Summary

Building long-term personal relationships is an ubiquitous tendency of human beings. Throughout life we build friendships, collect acquaintances, forge business alliances, become attached to intimate partners. Many of these relationships follow us through our lives and integrate us into a complex social fabric of interpersonal connections. At the same time, establishing and maintaining lasting relationships involves substantial investments of one’s time, effort and other resources. Moreover, many relationships by definition require exclusivity. For example, it’s only possible to have one single best friend at a time, in many cultures only one spouse, and in many business settings only one supplier of some product. This means that we have to forgo relationships with potentially better alternative partners. And to complicate matters, even when we do our best to invest in a relationship, we have to live with the risk of being dumped for someone else or unknowingly being taken advantage of by our partner.

Why do people establish and maintain long-term relationships when these are costly, risky and exclusive? Explanations based on rational choice (Kollock, 1994; Yamagishi and Yamagishi, 1994; Yamagishi et al., 1994; Trivers, 1971; Friedman, 1971; Axelrod, 1984; Fehr and Schmidt, 1999; Fehr and Gächter, 2002; Falk et al., 2001) appear to be insufficient to account for some of the consistent behaviors people express in long-term relationships.

There are numerous cases, for example, when people keep relationships with partners who have proved to be untrustworthy (e.g. Roy, 1977; Strube, 1988; Rusbult and Martz, 1995). There are also examples for relationships where a partner has no means of reciprocating in the future (e.g. Monahan and Hooker, 1997). What is it that makes battered wives return to their abusive husbands when there are hardly any prospects for change? And why does someone take care of a life-long partner with Alzheimer’s disease who will never be able to recognize the caretaker? Why do subjects in controlled laboratory experiments give costly gifts to their long-term exchange partners when their identity will never be revealed to each other?

Apparently, people create social relationships with great ease even in the absence of materialistic benefits or other ulterior motives, and strongly re-
sist the dissolution of these relationships, well beyond rational considerations of practical advantages (Baumeister and Leary, 1995). Many of the strongest emotions people experience in their life, both positive and negative, are linked to long-term relationships. Furthermore, there is evidence that people observe and evaluate alternative partners with a biased vision, systematically dependent on how committed their current relationship is (Johnson and Rusbult, 1989). We know that even in anonymous exchange settings, positive emotions develop toward frequent exchange partners, and toward the relationship, which gradually becomes an object of value (Lawler and Yoon, 1996) in itself.

In order to resolve the paradox between rational and emotional explanations of interpersonal commitment, we put forward an evolutionary explanation. During countless years of prehistoric evolutionary adaptation in the human ancestral environment, people lived together in small groups and fought for daily survival in a world more hostile than today’s (Sterelny, 2003). With many of the formal and informal helping institutions of modern society missing, people had to rely on interpersonal relationships to a much larger extent than today. Being capable and willing to establish and maintain long-term stable relationships substantially increased one’s survival and reproductive chances. As a consequence, those whose cognitive arsenal was equipped with better tools and stronger preferences to make interpersonal commitments gradually increased their presence in the population over many generations (cf. Nesse, 2001a). And these evolved preferences and abilities still influence how people make decisions about their partners today (see e.g. Cosmides, 1989; Cosmides and Tooby, 1993).

**Results**

Since evolutionary theories are difficult to empirically test, our strategy is twofold. We first examine a theory of natural selection acting on commitment in closer detail (Part I). Building on previous work (especially de Vos et al., 2001) that relies on anthropological knowledge about conditions of the human ancestral environment, we created formal computational models of the ancestral environment.

In these simulations (Chapters 2-4) we found that strategies that possessed a tendency for commitment outperformed other strategies, such as fair reciprocation. Our results were stable across simulations, where individual strategies were matched against each other in an ecological competition, as well as in genetic simulations, where genotypes of mutating strategies contested their strengths under evolutionary selection pressures. We found (in Chapter 4) that even when there were large differences between individuals in helping capability, it was still better to have a preference for helping old friends (com-
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commitment) than a preference for helping the most attractive other. At the same time, we also emphasized the importance of fairness, which is probably another strong and cross-culturally stable preference (Fehr and Schmidt, 1999; Heinrich et al., 2001; Fehr et al., 2002).

In order to empirically test the existence of an evolved commitment trait (Part II), we conducted cross-cultural laboratory experiments at six locations in three different countries (the Netherlands, USA and China). In particular, we aimed to find support for decision mechanisms that are difficult to reconcile with current exchange theoretical and (social) psychological theories but become intelligible in light of the evolutionary explanation.

In Chapter 5, we uncovered support for the notion that people possess such a commitment bias: they hold on to their partners simply as a result of repeated encounters, and not necessarily as a result of instrumental benefits accumulated during encounters. Another finding of our experiments was that uncertainty decreased commitment, which is largely in contradiction with previous literature (Kollock, 1994; Yamagishi and Yamagishi, 1994; Yamagishi et al., 1998). To explain this anomaly, in a follow-up experiment (Chapter 6) we tested the hypothesis that social uncertainty only affects people who themselves wish to be cooperative, and have an opportunity to meet fellow cooperators. Furthermore, we found that there is at least one other important source of uncertainty that has been neglected in the exchange-commitment literature: resources. Similarly to social uncertainty, resource uncertainty increases commitment, especially when one has an opportunity to meet a high-resource partner.

But why are some people more committed than others? In order to explain some of the individual differences in commitment behavior, we linked the effect of resource and social uncertainty to psychological mechanisms. Building especially on Yamagishi’s works, we confirmed that general trust in people has a negative effect on the tendency to become committed to steady partners. Furthermore, we also showed that while general trust decreases commitment, optimism in a more general sense has a similar negative effect. Those who are generally optimistic are more likely to dissolve existing relationships and venture interaction with strangers.

Our work aimed to make a contribution to the comprehension of seemingly irrational decisions in durable relationships. We found support for the notion that people instinctively stick to their existing interpersonal relationships, more so than would seem rational given the circumstances. We argued that this tendency could be the result of a long-lasting evolutionary process. Furthermore, we advanced previous research on the relationship between commitment and one of its key rational sources, uncertainty.

Our efforts testify to the importance of interdisciplinary research. Without combining previous research and insights from psychology, sociology, economics and evolutionary theory, most alternative explanations of commitment
remain limited in their power and scope. Together, they promise to further our understanding of the wonderful and mysterious complexity of human nature.