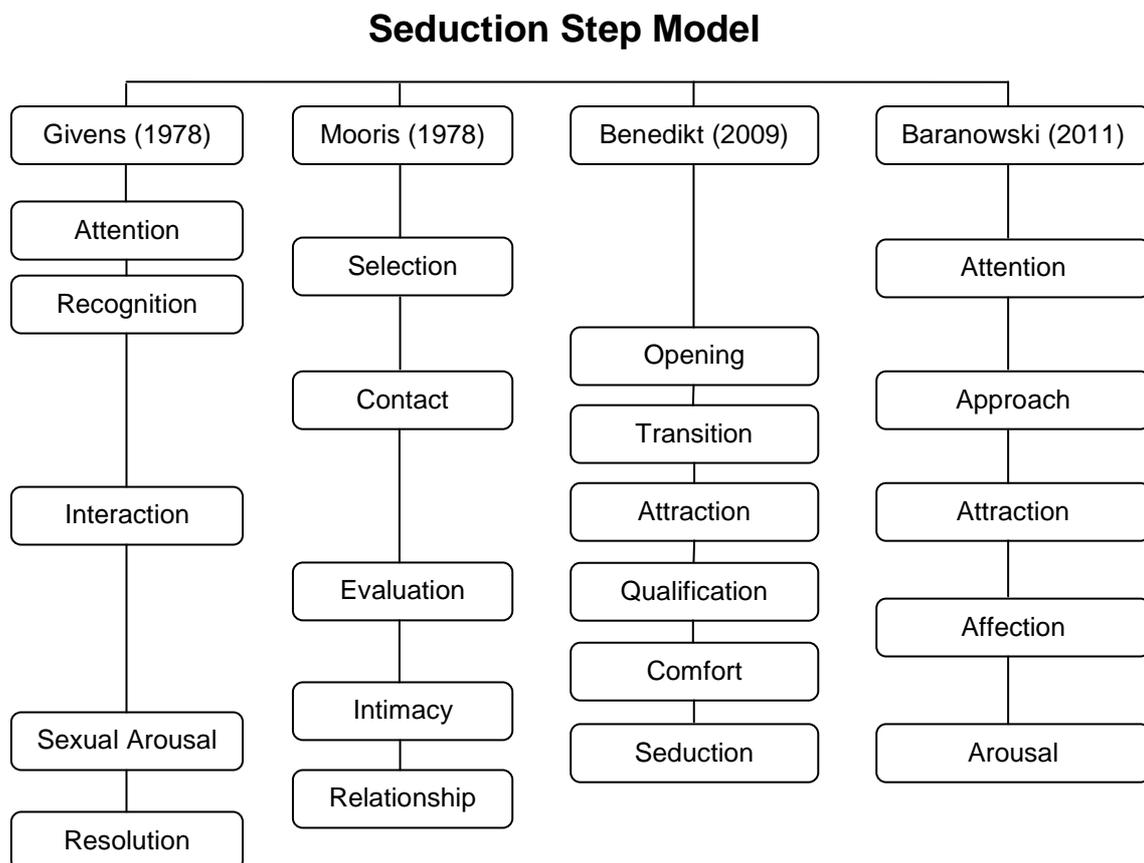


Fig. 1. The seduction process seems to fall into different steps similar to the mating process (Givens, 1978). The steps are ordered so that the different models fit chronologically. They are mainly descriptive phases that not every couple has to go through in that order. They are however well apt to describe the seduction process.

After having learned what flirting is and how it can be set apart from seduction, we learned about three different models. Those models built the foundation for a new model; the 5-A model. This model was developed to separate accurately seduction from courtship behaviour. The following subchapters are dedicated to explaining the seduction process in depth on the basis of current research.

2.2.1 Attention

The seduction process usually starts with one person becoming aware of another person in whom he or she is interested. If two people are already aware of each other, for example because they work together, the actual seduction starts with the building of attraction. However, we assume we are dealing with two strangers who have no obvious reason to talk to each other.

In a series of field studies conducted by Perper (1985) in single bars he found that women were responsible for the initiation of courtship most of the time. In evolutionary terms this seems reasonable, as women are the sex with the potentially greater parental investment and therefore get to choose. Led by this theory, Moore (1985) observed nonverbal facial expressions and gestures in women in bars and coffee shops to explore nonverbal female solicitation behaviour.

The courtship dance typically begins with a glance of the female over the potential mates without resting anywhere. The following brief glance can be understood as solicitation behaviour already. Thereby the woman looks at the potential partner for a very short time and then looks away rapidly. This happens in about three seconds. In contrast, Moore describes the longer look that lasts somewhat longer than three seconds and already makes eye contact. Also, the directions in which the eyes wander after looking at the potential partner are interesting. If the eyes wander horizontal after eye contact was established, the look is rather be interpreted as accidental. However, if the woman looks down after the partner recognizes her it is more likely interpreted as a sign of submission and encourages the counterpart to interact.

Kendon (1975) points out that submissiveness is a key message in the early courtship interaction. It communicates that the potential partner does not have to expect hostile nor dominant behaviour and is safe to approach. It grants the receiver an implicit permission to do so. This is important because approaching an aggressive person in general might bring oneself in danger. More important however is the danger of being rejected which we will discuss in more depth in the approach section.

Another, frequently observed submissive pattern is the *head-toss*, often combined with a hair-flip. A head-toss starts with a rapid upward movement of the head to the back, so that the face points upwards and the neck is exposed. The movement takes no longer than five seconds. The *hair-flip* consists of the woman

lifting one hand and brushing her fingers through her hair. This could have the function to present the shiny hair, which is a sign of youth and therefore beauty. The hair-flip also works as auto-manipulator, which are often seen in the courtship process and can have the function, besides improving ones appearance, to calm oneself by convey directed energies inward and therewith away from the stressing subject.

Smiling is yet another powerful tool for women in the art of seduction. According to Grammer (1992) it has many functions. It transports the message “I’m happy” or “I’m happy to see you”. It also can be distinguished over a large distance (up to forty-five meters) and is universally understood. Smiling also is contagious and induces a feeling of happiness in the people who are smiled at. Finally, smiling is associated with submission and facilitates an approach by men.

Walsh and Hewitt (1985) showed just how powerful smiling in a courtship situation is and further demonstrated that men need a lot of invitation in a normal courtship situation before they dare to approach a woman. In their study, female students made eye contact with men at a bar. Once contact was made, the women smiled or looked down. Afterwards it was measured if the men with whom contact was made approached the confederate. The highest approach behaviour, 60%, was shown by men when the female repeatedly looked at the subject and smiled. Repeated gazing without a smile just motivated 20% of men to approach the woman. And just one look and no further invitation got only 5% of the men to get up and talk to her. In the control situation where the female student did not send out any signals at all, just sitting by herself, no one in the bar approached her.

Guéguen (2008) confirmed in a similar field experiment in the west of France that a smile might be just what it takes to get men to approach a strange woman. He instructed a female student to enter a bar and either look or smile at a man who was alone and seated for two seconds. Then she looked away, took up a seat near the participant and started reading a magazine. After smiling, she was approached by 22% of the men she made contact with. If just looking for two seconds without smiling, the confederate was approached by 4% of the participants. That shows how seductive a smile of a woman can be.

However, the same French researcher showed that something else than a woman’s smile might be just as seductive – female breasts (Guéguen, 2007a). It had been scientifically proven before that most men are attracted to women with large

breasts (Wiseman, 2009). Yet, this work suffers from a significant drawback. Most of the experiments were conducted in laboratories by showing men pictures of women with various-sized breasts, asking them to select the ones they find most attractive.

Guéguen (2007a) decided to conduct two experiments in a more realistic setting. To control the size of the breasts of the female confederate, he chose a student with an A-cup bust size. To enlarge the breast throughout the experiment, Guéguen used latex inserts, varying the woman's bust size between a B and C cup. In the first experiment the woman was sitting in a nightclub for an hour and looked longingly at the dance floor. The number of men who asked her to dance was counted by a second researcher. Without breast alteration the woman was approached 13 times in one hour. By enlarging her breast to an artificial B cup, this rose to 19 and with a fake C cup she was asked to dance 44 times. In the second experiment the same woman was sitting for one hour outside a bar. Again it was counted how often she was approached with what cup size. And again the same pattern emerged as in the nightclub before. The woman was approached 5 times with her real breasts. After faking a B cup 9 men took interest in her and with a C cup the number rose to 16. The woman was instructed to behave the same in the different scenarios. However, a change in body language, e.g., because she seemed more insecure with the faked breasts and hence "easier to get" was not considered.

Women are the initiator of natural courtship behaviour by giving nonverbal an implicit admission to be approached. This raises the question, what can men do to be chosen by a female? To investigate this question, Renninger, Wade, and Grammer (2004) observed men in a bar that successfully made contact with females and men who failed to do so. They found that the successful men showed significantly more body language which demonstrated high social status such as moving around in the bar, gesturing more and with bigger movements, and making more nonreciprocated touches to surrounding males.

This comes with no surprise. Common sense tells us that if the predictions of evolutionary psychologists are true, showing these traits through body language makes a potential partner more attractive. We must be careful, however. In self-help literature social status is often mixed up with dominance. In the internet and through books it is promoted that "nice guys finish last" because they do not try to dominate the woman. This is certainly wrong, women do not want to be dominated. They rather

want a partner how has a high social status because a dominant partner also might be aggressive towards them (Ellis, 1992).

Another commonly given advice in self-help literature is to show up together with attractive members of the opposite sex. It is argued that when a potential mate sees you interacting with them his or her assessment of one's attraction is altered. The potential mate will assume that your partner value is similar to those you are talking to and find you more attractive. This advice is given to men and women likewise. In animals this behaviour is called *mate copying* and in some species it is part of the mate selection process (Place, Todd, Penke, & Asendorpf, 2010).

To find out if humans belong to these species, Parker and Burkley (2009) asked 184 undergraduate students to take part in an experiment. The students had to fill in a questionnaire asking personal questions and were told it was matched with a fellow student who answered similarly. They then got a picture of a person belonging to the opposite sex with a description and the relationship status. All men and all women got the same output with the same picture however. The only variable was that the match was either in a relationship or single. It turned out that women were more interested and found the potential date more attractive when he was in a relationship. Men on the contrary were more interested in single women.

In yet another study, Jones, DeBruine, Little, Burriss, and Feinberg (2007) focused on the direct social transmission of mate preferences. To do so they showed students pictures of women looking at men and vice versa, either smiling or looking serious. Again women rated the men that were smiled at as more attractive as their not smiled at counterparts. Male participant in contrast rated the females that were observed by smiling men as less attractive as the females that were observed by neutral looking men. This tells us two things. Human females use to a certain extend social references when they assess the attractiveness of a potential partner. And human males rather avoid confrontation with other males and prefer woman that are still free. Though we know since the infamous Asch conformity experiments that our environment has a very strong influence on our decision. It might be the designs of the studies (laboratory setting) were not right to find these effects in males. The mate copying effect in women could be shown repeatedly however.

The initiation of the flirting as it seems to be natural comes with some problems for a seduction. First the transmission of the invitation from women can be interfered with quite easily. Because men are not as good in reading body language as women

it might be that even under good conditions the invitation is not noticed. Add bad lighting, a dynamic location and a short time frame and the odds are against the sender that the message will ever arrive. This system is even worse for men. They have to wait for a nonverbal invitation. Most men are able to detect those signals from females with a bit of training but they have to wait for them and cannot decide for themselves with whom they are going to flirt. As seduction implies that a target is chosen and then seduced, we have to find a better way to do so.

2.2.2 Approach

Imagine that you are walking down the street and an attractive person of the opposite sex is coming towards you. You have not met that person before but could well imagine going for a coffee with him or her. Now if I stand right next to you and tell you to approach that person, how would you feel?

Most people, when confronted with the task to approach a complete stranger with a romantic intention and without any signs of interest from that person, show some form of psychological and physiological reaction ranging from light excitement to sheer horror. This reaction stems from the anticipation of all the things that might go wrong. Subconsciously our brain might go through all the past rejections. Our self-perception realizes the threat it is confronted with by being rejected. And our evolutionary fear of strangers kicks in. Altogether, most people find that feeling not very pleasant.

The fear of being rejected has a lot of parallels to shyness. Chronically shy people have a generalized fear of social situations. Often they feel they do not have the right to speak to other people because they are not as worthy as them. This deep lack of self-esteem might take years of psychotherapy to treat. In the general population, shyness occurs mostly in new situations or with unfamiliar people. However, the shyness has similar roots; the feeling of not having the right to speak to another person. Yet it does not necessarily come from low self-esteem but from the insecurity of how to act in an unknown situation. 50% of the general population describe themselves as shy (Lorant, Henderson, & Zimbardo, 2000).

So, how can one tackle the fear of rejection? The pick-up community suggest the *three-seconds-rule* (Strauss, 2005). Once you have spotted a person you are interested in, do not wait longer than three seconds to approach him or her. They

argue that by waiting any longer than three seconds you become consciously aware of all your fears and you start to transport those outward through your body language and the tone of your voice. Scientifically that rule has not been tested yet. But we find strong parallels to the method of *exposure and response prevention* in cognitive behavioural therapy. The therapeutic principal behind this method is that a person loses his or her fear of an innocuous stimulus by being exposed to it without the chance to escape from it. The process is called *habituation* and used widely in behavioural therapy. It typically causes some short-term anxiety but a long-term reduction of the symptoms (Huppert & Roth, 2003)

So if you repeatedly walk up to attractive persons of the opposite sex and talk to them you will eventually lose the fear to approach because you have habituated through the knowledge that nothing bad can happen. There is a catch, however. Radical habituation is only used in a safe therapeutic setting where there is the security that nothing bad can happen. In a social environment there is no such security. A person can be rejected badly by a person of the opposite sex. Without support that person will most likely become more and more averse toward approaching strangers he or she would like to meet. If the three-second-rule is applied, the user should have some form of support, be it through internet forums, through his or her social circle, or through therapeutic guidance. Otherwise it would be advisable to go with *systematic desensitization*, going step-by-step. First one could ask a stranger for the way. The tasks then gets harder and harder until finally the person one is interested in is approached.

After having tackled the problem of approach anxiety through training (most fears can be decreased by training; one should ask him or herself, however, where the fear stems from in the first place), we want to find out, what is a good line to use in order to start a conversation with a stranger. In an attempt to do so, Kleinke and his colleagues asked male and female students how they approach members of the opposite sex in daily life (1986). With a principal component analysis of the 100 most frequently listed opening lines the scientists extracted three categories: direct, innocuous, and cute-flippant. The direct opener consists of a self-disclosure. An example would be "I feel a little embarrassed about this, but I would like to meet you." The second tactic is indirect. It is designed to start a conversation by saying or asking something banal. An example is the simple "Hi" or "What do you think of the band?" The last approach is somewhat funny (at least if you are not directly involved). Often

mentioned were “You remind me of someone I used to date” and “Bet I can out-drink you.” Kleinke and his colleagues then asked the students to rate what opening lines they would prefer to hear if they were approached. It turned out that both sexes liked the direct and innocuous version about the same and more than the cute-flippant one. Women even had the tendency to dislike the funny lines.

In a follow-up study, Cunningham (1989) tested if the ratings could stand up to field examination. He trained two women and two men to deliver the most quoted lines of the previous study in single-bars. He found that the results of Kleinke and his colleagues are correct for the most part in real life, too. Cute-flippant lines provoked the most negative responses in women. The direct and innocuous approach was taken positively by about 70% of the females. Men were less discriminatory. All opening lines delivered by women were appreciated. Both, the simple “Hi” and the cheekier “You remind me of someone I used to date” provoked positive responses by 100% of the male. Even the less successful innocuous variant proved working with 80% of the male bar patrons.

These findings allow two curious conclusions. Men react more positive when approached by an unknown female than vice versa. The worst results of the women delivering opening lines to males were still better than the best results of the male delivering opening lines to females. These findings support an evolutionary view on courtship behaviour. Females are, as predicted, choosier when it comes to mating as indiscriminatory mating does not bring any advantage to them. Men in contrast will take up most opportunities for mating to pass on their genetic material. Secondly, women appreciate a more indirect approach. That is because a female then does not have to decide just by looks if the male is a potential mate. She has time to test him and see if he has the traits she is interested in. For men having the time to acquire information is not that important. They can assess the evolutionary relevant information already by looks. So they prefer the direct to the indirect approach because they then know what the woman is up to and do not have to invest time in a female that might be not even interested in them.

In my own research conducted in the course of my studies, I wanted to find out, which of the opening lines work best in a non-romantic setting (Baranowski & Schüssler, 2010). To do so I sent out five averagely attractive male students to the streets of Klagenfurt, Austria and Stuttgart, Germany to deliver one of three lines – direct, innocuous or cute-flippant – and then ask for the phone number. Out of forty-

nine approached women, only three were willing to provide their phone number. This might be due to the social convention that you do not just go up to somebody and ask someone for their number. It also might be different in cultures where life generally takes place more on the streets e.g., in the Mediterranean countries. Some women also described afterwards that the whole situation seemed somewhat artificial, which could be due to the standardized opening lines. After the approach was over a scientist entered the scene and asked the women to fill out a questionnaire. It turned out that the innocuous approach was rated best. Males who delivered these lines were described as significantly more attractive, likeable and intelligent as when they delivered an alternative one. Also, the three women who gave out their number were all approached with the innocuous line.

To find out how to improve the chances of success in courtship, Guéguen decided to set up another experiment. He wanted to explore whether a slight touch on the forearm might help in the game of seduction. Cunningham (1989) had touching as a control variable in his experiment, but could not find any significant differences in the responsiveness of a person being touched while approached verbally and a person that just was approached without physical contact. However, we know that a subtle touch can have large effects. In different experiments it significantly increased the likelihood of people signing petitions, leaving a tip for waiting staff, participating in a taste supermarket test, and drinking more in a bar (Wiseman, 2009). Hence, Guéguen (2007b) sent out a male student to approach women in a nightclub and ask them to dance. Half of the time the student accompanied his request with a slight touch on the forearm of the women, the other half without touch. Of the 240 women approached, 43% accepted the offer to dance without being touched, compared to 65% after just a brief touch.

In a second study, Guéguen asked three male students to go out on the streets and approach women in an attempt to obtain their phone numbers. Like in my own study, he found it hard to obtain phone numbers in the street so he chose students that were particularly good looking. The men approached 240 women, told them they were really pretty, proposed to go for a drink later and asked for their phone number. The result was as impressive as in the study before. 10% of the women offered their phone number after no physical contact but almost double as much when touched.

In 2010, Guéguen conducted another study to further uncover the secrets of seduction. After he had found that men had better results in flirting when they briefly touched their female counterpart, he constructed a study that should prove the same for women. A young female student went in a bar and asked a man who was seated alone for help with her keys. Half of the time she added a slight touch to the forearm, the other half she kept her hands to herself. After the male subject helped she went away, took a seat somewhere else in the bar and started to read. Of 57 men, about 15% approached without being touched compared to 34% after even the slightest touch.

We see that nonverbal communication is very important. But what does a touch communicate? It seems a touch holds important information for the receiver (besides that it usually feels good to be touched). If a male touches another person, male or female, it is perceived as a sign of high status (Major & Heslin, 1982). If you show somebody a picture with two people, one touching the other, the touching person is usually seen as far more dominant. This is especially true for the touch on the forearm or upper arm. Consciously the touch is not noticed, but subconsciously it makes the women think more highly of a potential partner. For men being touched holds quite a different meaning. It is understood as a sign of sexual interest (Levesque, Nave, & Lowe, 2006). However, usually they are also not aware of the touch and why they feel attracted to that woman.

The studies above allow us a careful conclusion of what personal traits are important for the willingness to engage in a conversation. Wanted personal traits in men are likeability and intelligence. How sexy and dominant a male represents himself does not affect the willingness of a female to talk to him. The studies also show that men most likely engage in a conversation with a woman when she presents herself as likable and sexy.

There is always a risk of being rejected when approaching somebody. The risk does not just exist when asking somebody out for a date it also exists when you ask a stranger on the street to sign a petition. So, how can one minimize that risk? In a classical experiment by Freedman and Fraser (1966) they introduced the *foot-in-the-door technique*. The basic idea is that people are more likely to agree on a large request after they have satisfied a small one. To test their theory they asked house owners to put up an ugly big sign in their garden stating "Drive Carefully". Half of the house owners were asked a week before to do them a small favour like putting up a

nice little sign with the same message or signing a petition against speeding. If just asked to put up the big sign, 17% agreed to do so. In the control group where people had helped the researcher before, a stunning 76% agreed to put up an ugly and oversized sign.

It is more likely that we get what we want when we start small. So if we want to get a phone number from somebody on the street we should start with asking for something else. You could for example ask for the way or for some help (guys love when they are asked for help). However, it should be something that allows you to keep talking. In pick-up circles it is rightly pointed out that a question on an opinion is a good conversation starter. An example could be “My friend Eddie in the green shirt over there just broke up with his girlfriend. How long do you think he has to wait before dating her friend?” (Benedict, 2009, p. 45). After some conversation, the question for the phone number does not seem that absurd any more. It also works the other way around. We first could ask for something very unlikely such as “I think I just fell in love with you, will you marry me”. If the request is rejected, we agree to settle for a cup of coffee. Be advised to deliver it with a wink.

The more direct an approach is, the more risky it is. This is especially true for men. There is no systematic research on different approaches for women except in single bars. Here it does not seem to matter what the female is saying, men generally accept offers to talk. The reason for the high risk a very direct approach carries e.g., “I saw you from over there and I find you to be an interesting person”, comes from its ultimateness. It shows our interest directly and does not leave a lot of air for speculations. Yet, we have learned that flirting is defined by its ambiguity. An ultimate move is a bad move in the game of seduction and should be avoided as long as possible.

The risk we take by going up to a person we are interested in and telling him or her how we feel also depends strongly on our and his or her partner value. People have a quite realistic idea of their own partner value and the partner value of others (Grammer, 1992). The higher the partner value of our potential beau is compared to our own, the more important it is not to show them that you feel attracted to them right away. To protect their partner value, they will reject you most likely right away. The skilled seducer makes the potential partner attracted to him or her first and then gives in to their longing for more.

In pick-up forums and self-help literature it is rightfully stressed that a transition is needed after approaching somebody by asking for an opinion or advice. Take e.g. "Where is the next supermarket?" You cannot ask "Would you like to go for a coffee?" as the next question without a transition. Usually the transition is a topic that goes away from the initial approach. For example, after asking for the next supermarket one could ask whether the other person is from here.

It is important that in the first minutes of the conversation no silence occurs. Grammer (1992) found in an experiment where he put two strangers of the opposite sex in a room and left them there under false pretences that by observing the amount of time they spoke to each other, he could well predict how much they liked each other. In his experiment, people who talked about half of the time rated each other as significantly less attractive than people who spoke between 82 and 95% of the time. Of course, that just proves that people who like each other talk to each other. But it also works the way around. By talking a lot we pretend we like each other. In social psychology this is called *labelling*. We convince people to act a certain way by talking to them as if they were already that way. If we pretend a person likes us, it is very likely that person will like us after a while.

Miller, Brickman, and Bolen (1975) demonstrated that impressively in a classical social psychology experiment. They tried two techniques to convince fifth graders in a Chicago school to pick up their trash during breaks. In one condition they lectured them about environment awareness and the consequences of their behaviour. In another condition adults labelled the kids as really clean. Teachers told them, "Wow, you kids are so clean. Gosh, I am impressed" while the principle complimented them on their clean class room. Finally, in a third control condition they did not do anything to the fifth grader. Probably not surprising for most teachers, asking the pupils to clean up did not have any effect on the fifth graders. Just 25% picked up their papers after being lectured about it, as many as in the control condition. Yet, in the labelled condition a stunning 85% of the kids picked up their trash during break. Labelling is similar to the *self-fulfilling prophecy effect*. The difference is that we consciously construct an artificial expectation of a person. To avoid cognitive dissonance (which we will discuss in more depth in the attraction phase) the person changes his or her behaviour to fit our view of them.

2.2.3 Attraction

In an often cited experiment Worchel, Lee, and Adewole (1975; cited from Wiseman, 2009) found a curious thing. They gave students a jar of chocolate chip cookies and asked them to rate how much they liked the cookies. In one condition, the jar contained ten biscuits, in the other only two. It would seem reasonable to think that the number of biscuits a jar contains would not affect the ratings. However, the unintuitive result was that when only two biscuits were left in the jar, participants rated the biscuits to taste significantly better. Scholars could show this effect again and again and called it the *scarcity effect*. The name of the effect refers to the fact that our desire for an object depends, in part, on how easily we can obtain it. The same effect explains why collectors spend large amount of money on limited editions, why people are attracted by banned films and books, and why retailers are quick to point out limited stocks.

But what about dating? Is it better to pursue a potential partner or play hard to get? To explore this question we turn to a classical experiment conducted by Stapert and Clore (1969). The two researchers set up a series of dates with 110 college students. Unknown to the students, their partners were confederates who had strict orders to behave in a certain way. They either had to agree with their date through the whole conversation, had to disagree at first and then agree after about half of the time, had to disagree and then agree after about two thirds of the time or had to agree with their partners only at the very end of the date. It turned out that the partners were found to be way more attractive when they first disagreed and then agreed. To the surprise of the researchers the participants found the partner to be more and more attractive the later he or she switched from disagreement to agreeing. One theory to explain these curious results is that after finding yourself in a situation of constant disagreement, the sudden change to agreement makes you feel you had an impact on your date. This is found to be attractive. Another theory argues that the disagreement produces a high level of stress which is relieved by the change to agreement. The positive emotion that occurs might be, at least in part, mistaken for attraction.

These findings are surprising because we know that commonalities are one of the strongest foundations of attraction. However it seems we find pleasure in uncertainty. In an experiment conducted by Whitchurch, Wilson, and Gilbert (2010) they asked

47 female college students to rate the attractiveness of four male Facebook users. The information they received was that the men previously had seen their profiles and had rated them. The researchers told the participants that the men either were very interested in them, found them averagely interesting, or the women were not given information on how much the men were interested in them. Like previous studies they found that women are more attracted to men that were strongly interested in them compared to men who only showed an average interest in them. Yet, the same men were rated significantly more attractive when the participants did not have the information on how much the males were interested in them.

We tend to like people who share our attitudes, social and cultural background, religion, interests and even our name. Social psychologists argue that people who share our beliefs and agree with our opinion provide social validation and thereby boosting our self-esteem. It is stunning how little similarity is needed to build attraction. For example, Garner (2005) mailed surveys, altering the cover sheet so that half the time the cover would fit the first name of the participant and half the time it would not. In the experimental condition a participant named John Smith might receive an email from John Peterson while in the control condition a Marcus White might get an email from Samantha Green. This simple manipulation led to a rise of the response rate from 30% in the control group to 56% in the group with matched names.

In another study by Jones, Pelham, Carvallo, and Mirenberg (2004) male and female participants evaluated the attractiveness of a young woman based on her photograph. The woman was shown wearing a pullover which featured either the number 16 or 24. Before rating the woman, the participant completed a computerized decision-making task about simple strings of letters. After each decision a row of Xs appeared in the centre of the screen to focus the participant's attention. Afterwards either the number 16 or 24 followed for a very short time (14ms) followed by either the participant's individual name or one of several gender-matched control names (again only displayed for 14ms). Participants rated the woman more favourably when the number on the pullover had been subliminally paired with the participant's own name.

In an additional study, Pelham, Carvallo, and Jones (2005) found that we tend towards similarities with others more when our self-concept is threatened. It makes sense that we look for affirmation when we are insecure. In their experiment, Pelham

and his colleagues asked the participants to write about their flaws as a potential dating partner. After this mild self-concept threat, they were especially attracted to people whose screen name contained the initial letters of their surname. An Eric Pelham for example would then prefer STACEY_PEL to STACEY_SMI.

Without being aware of its scientific foundation, the idea of producing a self-concept threat and then using the longing for affirmation made inroads into the seduction community. It is called a *neg* and is used to make one an object the target wants validation from as well as to temporarily disqualify oneself as potential partner (Strauss, 2005). A neg could be for example “You blink a lot” (said neutrally) or “You’re fun; too bad you’re not my type” (Benedict, 2009). However, negs are only used when the partner value of the potential partner is higher than the one of the seducer.

Playful teasing also has another purpose that has not been discussed yet. It produces *cognitive dissonance*. This describes the idea that under certain circumstances the cognition of a person adapts to his or her behaviour. Usually, it is the other way around; a person’s behaviour follows his or her cognition. The concept of cognitive dissonance was developed by Festinger in 1956 (cited from Tavris & Aronson, 2007). Festinger and his colleague infiltrated a cult that proclaimed that the end of the world was near. They wanted to observe what happens when humanity was not wiped out and no alien space ship landed as predicted by the cult’s leader, Marian Keech. Contrary to their expectations, the cult members started to become stronger believers as the predicted event failed to appear. They claimed their strong belief rescued the world and started to recruit new members. Festinger attributed this to the dissonance between expectations and experiences. The cult members expected the world to end which did not fit with their experiences. To solve that conflict, they had two options: to either change their opinion or the opinion of everybody else. After the cult members gave up their jobs and families, to be mistaken was not an option. So they started to be even more convinced of their faith and tried to get others to believe what they believed.

So what has a cult to do with flirting? Quite a lot, because teasing a partner who thinks that he or she has a higher partner value also produces cognitive dissonance in him or her. The potential partner has the cognition that he or she has a higher partner value and suddenly experiences that somebody treats him or her as if it was different. When the potential partner feels insulted, most likely the cognition will win

and he or she will solve the dissonance by explaining, that the other person just envies them. If it is delivered playfully however, chances are good that the person becomes convinced by the experience, thinking if a person talks to me like that, he or she must have a higher partner value than first anticipated.

Another form of cognitive dissonance is produced when we play hard to get. It is called *induced compliance paradigm* and states that people like a situation more when they had to work to get there. We find this effect in gangs, clubs, military units, fraternities and sororities. Members often have to go through cruel ceremonies before they can join these groups. Aronson and Mills (1959) found for fraternities that the harder the hazing was, the more loyal and committed were their members. Our mind tricks us into thinking that the harder we worked for something the more valuable it is. Imagine you had two exams, for one you studied one day, for the other one week. If you get an A in both, about which A would you be happier? The same is true for dating. After we have put a lot of effort into winning somebody over, we will think of that person higher than of somebody that we did not have to persuade.

To get somebody to like us we might also try to ask for a little favour. This persuasion technique is said to be first described by eighteenth century American polymath and politician Benjamin Franklin. He had difficulties convincing a member of the Pennsylvania state legislature to cooperate with him. But instead of trying to win him over with nice gestures, Franklin asked him for a favour. Franklin knew he had a rare book in his library so he asked the man to borrow it for a couple of days. The man agreed and changed completely afterwards according to Franklin. The man became a supporter of him and was ready to serve Franklin whenever he could. Franklin wrote down later: "He that has once done you a kindness will be more ready to do you another, than he whom you yourself have obliged." (Franklin, 1868; cited from Wiseman, 2009, p. 53).

In 1969, Jecker and Landy set out to test if the two hundred year old technique still works. In an experiment, they first arranged for participants to win some money. Soon after the experiment was over, one of the researchers asked several of the participants for a favour. He explained that he has used his own money for the experiment, was running short on cash, and was wondering if they could return the money. A second group of participants was approached by another researcher, the department secretary, who made the same request, but this time explaining that it was the money of the psychology department and that the department was a bit low

on cash. Afterwards the students rated how much they liked each researcher. As predicted by Franklin, the group who helped the researcher on a personal basis liked him far more than the group who helped on behalf of the department. After all, the second group of participants did the department a favour, not the researcher.

The theoretical basis to explain the so-called *Franklin effect* is cognitive dissonance. Usually, people's behaviour follows from their feelings and thoughts. We smile because we feel happy, or we look longingly into somebody's eyes because we find them attractive. However, the reverse works as well. Make people smile and they feel happier, make them look into somebody's eyes for a while and they will find that person more attractive (Wiseman, 2009).

This should also work with physical factors. When people feel attracted to somebody, their hearts beats faster. Dutton and Aron (1974) wondered if that reaction could be reversed so that people find somebody more attractive when their heart beats faster. To find out they made an experiment on two very different bridges. The one was swaying in the wind about 70 meters over the Capilano River in British Columbia. The other was way more solid and closer to the ground. On both bridges, male passers-by were approached by an attractive woman who asked them to participate in a survey. After they finished, the female researcher offered them her number in case they wanted to find out more about the experiment. Men on the seemingly dangerous bridge had a higher heart rate due to the height of the bridge. When approached by an attractive woman they unconsciously attributed their arousal to her rather than to the bridge and were far more likely to call her looking for a date.

In 2003, Meston and Frohlich wanted to find out if the effect also occurs with couples and people who knew each other. They visited two large theme parks in Texas waiting for subjects to enter or leave a roller coaster. They then asked them to rate how attractive they found a person of the opposite sex on a photograph and the person they were with. The researchers assumed that the people who finished the ride would have higher heart rates than those preparing for it, which they unconsciously attributed to the person they were with and thus give higher attractiveness ratings. However, only some of the predictions were supported. Those rating the pictures after the roller coaster ride found the people on the photographs more attractive than those waiting in line. Yet, the rating for their seat partners did not differ significantly. In fact, people found the person they were with slightly less attractive than before the ride. No differences between couples and other participants

were found. Both rated the person on the photograph more attractive after the ride but not their partner. The authors speculated that rating their partner as less attractive after the ride might be due to “sweating, messy hair, and post-anxiety expressions” (p. 543). Other work, exploring whether a comparable effect appears when couples watch exiting films together has provided more evidence to support the theory. Cohen, Waugh and Place (1989) secretly observed couples leaving different films. They found that those who just watched a suspense thriller were way more likely to hold hands and touch each other.

However, for men to impress women it is important not to be frightened when watching a scary movie. Scientists found that women rated kindness high when asked what they found most desirable in friends, short- and long-term partners. Yet, it was topped by bravery each and every time (Kelly & Dunbar, 2001). So, when it comes to love it seems women value heroism and willingness to take a risk over altruism and kindness. Wiseman concludes the findings about bravery, stating that “instead of men making a special effort to woo women by describing their tireless work for charity, they should perhaps consider mentioning their love of skydiving, the importance of standing up for what you think is right, and following your heart no matter where it leads.” (2009, p. 167).

To find out, whether these preferences are actually reflected in the attractiveness of different kinds of sports, he and Murphy conducted an online survey (Wiseman, 2009). They asked 6,000 men and women to rate which sporting activities would make a member of the opposite sex more attractive. It turned out that the sexiest sport for men by a female perspective was rock climbing, voted by 57% of the women as attractive. It was followed closely by extreme sports (56%), football (52%), hiking (51%). On the bottom of the list came golf (13%) and aerobics (9%), making them the least attractive sports. Men were most attracted by women who practiced aerobics (70%), followed by yoga (67%) and going to the gym (64%). Least attractive was golf (18%), rugby (6%) and bodybuilding (5%). These findings reflect the preferences that were previously discussed. Women look for men that are brave and are willing to take a risk. Men find women appealing who practice sports that are associated with sexy, thin women in pop culture.

2.2.4 Affection

The affection phase is the time to reduce uncertainty. Before, everything was done to keep a high level of ambiguity so the partner stays interested and the flirting can proceed. At this point it is time to open up and build a bond. The only time this phase can be skipped is when a woman looks for short-term mating. In that case, she could go from the approach right to the arousal phase. If a male intends to engage in short-term mating, he has to adapt to the pace of the slower sex and hence build affection before becoming more intimate. In search for a long-term mating partner, it is advisable to go through the phase of affection to make sure the potential partner has the same social script like the seducer. Otherwise the seduced might think the other person is just interested in casual sex and adapt with negative consequences to the behaviour of the seducer.

To find out if the feeling of love can be manufactured in a short period of time, Kellerman, Lewis, and Laird (1989) conducted an unusual but groundbreaking experiment into the psychology of love. They asked volunteers to participate in a study about extra-sensory perception. Male and female participants who did not know each other were arranged to arrive in the laboratory at the same time. A researcher explained that it was important to build rapport before starting with the actual experiment and instructed the participants to look into each other's eyes for a while. Then the participants were taken in separate rooms and one of them was presented with a series of simple pictures while the other had to "psychically" guess the nature of the images.

The researchers did not find any evidence for psychic powers. They were not disappointed, however. The experiment was not about extra-sensory perception in the first place. Kellerman and his colleagues wanted to know if the "as if" principle could also be applied to love. Psychologists found that when we behave as if we feel something, we tend to feel it. For example, ask people to smile and they start to feel happy. This even works when they are not really smiling but are forced to lift their corners of the mouth by having them hold a pencil with their teeth that must not make contact with their lips (Eckman, 2003). From everyday life it is obvious that couples in love spend a significant amount of time looking into each other's eyes. So is it possible to create a feeling of love by having people spend a few moments gazing into each other's eyes?

After the telepathy study, participants were asked to fill out a questionnaire rating their amorous feelings towards their experimental partner. It turned out that couples who spent a certain time looking into each other's eyes reported significantly stronger feelings of affection and attraction for their partners than the control group. This proves once again that not just thoughts and feelings affect how we act but also the opposite is true. Our behaviour influences our thoughts and feelings.

Aron, Melinat, Aron, Vallone, and Bator (1997) also used this approach. They noted that couples start to build affection partly by disclosing personal information. But could the reverse work, too; could talking about personal and emotional topics with another person make you feel especially close to that person? In their experiment, the researchers paired people who did not know each other and instructed them to talk about increasingly private topics. The couples were given 45 minutes to go through a list of questions the researchers had prepared. The list started with a simple cocktail party conversation opener such as "If you could meet anyone in history, who would it be?", quickly moved to more personal questions such as "Have you a hunch about how, and when, you are going to die?" before it arrived at a very private level with questions such as "When did you last cry in front of someone?". The control group also received a list with questions because any interaction can lead to positive feelings towards the other person. The list contained small-talk questions such as "What are the advantages and disadvantages of artificial Christmas trees?" and "Do you prefer digital clocks or the one with hands?"

At the end of the experiment the pairs were asked to rate how attractive they found each other. The couples who had talked about Christmas trees and clocks found that they had not developed a very close relationship. In contrast, the authors described that those who played the Sharing Game developed an intimate relationship that usually takes month to develop. The researchers also noted that several couples exchanged phone numbers after the experiment had finished.

In the seduction community there is a consensus that you do not talk poorly about your friends or the people you previously dated. They argue that by doing so people deliver a bad picture of themselves. It makes sense that people who are confident and attractive surround themselves with people they like. But can science back up this claim? To find out how people perceive malicious gossip, Skowronski Carlston, Mae, and Crawford (1998) made participants watch a video of an actor talking about a friend or acquaintance. The statements were designed to either elicit a positive or a

negative trait. “Cruel” for example was transported with the statement “He hates animals. Today he was walking to the store and he saw this puppy. So he kicked it out of his way.” Even though the participants knew the actor was talking about someone else they consistently attributed the negative and positive traits to the speaker. It seems the listeners unconsciously associated the traits the speaker described with him or her, leading to a “transfer” of those characteristics to the goosiper. That is why the effect is called “spontaneous trait transference”. So, when you tell good things about your friends and colleagues you are seen as a nice person. In contrast, when you constantly complain about their unpleasant side’s people will unconsciously apply the negative traits to you. This leads to the conclusion that the pick-up artists are right with the advice not to talk bad about your friends. In fact, you should not only talk positively about your close friends, you should generally adopt a positive outlook towards others.

However, Bosson, Johnson, Niederhoffer, and Swann (2006) found that sharing negative feelings about something or somebody has a stronger bonding effect than sharing positive feelings. Yet, gossiping about another person only works when the partner also holds the negative attitude, otherwise spontaneous trait transference might occur. In the study the researchers instructed the participants to listen to a conversation on a videotape. Afterwards they were asked to write down one negative and one positive observation about one of the persons on the tape. Then the participants received instructions that they would team up with another participant who either shared their negative or their positive thought. Those who shared a negative attitude with their new team partner felt stronger sympathy for their team partner than those who shared positive feelings. The researchers suggest that “sharing negative attitudes is alluring because it establishes in-group/out-group boundaries, boosts self-esteem, and conveys highly diagnostic information about attitude holders.” (p. 135).

So, when you want to establish a deeper connection with your new partner, look him or her in the eyes, disclose intimate information and build a “we feeling”. But be aware of too much gossiping; it might fall back on you.

2.2.5 Arousal

Contrary to a friendship, courtship and hence seduction must physically escalate. Givens (1978) notes that couples who make it to that phase in courtship start to exchange caring and affectionate gestures similar to those found in a caregiver-child relationship. Licking, sucking, and playful biting, for example, are activities also related to breastfeeding. Kissing might be seen as a form of ritualized mouth-feeding. The function of such carrying behaviour might be to unite the pair physically and emotionally so that they can proceed easily to sexual intercourse.

Positive feelings facilitate sexual arousal while negative ones (such as fear, embarrassment, worry, or anxiety) inhibit it. However, negative emotions can, under certain conditions and due to their potential to increase general levels of arousal, increase sexual arousal (Rowland, 2006). If a couple went through all the “A” phases before, the arousal phase should be a natural next step. This phase is all about reducing the barrier of physical contact. Yet, like in “natural” courtship, touching the partner should not start only now. Physical contact should slowly escalate from slightly touching e.g. the upper arm at the approach to kissing in the arousal phase. If the exchange of physical contact did not start until now, it might be awkward to initiate.

In contrast to common belief women become sexually aroused as fast as men. Kukkonen, Binik, Amsel, and Carrier (2007) asked participants to watch erotic material and found that there was no significant difference in the time men and women needed to reach the peak of their arousal. The erotic material was provided by the Kinsey Institute and determined to be sexually arousing to specific genders. For the base-line, subjects also watched several different films such as *The Best of Mr. Bean* or Canadian tourism travelogues. Both men and women began showing arousal within 30 seconds after starting to watch the explicit material. The male participants reached maximal arousal after eleven minutes, the female participants in twelve minutes – a statistically negligible difference. Arousal was measured with thermal imaging; higher blood flow in the genitals mean a higher temperature and hence a higher level of arousal.

There are many good reasons to have sex. In fact, Meston and Buss (2007) counted a total of 237 subjective reasons to engage in sexual intercourse, with “I was attracted to the person” leading the list, followed by “I wanted to experience the

physical pleasure” and “It feels good” for men and women. The bottom of the list made “I wanted to brag to friends about my conquests” and “The person demanded that I have sex with him/her,” for females. “I wanted to stop my partner’s nagging” and “I wanted to manipulate him/her into doing something for me” was on the bottom for males.

However, there are also good reasons to be cautious when it comes to sex. Especially women are in danger, apart from possible evolutionary disadvantages, of facing real physical harm. Rickert and Wiemann (1998) report in a review article that the danger of facing violence during a date ranges from 13% to 27% among college-age women and 20% up to 68% among adolescents in the United States. They note that the risk of becoming a victim of sexual violence is strongly dependent on demographic factors. Krahe, Scheinberger-Olwig and Waizenhöfer (1999) found similar figures for Germany. One quarter of German women reported that they had been the victim of sexual violence during a date. For an evolutionary analysis of rape see e.g. Thornhill and Thornhill (1983) or more recently Takala (2008).

Sexual arousal depends on many factors such as past experiences, desire, and expectations (Rowland, 2006). If the couple makes it through this phase, arousal culminates into intercourse. Sexual intercourse is not part of this thesis because it is a very broad topic and holds a body of research on its own. A good summary of current research is given by McAnulty and Burnette (2006) and Roach (2008). What follows the intercourse is resolution or emotional attachment, which traditionally marks the end of seduction.

3 Research Question and Hypotheses

3.1 Research Question

The main purpose of this study is to explore if the presented psychological knowledge can be applied to improve one's flirtation skills in a short amount of time. It was also planned to compare these findings with trainings that promise to improve the skills with the opposite sex offered in Germany and Austria. However, this plan had to be withdrawn because no co-operation could be negotiated with any of the companies offering these trainings.

The problem is that the efficiency of *date coaching* has not been scientifically researched. Yet, it seems necessary as people spend millions on "techniques that are proven to work to help you meet tons of women," or "simple techniques to attract and keep the man of your dreams." None of these outrageous claims has been backed up with any hard data. Because no accreditation regulations exists for coaching in Europe and the United States, organisations or individuals who offer date coaching, or in fact any form of coaching, are not required to prove the techniques they use work. Anyone can call themselves a coach and offer such services.

Empirical data support the idea that the skills which are necessary to engage in a heterosexual relationship can be learned. In clinical settings it is part of social skills training and called *heterosocial skills training*. In a promising study, Foster, Krumboltz, and Ford (1997) randomly assigned 60 shy male singles to either a cognitive-behavioural workshop to improve their dating skills or a waiting-list. The workshop consisted of training to reduce anxiety in dating situations, learning social skills that are associated with competent daters, and practicing behaviour to initiate a date. After the training all the men were asked to participate in a single function where female confederates rated their social skills. Workshop participants were rated significantly higher on social competence than members of the control group.

In a meta-analysis conducted by Allen, Bourhis, Emmers-Sommer, and Sahlstein (1998) they discovered a similar trend. The researchers reviewed twenty studies and found that generally dating anxiety could be reduced and date behaviour increased by appropriate training. Unfortunately, dependent and independent variables are not consistence across the reviewed studies. This makes it difficult to generalize and draw useful conclusions. Furthermore just one of the studies had an adequate control

group and the average effect size was unspectacular ($r = 0.339$). Nevertheless, the scientific consensus is that that heterosocial skills training does work (for a detailed review of the current literature see Strachan and Hope, 2002) and many institutions such as the Shyness Clinic in Palo Alto, California, founded by the famous psychologist Zimbardo, use these methods (www.shyness.com).

However, heterosocial skills trainings differ significantly from date coaching. Usually these kinds of coaching take place over a very short time. Most companies offer so called *boot camps* that last for one weekend. Also, the target groups are different. Skills trainings are particularly for patients with some form of dysfunction (usually some form of social phobia like dating anxiety) while date coaching is addressed to healthy individuals. The trainers differ as well. Whereas skills trainings are usually hold by well trained psychologists, coaches do not have to have any kind of formal education.

The initial research question focused on the functionality of advices the self-help literature offers. While this was partly clarified in the literature review, the empirical part focuses on the possibility of training healthy young people in a short amount of time (less than one day) to improve their flirting abilities based on techniques that are predicted to work by the seduction community and evolutionary psychology alike. The idea to solely use the methodology of pick-up artists to train the participants was withdrawn because it seems unethical to train somebody after a concept that is not proven to work. Furthermore, side-effects of training strictly based on the seduction community could occur. While the side effects of established psychological methods are known and can be taken into consideration, this is not true for much of the advice offered by the self-help literature.

Take for example what is stated on pickupguide.com, a U.S. based seduction forum: "What this means is that on an 'instinctual' level women ARE all the same! They get their juices flowing when they are in the presence of a MAN who is living HIS ROLE. MAN is the dominant one, NOT woman. And deep down inside women KNOW this." It does not take a feminist to see the danger that lies in such a statement. Because participants of the training session were highly educated people, mostly psychology students, compliance would not be ensured. If such statements (widely accepted in the seduction community) were made in the training, it might have led to rejection of the whole program and hence no effect would occur.

3.2 Hypotheses

Hypothesis 1: There will be no gender difference in the interest in a flirt seminar.

It is known that women are keener on romantic movies and literature than men (Hentschel, 2005). But we find that men spend thousands of Euros on dating seminars. Yet this is not proof that men are more interested in dating advice. There could be multiple reasons men are attracted to these seminars, e.g. because they find the pragmatic approach appealing; because the seminars promise that you will have tons of women afterwards; because men do not have any other source of advice such as *Cosmopolitan*; and the strong interest certainly correlates with the success of the bestseller *The Game*, which was a huge advertising success for dating consulting.

However, it could be that women would welcome advice for dating if it did not cost that much and was offered in a different format. No research has been done to assess sexual differences concerning the interest level in self-help dating literature. To get an overview over the self-help market, I counted the most sold books on Amazon.com and Amazon.de in the category “dating” and “Flirten & Verführen” (flirt & seduce) accordingly (2011). On Amazon.com, from the one hundred most sold books twenty-one were addressed to men and twenty-nine to women. The rest of the books were addressed to both sexes. A two-tailed binominal test was conducted with $\alpha = 0.05$ to assess if the difference is significant. The same was done of the German Amazon sample, where thirty-one of the one hundred most sold books were addressed to male readers compared to fourteen books written for females. While the English sample did not differ significantly (p -value = 0.32), the German sample did (p -value = 0.01).

The different results in the German and English sample might be due to the delay with which the pick-up wave reached the German speaking countries. A content analysis of the books revealed that most of the books directed at men on the German bestseller list are coming from within the seduction community or from authors who try to make money with that approach. In the U.S. the boom of seduction literature reached its peak after the publication of *The Game* in 2005 and seems to have now normalized with a balanced publication for men and women.

The evidence is ambiguous, making a clear conclusion difficult to draw. On the one hand, women are more interested in books and magazines that talk about

relationship and love. On the other hand, men pay a lot of money for seduction seminars and literature. The hypothesis is thus that when no money must be paid and gender specific promotion is made, both sexes have the same interest in a dating seminar.

Hypothesis 2: The success differs between the sexes: women will be more successful in the courtship scenario, receiving more drink invitations than men receive phone numbers.

Clark and Hatfield (1989) found in their famous studies about gender differences in receptivity to sexual offers that men and women are as likely to go on a date with a person they just met. In the studies from 1978 and 1982 about half of the approached subjects agreed to meet later the day. However, the studies were not replicated by scientists and were conducted on U.S. campuses. Most other studies indicate a strong sexual difference when approached by a person of the opposite sex. Cunningham (1989) found for example, that all men reacted positively in a bar when approached by averagely attractive women while men could not receive a positive response more than 70% of the time even with their best line. In another study, Guéguen described that it just takes a smile of an averagely attractive female to be approached by every fifth man (2008) while the researcher had to send out his best looking male students to approach women in order to have a similar success rate obtaining phone numbers from females (2007b).

Recent research leads to the conclusion that a significant difference exists in how successful both sexes are in approaching the other sex. While men seem to have a hard time even getting a phone number; women simply have to smile and wait till they are approached.

Hypothesis 3: The seminar results in participants describing themselves as more successful with the opposite sex.

There are almost no studies available that research short-term treatment of only one day to improve dating skills. There are, however, several sound studies which generally indicate that particular training decreases dating anxiety and makes the participant feel more successful. Curran (1977) for example conducted a controlled study with male and female participants who were exposed to heterosocial skills training. The treatment consisted of six group sessions of in total seven a half hours

over the course of three weeks. Parts of the training were instructions, modelling, rehearsals, coaching, and homework. In the control, participants received relaxation training that was not specifically geared toward heterosocial anxiety or no treatment at all. Those who were in the active intervention group described themselves as less anxious and more successful in dating situations. This correlated with better heterosocial skills observed in real-life interactions with peers.

These and other findings indicate that people describe themselves as more successful with the opposite sex after having completed appropriate training. They also show the importance of cognitive changes in order to overcome dating anxiety and feeling more secure in heterosocial situations.

Hypothesis 4: The seminar will result in participants describing themselves as more content with their lives.

Engaging in social and sexual relationships is an important goal for most people in life. Arkowitz, Hinton, Perl, and Himadi (1978) argue that failing to do so is a major source of real-life concern and may lead to other problems such as depression and job trouble. It can have a strong and persistent effect on the life of the persons concerned. Arkowitz and his colleagues reported that 50% of the 3,800 surveyed students indicated interest in a dating skills program and 30% of them claimed to be “somewhat” to “very” anxious about dating. This was a student sample in which the variety of potential mates is large. We can safely assume that this figure is larger in the rest of the population, especially for those who have been divorced, widowed, patients in psychiatry, etc.

These findings lead to the conclusion that people who participate in a training session to improve their dating skills will describe themselves as more content afterwards. This assumption, however, is strongly connected with hypothesis 3. People will simply be happier when they feel they have managed to improve their love life. Accordingly, those who did not feel they could learn something from the seminar will not be more content afterwards.

Hypothesis 5: The seminar will result in participants receiving more phone numbers/ invitations for a drink.

That dating skills can be improved and lead to real life behavioural changes was demonstrated by Curran and Gilbert (1975). In a similar study design to that of

Curran in the same year, the two researchers provided 35 college students with heterosocial skills training. The control group was on a waiting list and did not get any treatment. The participants were asked to keep a diary to monitor changes in their daily life. Those who received the treatment reported a significantly lower dating anxiety. This was also confirmed by observer ratings. Most importantly, participants of the skills training reported an increase in dating activity in their daily life.

Other studies report similar effects. This indicates that a specific training has the potential to improve heterosocial skills in real life interactions. Thus, participants of such training should receive better results in the quest for phone numbers or drinks.

4 Methods

4.1 Design

The presented study used a one-group pretest-posttest design to determine the effectiveness of the treatment. The decrease of internal validity, because no control group was used, was considered acceptable for two reasons. First, an earlier study (Baranowski & Schüssler, 2010) showed that no training effect exists when people are asked to approach strangers and ask for their phone number without being coached. On the contrary, participants became more self-aware and depressed when success with the opposite sex did not occur. It also seemed unethical and somewhat difficult to teach participants something that does not work. Difficult, because of about half the participants were psychology students who probably would have detected the deception. I conceived a control placebo group in which participants received alleged pheromone cologne but considered it as too costly for this thesis.

To assess whether a flirtation training session could improve the participants' dating skills, two means of measurement were chosen: a questionnaire and behavioural observation. The unstandardized questionnaire consisted of basically three parts. The sociodemographic questions were about gender, age, size and weight to calculate BMI; relationship status; education; monthly income; sexual orientation; and number of previous sexual partners. The second part consisted of five questions to assess self-perceived mating success and six questions to assess self-perceived contentment with their life on a seven-point Likert scale (Landolt, Lalumière, & Quinsey, 1995). Part three lists 19 adjectives that are associated with partner value and dating success (Kleinke & Dean, 1990). Participants were asked to rate on a seven-point Likert scale how much each adjective applied to themselves. Furthermore, one item assessed how many dates participants had in the last month. A second item asked how many dates participants thought they could have had in the same amount of time. The full questionnaire can be found in the appendix. In the post-test questionnaire the sociodemographic part was left out. The question about education differs slightly in the German and Austrian samples because of different, though comparable, education systems.

To have an objective control of whether participants improved their skills, they were asked to go out for one hour and measure their success with the opposite sex.

To measure success, men were asked to obtain as many phone numbers as possible while women needed to receive as many drink invitations as possible. Women needed to receive drink invitations because the literature indicates that women would receive the phone number from most men they approach, thus, no discrimination in pre- and post-testing would be possible. The pre-testing was done one week before and the post-testing three to four weeks after the training.

The treatment was a behaviouristically oriented training aimed to tackle the three major problems that inhibit peoples' dating behaviour: conditioned anxiety, faulty cognitive-evaluative appraisal, and a lack of skills (Curran, 1977). The seminar lasted from five to six hours at a time and was held separately for men and women. The structure of the seminar was strongly based on Schmidt (2009). The training included instructions, modelling, role-playing, coaching, and homework. One hour during the training session was taken to leave the seminar room in order to complete different tasks in the field under supervision, such as smiling to and greeting persons of the opposite sex. Other tasks included the paradoxical injunction "Be rejected once real hard," and the nicer mission "Gather information about the evening program from three different persons of the opposite sex". At the end of the seminar participants received an evaluation and were asked to indicate how useful they found the training.

4.2 Participants

17 men and 23 women participated in the study. About half of the students participated in a seminar in Klagenfurt/Austria, the other half in Freiburg i.B./Germany. Participants studied various subjects, with most being enrolled in social or administrative programs. The men's age ranged from 20 to 29 ($M = 23.3$, $SD = 3$), the women's from 19 to 32 ($M = 21.8$, $SD = 3.9$) with both groups having a standard BMI between 19 and 26 (male: $M = 23.4$, $SD = 1.6$; female: $M = 21.9$, $SD = 2$). All men in the sample were heterosexual and had had on average sex with seven women (range = 1 – 24, $SD = 6.5$). Women had on average six sexual partners, ranging from zero to thirteen ($SD = 3.7$). Of the 23 women, 19 indicated that they were heterosexual, three that they were bisexual, and one that she was homosexual. Because sexual orientation did not have an effect on the results, all participants were included in the analysis.

4.3 Procedure

Participants were recruited through the university email distributor and by word-of-mouth. The full email text can be found in the appendix. All those who indicated interest were invited to a preliminary meeting to discuss the requirement and objects of the study. They were asked to go out for one hour to flirt one week before and two weeks after the training in the same setting. In about two-third of the cases, the experimenter was present to observe and verify the claims of the amount of phone numbers and drink invitations participants made. Participants were also informed about the questionnaire. After the briefing, participants were able to decide if they wanted to participate in the study (as anticipated, some participants did not feel confident with the requirements and dropped out of the study). To those who continued to participate I sent the questionnaire. The deadline to return the questionnaire was the starting date of the seminar. All data were coded so that once in the computer it was not possible to reconstruct which questionnaire and phone/drink number belonged to whom.

The seminar started with an introduction round so people learned more about each other and felt confident to exchange about such a sensitive topic. Then the trainer discussed with the participants how they felt during the task they had to accomplish before attending the seminar. Afterwards, the trainer gave an evolutionary background to flirting. After evaluating how this knowledge could be used for heterosocial interactions, the trainer gave a scientific background to the larger field of courtship, followed by a reflexion of the group on its implications. Next the trainer introduced the faulty cognitive-evaluative appraisal. The group discussed negative experiences in the past and the trainer tried to put them into perspective. Depending on the group, a gender specific role-play to acquire a phone number/drink invitation and/or a skills training to interpret body language followed.

At that point, most participants were keen to test their newly learned skills in the field. Hence, participants were sent out to accomplish different tasks such as initiating and hold conversations with persons of the opposite sex and trying to sustain certain information. After one hour in the field, everybody came back to the seminar room. The group reflected on the experiences they just made. After a last theoretical lesson on how to be more successful in a first encounter and some

homework, the trainer thanked the participants for their participation and asked to fill out an evaluation form.

On the evaluation form, participants could rate the training on a scale from one to six, one being the best and six being the worst (German school mark system). Men rated the training as slightly better than women, with a range from one to two and a mean of 1.53 (SD = 0.48). Women rated the training still as quite good, with a range from one to four and a mean of 1.76 (SD = 0.74). All in all, the evaluations were positive with beneficiary criticisms such as splitting the seminar up in smaller sessions and being a bit more practical and less abstract in the theoretical parts.

Two weeks after the seminar I sent out a reminder that asked to fulfil the task of one hour flirting. Three weeks after the training I sent out a second reminder with the second questionnaire. Subsequently, another reminder was sent out one month after the seminar to all those who had not sent back the questionnaire or fulfilled their task.

All participants were offered to contact the trainer at any stage of the experiment to talk about any potential problems. This was to make sure that nobody felt alone or experienced distress due to the exercises incorporated in the training. No participants made use of this offer.

It was also left to the participants how to dissolve the situation after they approached a stranger who agreed on giving their phone number or paying for a drink accordingly. As they were instructed to just approach people they felt they wanted to go on a date with, it was recommended to do so when offered the chance. If participants felt they did not want to go out or have a drink with that person, it was recommended to politely explain that they had been part of a social science experiment and thank them for their participation. To lie to the subjects and make false hopes was seen as unethical and asked to avoid.

4.4 Data Analysis

I conducted the quantitative data analysis with SPSS 17 for Windows. Additionally I conducted a power analysis with GPower 3.1.2. To detect gender differences in the interest in a flirtation seminar I conducted a binominal test. I constructed the questionnaire with summative response items to obtain interval-like data (Meyers, Gamst, & Guarino, 2005). To compare the means of the answers and the obtained phone numbers/drinks I used the dependent t-test for paired samples. Also, I used

the non-parametric Wilcoxon–Mann–Whitney rank-sum test for paired samples to see if the Likert scale assumption could be confirmed. For both tests, the same data were significant. Thus, to not lose information, I treated the data as interval-like.

Furthermore, I conducted a principal component analysis over the adjectives. With a small sample of forty cases, this is tricky. Mundfrom, Shaw, and Ke (2005; in Bühner, 2006) found, however, that when commonalities for all items exceed 0.6, a stable factor structure can be expected even in a very small sample. I found this to be true for all but one case in the presented items. Further, I consulted the KMO coefficient to assess the variance of the intercorrelation matrix. It was quite small with 0.47. Kaiser and Rice (1974) argue that a KMO coefficient larger than 0.5 is needed to achieve useful results with the principal component analysis. Guadagnoli und Velicer (1988; cited from Bortz, 1999) find it acceptable to interpret results from a principal component analysis even when the requirements are not given, as long as the result can be replicated in other samples. Fortunately, most of the items were from another study with a larger sample where a very similar factor structure was found (Kleinke & Dean, 1990).

In order to find predictors for successful participants I calculated Pearson and Spearman correlations between the factors and numbers/drinks/sexual partners. Because the two correlations differed in outcome, I chose the more robust Spearman's rho for interpretation. I conducted a one-sample t-test against $\rho = 0$ to identify significant correlations.

5 Results

5.1 Power Analysis

A power analysis was conducted to evaluate what effect size a two-tailed dependent t-test for paired samples with $\alpha = 0.05$ and power $(1-\beta) = 0.8$ could detect. For the female sample ($N = 23$) a population effect of $d \geq 0.61$ would be necessary to gain a significant sample effect with $p \geq 0.8$. For the male sample ($N = 17$) an even bigger effect of $d \geq 0.72$ would be needed. Bortz (1999) noted that $d = 0.5$ is a middle and $d = 0.8$ a strong effect for this test. Both the figures for men and women lie in between a middle and a large effect. With this sample the t-test might be slightly underpowered. That carries the risk that the test does not detect existing effects. However, results that become significant will point to a strong effect and therefore are more likely to be replicated.

5.2 Gender Differences in Flirtation Seminar Interest

In total, 60 people showed interest in a flirtation training session. Of these 66, 37 were female and 29 male. A binominal test was conducted to assess if the difference of 8 people is significant. It turned out to be insignificant with $p = 0.39$. Finally, 40 of those who indicated interest agreed to participate in the study with 23 women and 17 men. Again, the difference is not significant with $p = 0.43$. Hence I draw the conclusion that no gender difference exists in the level of interest in a flirtation seminar in the approached population as long as it is free. In the market, where similar two-day workshops cost up to \$2500 (Lovesystems, 2011), supply and demand is clearly dominated by males.

5.3 Improvement of Heterosocial Skills

In the first investigative step, I conducted a multivariate analysis of variances (MANOVA) to see if group differences exist before the intervention due to sociodemographic characteristics. I found no differences using the independent variables sex, age, BMI, relationship status, income, number of sexual partners, and the dependent variables self-perceived mating success and contentment with life,

adjectives, and phone numbers/drinks. Education and gender preferences were not considered because the complete sample consisted of students and the group of bi- and homosexuals was too small to conduct a MANOVA. In the second step, the same independent variables were chosen to see if they influenced the improvement achieved by the intervention. As dependent variables, the data from the post-test were taken. Again, the MANOVA did not indicate significant differences between the groups. It is no surprise, however, that the MANOVA did not deliver significant results due to the small sample size of $N = 40$.

I predicted that men and women differ in how many phone numbers and drink invitations they received, respectively. The data did not support this claim. Before the intervention, men had an average success rate of 1.07 (SD = 1.22, range = 0 – 4) phone numbers and women of 1.65 (SD = 3.07, range = 0 – 13) drink invitations. After the intervention, male participants received on average 3.67 (SD = 2.02, range = 1 – 9) numbers and female participants 3.1 (SD = 2.02, range = 0 – 8) invitations. An analysis of variance (ANOVA) was conducted with the independent variable sex and the dependent variable number/drink before and after the training. Both ANOVAs were insignificant with $F = 0.34$ and $p = 0.56$ before and $F = 0.64$ and $p = 0.43$ after the training t significant (see Figure 2).

The results might result from the different tasks the participants had to execute. Women had to receive drink invitations while men only had to acquire phone numbers. The tasks were designed differently on purpose because the literature suggests that it is quite easy for a woman to obtain a phone number. To get a drink invitation women had to invest more work and thus could not receive more. It also might be that the women who were interested and participated in the seminar were shier than the average woman and hence did not outdistance their male counterparts. Further, men might have approached more females than the other way around so that the success rate of women is actually higher. How many persons of the opposite sex each participant approached was not assessed so it cannot be excluded as a confounding variable. Finally, it also might be that women and men are not that different after all and both acquire about the same amount of phone numbers, too. The direct comparison has not been done to this day and is left for researchers to come.

It seemed that men profited more from the seminar than women as men received on average 2.6 (SD = 1.5) more phone numbers after the training session. Their

female counterparts received on average just 1.45 (SD = 1.9) more drink invitations. An independent two-sample t-test was conducted to see if this impression could be backed up. However, no significant differences were found between the groups in improvement with $t = 0.2$ and $p = 0.85$.

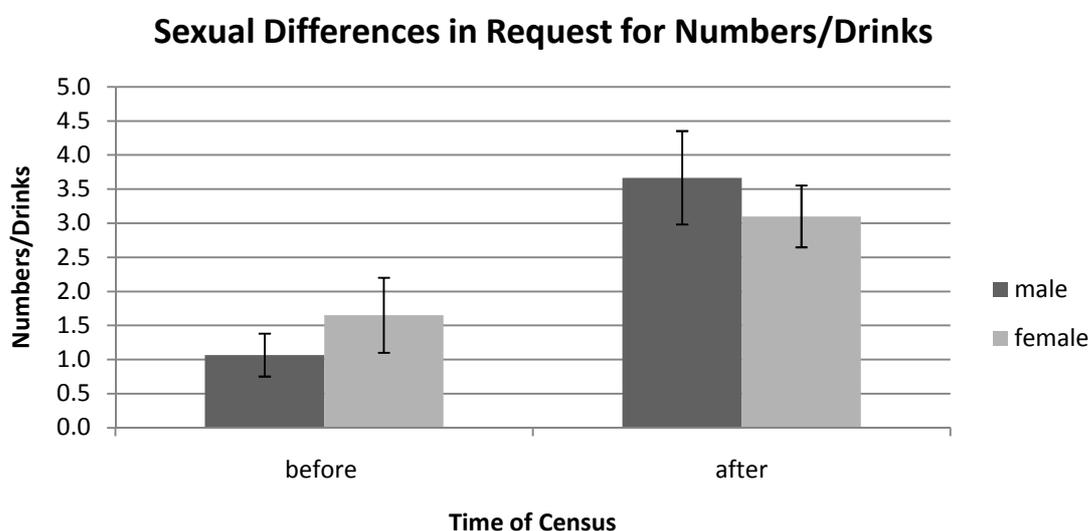


Fig. 2. Comparison of the average number of drinks/numbers received by male and female participants. While women did slightly better before the training, men profited stronger from the training. No significant differences were found, however.

* Error bars are ± 1 S.E.M. (Standard Error of the Mean).

The reason for the descriptively stronger improvement in the male sample might have its roots in the gender of the trainer. Because no female trainer was found, the whole seminar was taught by a male coach for both genders. Yet, some forms of intervention such as model learning are better done by a same sex coach. Also, the male participants rated the seminar as better, which could be partly because they felt better understood. Furthermore, there is more science and self-help literature for men. This gives a better theoretical foundation to teach men compared to women.

I assumed that the training leads to a higher score in self-perceived mating success and contentment with life. A dependent t-test for paired samples was conducted for both scales. It was found that both genders described their mating success significantly higher after the training but not their contentment with life (see Figure 3). Mean and p-value for all tested variables are found in Table 1 and 2.

There are multiple possible explanations why participants are happier with their dating skills but not with their lives. It seems plausible that successful dating is part of general satisfaction. However, other parts are very important too. For instance a male student who is not happy with his choice of studies. After the training, he might

feel more confident around women. Yet, his major concern of having made a bad career choice will remain and his overall satisfaction with his life might stay low.

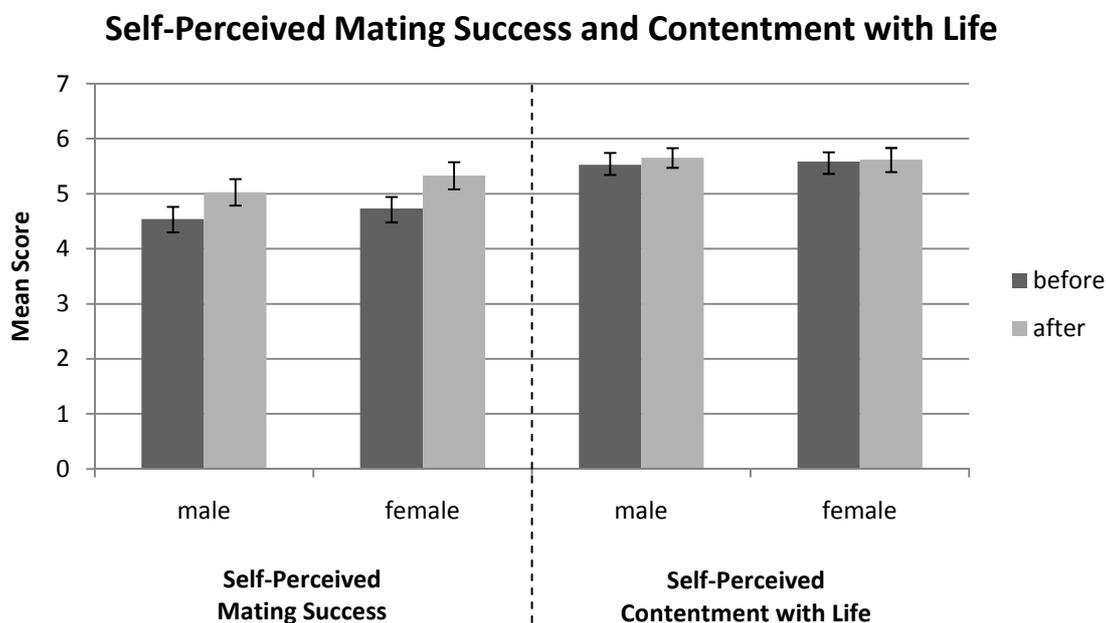


Fig. 3. Changes in rating of mating success and satisfaction. Both, men and women, describe themselves as more successful with the other sex but not as more content with their lives after receiving a flirt training.

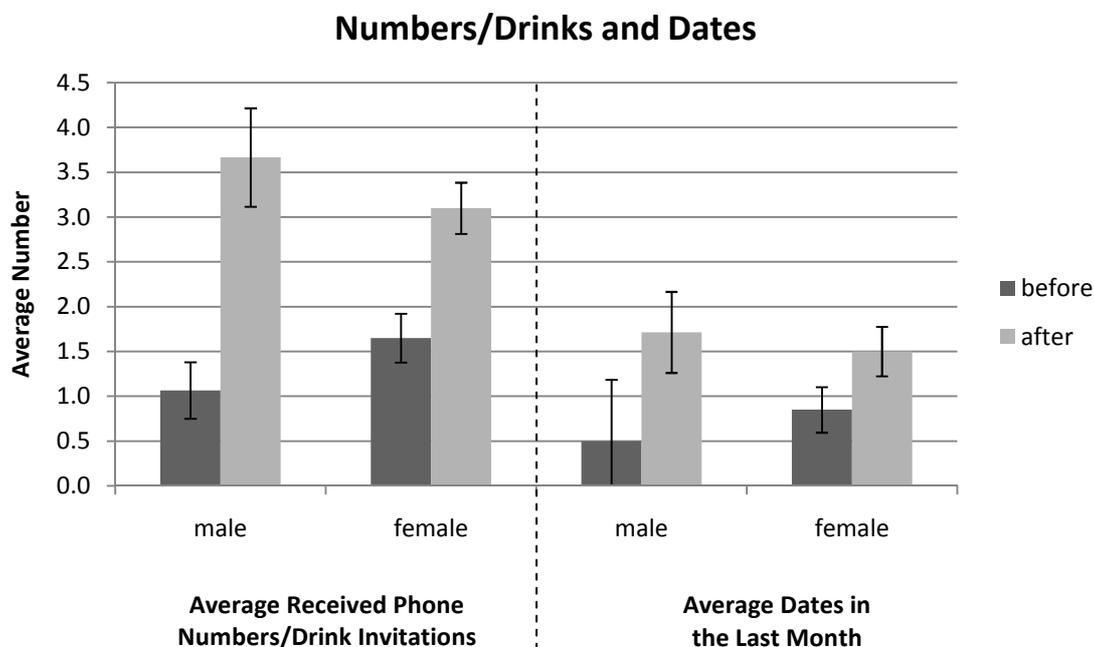


Fig. 4. In both behavioural measures participants improved significantly. Men and women had on average more dates after the training and were able to receive two to three times more phone numbers or drink invitations, respectively.

I predicted that people would significantly improve their dating skills, receiving more phone numbers or drinks after the training. This was true for both men and women. Men improved on average from one phone number an hour to more than three numbers. Women received between one and two drink invitations before the intervention and three after the training. Additionally, the number of dates participants had in the last month were assessed and taken into account as a further measure of behaviour modification. Again it was significant for both, males and females. Similar to the other variables, women had on average more dates than men before the training but less after the training (see Figure 4).

Participants also rated themselves on a seven-point scale of different adjectives. The question was: "On a scale from one to seven, how would you describe yourself? I am...". Men had significant changes in six adjectives. They described themselves on average as more attractive, intelligent, open-minded, selfish, dominant, and confident (see Figure 5). It can be doubted that the changes come solely from the seminar but it might have triggered a tendency in the participants which reinforced itself by success with the opposite sex.

It is impossible to tell whether participants felt better after the training session and, hence, acquired more phone numbers or acquired more numbers which left a positive impression on their self-image. Most likely, both factors interacted. Subsequently, they led to an overall change of cognition and behaviour. These results are also a warning. It was not intended to train participants in becoming more dominant or selfish. Unfortunately, these kinds of trainings sessions can increase dominance or selfishness because the intervention aims to reinforce the self. Also, the trainer teaches men to be more active and "take what they want" in contrast to "wait until it comes to you". In further training session, this should be considered so that it can be counteracted. We want people to improve their dating skills, but we do not want a horde of egomaniacs running around.

Female participants described themselves after the training as more intelligent and confident, but also as less responsible and honest (see Figure 6). Again, the training seems to have triggered traditionally negative traits, which was not intended. In the scientific community there is an ongoing discussion if dominance (Snyder, Kirkpatrick, & Barrett, 2008), deception (Tooke & Camire, 1991), egoism, and irresponsibility (Trivers, 1971) account to some extent for flirtation success.

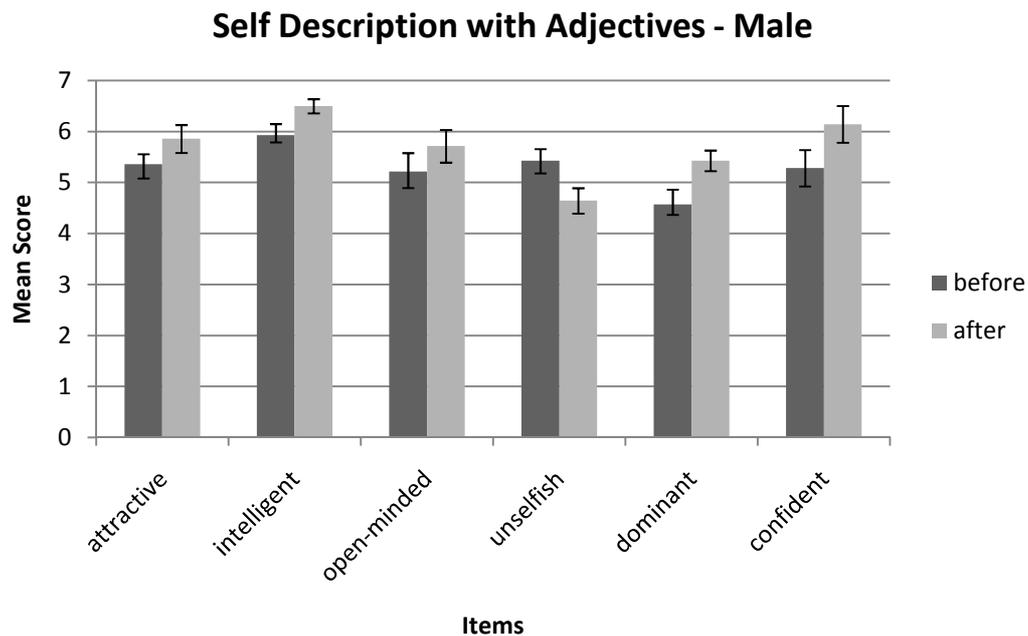


Fig. 5. The training resulted in males describing themselves as significantly more attractive, intelligent, open-minded, and confident. Alerting is that they also described themselves as more selfish and dominant.

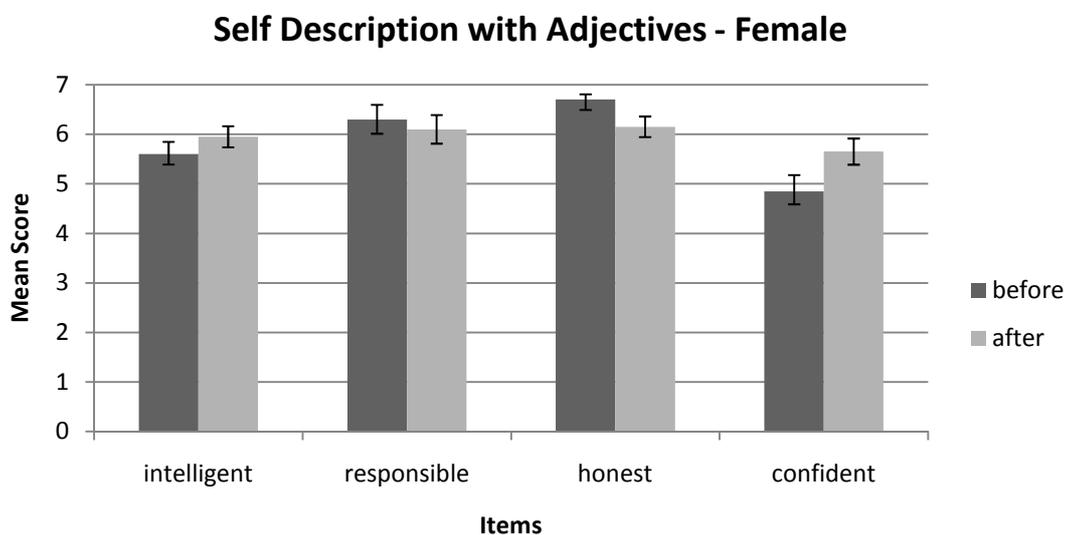


Fig. 6. Female participants felt more intelligent and confident after the training but less responsible and honest. Like for men, we see positive improvement, but also tendencies that were not intended by the training. This also stresses the question if these trainings can be dangerous if not hold by a well-trained professional.

Mean Improvement - Male

	Mean Before (SD)	Mean After (SD)	Mean Dif. (SD)	p-value
Numbers	1.07 (1.22)	3.67 (2.13)	-2.60 (1.50)	< 0.001***
Dates	0.50 (1.02)	1.71 (1.07)	-1.21 (1.19)	0.002**
Potential Dates	2.36 (0.74)	2.64 (0.63)	-0.29 (0.91)	0.263
Mating Success	4.54 (0.84)	5.03 (0.90)	-0.49 (0.42)	< 0.001***
Contentment	5.52 (0.83)	5.65 (0.67)	-0.13 (0.57)	0.406
Attractive	5.36 (0.74)	5.86 (1.03)	-0.50 (0.76)	0.029*
Likeable	6.07 (0.73)	6.43 (0.51)	-0.36 (0.74)	0.096
Intelligent	5.93 (0.83)	6.50 (0.52)	-0.57 (0.76)	0.014*
Interesting	5.54 (0.97)	5.85 (0.69)	-0.31 (0.75)	0.165
Humorous	6.00 (0.96)	6.21 (0.70)	-0.21 (0.80)	0.336
Healthy	6.21 (1.12)	5.64 (1.34)	0.57 (1.28)	0.120
Responsible	5.64 (0.84)	5.64 (0.93)	0.00 (0.68)	1.000
Open-minded	5.21 (1.37)	5.71 (1.20)	-0.50 (0.65)	0.013*
Competent	5.50 (0.94)	5.64 (1.08)	-0.14 (0.53)	0.336
Altruistic	5.43 (0.85)	4.64 (0.93)	0.79 (0.97)	0.010*
Polite	5.71 (0.99)	5.71 (0.91)	0.00 (0.88)	1.000
Honest	5.57 (0.76)	5.64 (0.93)	-0.07 (1.00)	0.793
Dominant	4.57 (1.09)	5.43 (0.76)	-0.86 (0.77)	0.001**
Ambitious	5.64 (1.34)	5.79 (0.89)	-0.14 (0.86)	0.547
Successful	5.69 (0.75)	5.85 (0.99)	-0.15 (0.69)	0.436
Uninhibited	4.43 (1.55)	4.71 (1.64)	-0.29 (1.27)	0.414
Confident	5.29 (1.33)	6.14 (1.35)	-0.86 (1.03)	0.008**
Faithful	6.29 (1.14)	6.00 (1.62)	0.29 (0.83)	0.218
Sexually Active	5.71 (1.64)	6.43 (1.16)	-0.71 (1.44)	0.086

Table 1. Mean and SD before and after the flirt seminar as well as the average change and p-value for male participants. Numbers, dates, and potential dates were assessed in absolute numbers. The rest was checked on a seven point scale. Significant results are highlighted in the table. Note that for 24 t-tests with $p < 0.05$ statistically one test gets significant just by chance.

$p < 0.05^*$ $p < 0.01^{**}$ $p < 0.001^{***}$

Mean Improvement - Female

	Mean Before (SD)	Mean After (SD)	Mean Dif. (SD)	p-value
Drinks	1.65 (3.07)	3.10 (2.02)	-1.45 (1.93)	0.003**
Dates	0.85 (1.14)	1.50 (1.24)	-0.65 (0.88)	0.004**
Potential Dates	2.30 (0.98)	2.35 (0.99)	-0.05 (0.76)	0.772
Mating Success	4.73 (0.96)	5.33 (1.10)	-0.60 (0.68)	< 0.001***
Contentment	5.58 (0.77)	5.62 (0.98)	-0.03 (0.50)	0.769
Attractive	5.47 (1.02)	5.42 (1.26)	0.05 (1.31)	0.863
Likeable	6.05 (0.76)	6.15 (0.59)	-0.10 (0.85)	0.606
Intelligent	5.60 (1.10)	5.95 (0.94)	-0.35 (0.49)	0.005**
Interesting	5.55 (1.43)	5.50 (1.32)	0.05 (0.88)	0.789
Humorous	5.79 (1.13)	5.79 (1.32)	0.00 (0.82)	1.000
Healthy	5.65 (1.09)	5.65 (1.35)	0.00 (1.21)	1.000
Responsible	6.30 (1.30)	6.10 (1.29)	0.20 (0.41)	0.042*
Open-minded	5.90 (1.33)	5.80 (1.40)	0.10 (0.72)	0.541
Competent	5.74 (0.93)	5.68 (1.11)	0.05 (0.91)	0.804
Altruistic	4.60 (1.31)	4.50 (1.32)	0.10 (1.17)	0.705
Polite	6.16 (0.90)	6.00 (0.94)	0.16 (0.60)	0.268
Honest	6.70 (0.47)	6.15 (0.93)	0.55 (0.60)	< 0.001***
Dominant	4.25 (1.68)	4.35 (1.53)	-0.10 (0.79)	0.577
Ambitious	6.05 (0.94)	5.85 (1.31)	0.20 (0.95)	0.359
Successful	5.50 (0.76)	5.75 (0.91)	-0.25 (1.07)	0.309
Uninhibited	4.37 (1.50)	4.37 (1.83)	0.00 (1.20)	1.000
Confident	4.85 (1.46)	5.65 (1.18)	-0.80 (1.06)	0.003**
Faithful	6.50 (1.10)	6.25 (1.33)	0.25 (0.55)	0.056
Sexually Active	5.06 (1.95)	5.11 (2.00)	-0.06 (0.73)	0.749

Table 2. Mean and SD before and after the flirt seminar as well as the average change and p-value for female participants. Numbers, dates, and potential dates were assessed in absolute numbers. The rest was checked on a seven point scale. Significant results are highlighted in the table. Note that for 24 t-tests with $p < 0.05$ statistically one test gets significant just by chance.

$p < 0.05^*$ $p < 0.01^{**}$ $p < 0.001^{***}$

5.4 Successful vs. Unsuccessful Participants

The 19 adjectives were factor analyzed from both sexes with a principal component analysis and varimax rotation. I hoped to find an underlying factor structure that is characteristic of a successful participant or somebody with a high number of sexual partners. Six factors were extracted with eigenvalues < 1 , accounting for 69.1% of the variance. However, an analysis of the screeplot and considerations in terms of content led to a five factor solution, which explains 61.5% of the variance (see Table 3).

Factor Analysis of Rating Form

Factor 1 Confident (16.00%)^(a)	
Confident ^(c)	0.77 ^(b)
Dominant	0.76
Uninhibited	0.73
Successful	0.63
Sexually Active	0.57
Factor 2 Ambitious (15.63%)	
Ambitious	0.79
Intelligent	0.73
Competent	0.65
Open-minded	0.56
Healthy	0.53
Responsible	0.52
Faithful	0.45
Factor 3 Likeable (11.66%)	
Likeable	0.74
Attractive	0.70
Interesting	0.67
Factor 4 Polite (9.01%)	
Polite	0.71
Honest	0.67
Factor 5 Humorous (9.01%)	
Humorous	0.72
Altruistic	0.70

Table 3. Five factors explain in total 61.5% of the variance.
(a) Explained variance (b) Factor loading (c) Rating form items

The factors as independent variables were correlated with the numbers and drink invitations as well as the number of sexual partners as dependent variables. For men, none of the factors correlated significantly. In the female sample, factor three and four correlated significantly with the number of drinks. Women who were subjectively more likeable also received more drink invitations before ($r_s = 0.43$) and after the training ($r_s = 0.63$). On the contrary, women who were especially polite received less drink invitations before (but not after) the training ($r_s = - 0.43$). These findings are not surprising. Women who find themselves attractive and interesting are more likely to attract others. On the other hand, those who are very polite and honest might find it hard to convince a stranger to invite them for a drink.

As a next step, the numbers and drinks achieved before the training were correlated with the ones achieved after the seminar. For both sexes, I found a significant correlation with $r_s = 0.53$ for males and $r_s = 0.82$ for females. This indicates that participants who were successful before the training were still so afterwards.

Furthermore, I correlated the number of sexual partners with the data. Again the outcome was rather unspectacular. Men who thought they were successful with the opposite sex also had a higher number of sexual partners ($r_s = 0.65$). This is a good validation for the self-perceived mating success scale but nothing unexpected. For women, uninhibitedness correlated positively ($r_s = 0.71$) with the number of their past sexual partners. It seems logical that uninhibited people have a more active sex life. In contrast, faithfulness correlates negatively ($r_s = - 0.45$) with the number of sexual partners. Again, it is just logical that somebody who is in a committed relationship and is faithful to her partner has had a lower number of sexual partners than their unfaithful counterparts. On the other hand could it also be that women who have access to less sexual partners attribute it to their faithfulness.

6 Discussion

The findings of this study indicate that evolutionary psychology can be used to teach people how to improve their skills with the opposite sex. They also show that dating skills can be improved in a very short amount of time for healthy young individuals. In the past the focus was on shy people (Foster, Krumboltz, & Ford, 1997). Also, trainings were given over a longer period of time (Curran, 1977). Furthermore, this study suggests that people who do not seem to have problems with the opposite sex can profit from a heterosocial skills training.

I did not find predicted sexual differences in the success rate of the tasks. This might have several reasons. The task for women was more difficult to complete. Women who were interested in such training might have been generally shier. And women might have approached fewer members of the opposite sex so that their general success rate was indeed higher. A direct comparison is not possible, however, as the tasks were different and the number of approached subjects was not documented.

Overall, both sexes profited from the flirtation seminar. Participants acquired significantly more phone numbers and drink invitations and described themselves as more successful with the opposite sex after the training. This is in line with current research in heterosocial skills training (Strachan & Hope, 2002). No significant sexual differences were found in this study, but a trend could be revealed. Women had more dates and received more drink invitations before the intervention than men, but male participants profited more from the training so that they received more dates and phone numbers after the training than females. Besides the already discussed reasons, it might be that women are generally better in flirting and decoding flirtation cues (Hall, 1980; Lindgren, Parkhill, George, & Hendershot, 2008) but with the appropriate training this difference can be reduced or even reversed.

The training also had some side-effects. Men described themselves as more selfish and dominant after the training, women as more deceptive and irresponsible. Dominance (Snyder, Kirkpatrick, & Barrett, 2008) as well as deception (Tooke & Camire, 1991) are explicitly discussed in an evolutionary context and it might be that embedding the seminar in such a context motivated participants to emulate this behaviour. Positive reinforcement in the training sessions might have led to a significant change in these traits. Altruism and responsibility are also part of the

academic discussion (Trivers, 1971) but were not discussed into the seminar. However, the topics might have found implicit entrance in the seminar considering the evolutionary background of the trainer.

Yet, I did not intend to reinforce such traits. I see their occurrence as a warning signal. The goal of a psychological training should not be to teach deceptive trickery or popular wisdom. Such a seminar rather aims to reinforce the self, so participants can ultimately take responsibility for themselves and their actions. In that sense, the seminar partly failed. For further trainings, more time should be taken to discuss evolutionary psychology and its implications in more detail. Evolutionary psychology as a science tries to find explanations and does not judge. This is contradictory to a trainer or coach, who is a role model and cannot leave morals out of the class room. This can be compared with the research on rape (e.g. Takala, 2008; Thornhill & Thornhill, 1983). Evolutionarily, rape may be an adaptive strategy under some conditions, but no scientist would ever support rape as a mating strategy (or in any other context as far as I know).

One can find the *naturalistic fallacy* in many self-help books. Naturalistic fallacy describes the tendency to believe that what is natural is good; that what is, ought to be. This leads to many misunderstandings and bad advices. People might see such a study as an instruction for action instead of a reflection of our times. Findings that suggest a “more or less” are reduced to “all or nothing”. Take for example the study about attractive sports (Wiseman, 2009). Does it mean that scientists would recommend men to go rock climbing, women to do yoga, and everybody to stop golfing? Certainly not! Social sciences tries to find answers for all sorts of problems, plays with explanatory models, and produces hypotheses, but never offers an ultimate truth. It aims to enlighten society and finally lead to educated individuals who can make good, mature choices. To replicate inconsiderate and undifferentiated popular findings in science, however, leads to the opposite. A power-stabilizing status quo is produced that reinforces traditional gender norms, inhibits personal development, and in its extreme, leads to sexism and conformism.

The presented study has some potential flaws in its construction that have to be considered when looking at the results. The main problem is the absence of a control group. This results in a decrease of internal validity. One could argue that without a control group it is hard to tell where the changes came from. On the other hand, is it very unlikely in this context that changes occur without any intervention. However, it

would have been good to have a placebo group or other variations to be better able to explain the resulting variance. In this thesis, a control group was not possible as it was already difficult enough to recruit people who received a proper treatment to go out and flirt in a real life situation. A study with a placebo control group could be done in the future, however, and the results could be compared with the results from the present study.

In this study, a student sample was used so the results cannot be generalized without reservations. The sample with 40 participants was also quite small. However, the effects found were large. It is very likely that the findings can be replicated in another study. Therefore, the external validity is acceptable.

Further, it is impossible to make an assumption about the long-term stability of the effects. The follow-up measure was taken one month after the training. A further follow-up after six months would have been preferable, but as said before, it was very hard to motivate the participants to flirt in real life situations. It took much persuasive power to get the participants to do so on only two occasions. For further research, a long-term follow-up should be considered as we know that a treatment is more stable the longer the intervention lasts (Margraf, 2009).

In the theoretical work, many areas could not be covered. The role of hormones, body language, grooming and clothing, past experiences, group dynamics, communication patterns, self-worth, and attachment-style, to name only a few, were just touched or left out completely. This is due to the limitation of a master thesis. A complete psychology of seduction is still not available. Studies that ask for the efficiency of mating strategies are just emerging. It will take years before a complete and autonomous psychology of seduction is available. Till then, this work represents one piece in the puzzle of mutual attraction.

I suspect that any positive and (self-) convincing belief system improves success with the opposite sex. I came to that conclusion when looking at the seminars offered on the free market and comparing their contents with state-of-the-art science. A lot of what is preached at these seminars does not have any scientific foundation. Some even can be considered as plainly wrong. Nevertheless, these seminars enjoy great popularity and some participants I have spoken with indicate that they enjoy greater success with the opposite sex after the training. The reason for that could be cognitive dissonance (*justification of effort*: after paying so much I must have become better) or a placebo effect. The placebo effect could be explained by what is known

as *self-efficacy* (Bandura, 1977). Self-efficacy describes a person's belief in their own abilities. People with high self-efficacy believe they can handle difficult situations and have success through persistence and confidence. Hence, failure does not induce a feeling of helplessness but can be overcome and might be even used to learn something for the future. Participants of a dating seminar might get more confident after having found a belief system they feel they can rely on, which in return raises their feeling of self-efficacy. By being more confident in dating situations participants also enjoy more success which in return convinces them of the belief system. To test this assumption, it would be good to design an experiment with a control and a placebo group.

Further it would be helpful to get a direct comparison of how many phone numbers men and women can acquire, how many potential partners they approached, and how many they did not approach. Until now, no study has actually assessed how many phone numbers women can acquire if they try. It is assumed that women are more selective and have a higher success rate but to be sure, a controlled study needs to be conducted.

It also seems necessary to do more research on the effects and side-effects of date coaching and self-help literature. Some of the recommendations have been shown to work. Others do not help. Some are even dangerous. The problem is that the field of self-help literature is so vast that it will take some time to put every advice to the test under controlled conditions. Further, even in the seduction community, a seemingly homogeneous field, opinions are often divergent.

7 References

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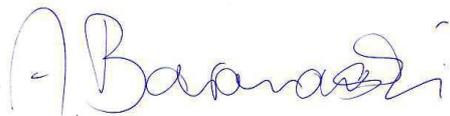
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für Masterarbeiten, Diplomarbeiten und Dissertationen**

Ich erkläre ehrenwörtlich, dass ich die vorliegende wissenschaftliche Arbeit selbstständig angefertigt und die mit ihr unmittelbar verbundenen Tätigkeiten selbst erbracht habe. Ich erkläre weiteres, dass ich keine anderen als die angegebenen Hilfsmittel benutzt habe. Alle aus gedruckten, ungedruckten oder dem Internet im Wortlaut oder im wesentlichen Inhalt übernommenen Formulierungen und Konzepte sind gemäß den Regeln für wissenschaftliche Arbeiten zitiert und durch Fußnoten bzw. durch andere genaue Quellenangaben gekennzeichnet.

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(Unterschrift)

Klagenfurt, 07.06.2011

(Ort, Datum)

Umfrage zur psychologischen Studie im Rahmen der Diplomarbeit
Alpen-Adria-Universität Klagenfurt
A. Baranowski

Die Daten werden im Rahmen einer psychologischen Studie erhoben und absolut vertraulich behandelt. Das heißt, nach der Erhebung gibt es keine Möglichkeit, eine Person anhand dieses Fragebogens zu identifizieren. Um möglichst genaue Ergebnisse erzielen zu können, bitten ich Sie, ehrlich zu antworten. Bevor Sie eine falsche Angabe machen, bitte ich Sie, die Angabe auszulassen.

1. Wie alt sind Sie?

2. Wie groß sind Sie?

3. Wie viel wiegen Sie?

4. Sind Sie aktuell in einer festen Beziehung?

Ja

Nein

5. Hindert Ihre äußere Erscheinung Sie daran, soziale Kontakte zu knüpfen?

Ja

Nein

6. Was ist ihre höchste abgeschlossene Ausbildung bzw. angestrebter Bildungsabschluss?

Akademische Ausbildung

Matura (inkl. Kolleg)

Berufsbildende mittlere Schule

Lehrlingsausbildung

Pflichtschule

Sonstiges: _____

7. Wie hoch ist ihr durchschnittlicher Nettoverdienst, d.h. Lohn oder Gehalt nach Abzug von Steuern und Sozialversicherungsbeiträgen?

0 – 499€

500 – 999€

1.000 – 1.499€

1.500 – 1.999€

2.000 – 2.499€

2.500 – 2.999€

3.000 – 3.499€

3.500 – 3.999€

4.000 – 4.499€

4.500 – 4.999€

5.000€ und mehr

8. Wie würden Sie ihre sexuelle Orientierung beschreiben?

Heterosexuell

Homosexuell

Bisexuell

Sonstiges: _____

9. Haben Sie bereits Bücher gelesen oder Seminare zum Thema flirten besucht? Wenn ja, welche?

10. Haben Sie eine Strategie, mit der Sie Personen des anderen Geschlechts ansprechen? Wenn ja, welche?

11. Wie viele Sexualpartner hatten Sie in ihrem bisherigen Leben?

Vielen Dank für Ihre Teilnahme!

Umfrage zur psychologischen Studie im Rahmen der Diplomarbeit
Alpen-Adria-Universität Klagenfurt
A. Baranowski

12. Warum nehmen Sie an diesem Seminar teil (Mehrfachnennungen Möglich)?

- Ich will mehr sexuelle Kontakte!
- Ich will eine Beziehung mit einer attraktiven Person des anderen Geschlechts eingehen!
- Ich will generell mehr Erfolg in sozialen Situationen!
- Sonstiges:

Auf einer Skala von 1 bis 7, was trifft auf Sie zu?

13. Personen des anderen Geschlechts die ich mag, tendieren dazu, mich ebenfalls zu mögen.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

14. Ich habe viele Freunde.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

15. Ich bin mit meinem Beruf unzufrieden.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

16. Personen des anderen Geschlechts fühlen sich nicht sonderlich zu mir hingezogen.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

17. Ich bekomme viele Komplimente von Personen des anderen Geschlechts.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

18. Ich habe viele Hobbys.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

19. Ich bekomme sexuelle Angebote von Personen des anderen Geschlechts.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

20. In sozialen Situationen wie auf Firmenfeiern oder Geburtstagspartys fühle ich mich unwohl.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

21. Ich kann so viele Sexpartner haben, wie ich will.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

Vielen Dank für Ihre Teilnahme!

Umfrage zur psychologischen Studie im Rahmen der Diplomarbeit
Alpen-Adria-Universität Klagenfurt
A. Baranowski

22. Ich habe oft finanzielle Sorgen.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

23. Im Gesamten bin ich mit meinem Leben zufrieden.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

24. Auf einer Skala von 1 bis 7, wie würden Sie sich beschreiben? Ich bin...

	gar nicht			etwas			sehr
Attraktiv:	1	2	3	4	5	6	7
Sympathisch:	1	2	3	4	5	6	7
Intelligent:	1	2	3	4	5	6	7
Interessant:	1	2	3	4	5	6	7
Humorvoll:	1	2	3	4	5	6	7
Gesund:	1	2	3	4	5	6	7
Verantwortungsvoll:	1	2	3	4	5	6	7
Aufgeschlossen:	1	2	3	4	5	6	7
Kompetent:	1	2	3	4	5	6	7
Uneigennützig:	1	2	3	4	5	6	7
Höflich:	1	2	3	4	5	6	7
Ehrlich:	1	2	3	4	5	6	7
Dominant:	1	2	3	4	5	6	7
Ehrgeizig:	1	2	3	4	5	6	7
Erfolgreich:	1	2	3	4	5	6	7
Ungehemmt:	1	2	3	4	5	6	7
Selbstsicher:	1	2	3	4	5	6	7
Treu:	1	2	3	4	5	6	7
Sexuell Aktiv:	1	2	3	4	5	6	7
	gar nicht			etwas			sehr

25. Wie viele Dates hatten Sie im letzten Monat?

<input type="checkbox"/> 0	<input type="checkbox"/> 1
<input type="checkbox"/> 2	<input type="checkbox"/> 3 und mehr

26. Wie viele Dates hätten Sie theoretisch im letzten Monat haben können?

<input type="checkbox"/> 0	<input type="checkbox"/> 1
<input type="checkbox"/> 2	<input type="checkbox"/> 3 und mehr

Vielen Dank für Ihre Teilnahme!

27. Was denken Sie, müssten Sie ändern, um mehr Erfolg bei Personen des anderen Geschlechts zu haben?

28. Was haben Sie bereits unternommen, um mehr Erfolg bei Personen des anderen Geschlechts zu haben?

Umfrage zur psychologischen Studie im Rahmen der Diplomarbeit
Alpen-Adria-Universität Klagenfurt
A. Baranowski

Dies ist die zweite Erhebung im Rahmen einer psychologischen Studie. Ihre Daten werden absolut vertraulich behandelt und nach der Erhebung gibt es keine Möglichkeit, eine Person anhand dieses Fragebogens zu identifizieren. Um möglichst genaue Ergebnisse erzielen zu können, bitte ich Sie, ehrlich zu antworten. Bevor Sie eine falsche Angabe machen, bitte ich Sie, die Angabe auszulassen.

1. Sind Sie aktuell in einer festen Beziehung?

Ja Nein

2. Wie viele Dates hatten Sie im letzten Monat?

0 1
 2 3 und mehr

3. Wie viele Dates hätten Sie theoretisch im letzten Monat haben können?

0 1
 2 3 und mehr

4. Was hat das Seminar bei ihnen verändert?

5. Wie merken Sie das in ihrem Alltag?

6. Haben Sie die von ihnen vor dem Seminar gesetzten Ziele erreicht?

7. Was denken Sie, müssten Sie noch an sich ändern, um mehr Erfolg bei Personen des anderen Geschlechts zu haben?

Auf einer Skala von 1 bis 7, was trifft auf Sie zu?

8. Personen des anderen Geschlechts die ich mag, tendieren dazu, mich ebenfalls zu mögen.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

9. Ich habe viele Freunde.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

10. Ich bin mit meinem Beruf unzufrieden.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

11. Personen des anderen Geschlechts fühlen sich nicht sonderlich zu mir hingezogen.

Vielen Dank für Ihre Teilnahme!

Umfrage zur psychologischen Studie im Rahmen der Diplomarbeit
Alpen-Adria-Universität Klagenfurt
A. Baranowski

1	2	3	4	5	6	7
gar nicht			etwas			sehr

12. Ich bekomme viele Komplimente von Personen des anderen Geschlechts.

1	2	3	4	5	6	7
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13. Ich habe viele Hobbys.

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14. Ich bekomme sexuelle Angebote von Personen des anderen Geschlechts.

1	2	3	4	5	6	7
gar nicht			etwas			sehr

15. In sozialen Situationen wie auf Firmenfeiern oder Geburtstagspartys fühle ich mich unwohl.

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16. Ich kann so viele Sexpartner haben, wie ich will.

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gar nicht			etwas			sehr

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1	2	3	4	5	6	7
gar nicht			etwas			sehr

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1	2	3	4	5	6	7
gar nicht			etwas			sehr

19. Auf einer Skala von 1 bis 7, wie würden Sie sich beschreiben? Ich bin...

	gar nicht			etwas			sehr
Attraktiv:	1	2	3	4	5	6	7
Sympathisch:	1	2	3	4	5	6	7
Intelligent:	1	2	3	4	5	6	7
Interessant:	1	2	3	4	5	6	7
Humorvoll:	1	2	3	4	5	6	7
Gesund:	1	2	3	4	5	6	7
Verantwortungsvoll:	1	2	3	4	5	6	7
Aufgeschlossen:	1	2	3	4	5	6	7
		gar nicht		etwas			sehr
		gar nicht		etwas			sehr

Vielen Dank für Ihre Teilnahme!

Umfrage zur psychologischen Studie im Rahmen der Diplomarbeit
Alpen-Adria-Universität Klagenfurt
A. Baranowski

Kompetent:	1	2	3	4	5	6	7
Uneigennützig:	1	2	3	4	5	6	7
Höflich:	1	2	3	4	5	6	7
Ehrlich:	1	2	3	4	5	6	7
Dominant:	1	2	3	4	5	6	7
Ehrgeizig:	1	2	3	4	5	6	7
Erfolgreich:	1	2	3	4	5	6	7
Ungehemmt:	1	2	3	4	5	6	7
Selbstsicher:	1	2	3	4	5	6	7
Treu:	1	2	3	4	5	6	7
Sexuell Aktiv:	1	2	3	4	5	6	7
	gar nicht			etwas			sehr

Wenn Sie wollen, können Sie jetzt noch ein Feedback zu dem Seminar, an dem Sie teilgenommen haben abgeben. Z.B.: was fanden Sie nützlich oder unnützlich, wie war die Gesamtqualität des Seminars etc.:

Vielen Dank für Ihre Teilnahme!

Betreff: Flirtforschung

Liebe Kolleginnen und Kollegen,

ihr habt die einmalige Chance, kostenlos an einem Flirtseminar an der Universität Klagenfurt teilzunehmen. Das Seminar wird von dem angehenden Diplom-Psychologen Andreas Baranowski geleitet. Es werden unter anderem die psychologischen Grundlagen eines erfolgreichen Flirts betrachtet, Möglichkeiten einen Flirt zu initiieren diskutiert und mit Übungen durch den Prozess geführt. Einzige Teilnahmevoraussetzung ist die Teilnahme an einer wissenschaftlichen Studie und der Vorbesprechung am 21.05.2010 um 19.00 Uhr (Raum I 2.38). Bewerbt euch jetzt unter abaranow@edu.uni-klu.ac.at, Betreff Flirtseminar, TeilnehmerInnenzahl ist begrenzt! Für weitere Fragen bitte ebenfalls an die angegebene Adresse schreiben.

Wann: Am 04.06.2010 von 9.00 – 14.00 Uhr für Männer

Am 04.06.2010 von 15.00 – 20.00 Uhr für Frauen

Wo: Seminarraum I 2.38

Wieviel: Für Studierende umsonst (Normalpreis: 99 €)