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# TAKING IT PERSONALLY

SELF-ESTEEM AND THE PROTECTION OF SELF-RELATED ATTITUDES

**DAPHNE V. WIERSEMA**

# Taking it personally: Self-esteem and the protection of self-related attitudes

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# Contents

Chapter 1:	Introduction	5
Chapter 2:	Motivated memory: Memory for attitude-relevant information as a function of self-esteem	17
Chapter 3:	Shut your eyes and think of something else: Self-esteem and the use of distraction in dealing with counter-attitudinal content	47
Chapter 4:	The best defense is offense: Self-esteem and the effectiveness of two strategies for resisting persuasion	71
Chapter 5:	General discussion	87
	References	99
	Summary	113
	Samenvatting (Summary in Dutch)	119
	Dankwoord (Attitude of gratitude)	125
	KLI Dissertation Series	127



# Chapter 1

Introduction

## Taking it personally

We hold attitudes toward virtually everything we come across, such as attitudes toward objects (e.g. cars, cigarettes), an institution (e.g. the church, university), a person or social group (e.g. George Bush, Muslims) or an idea (e.g. abortion, the death penalty). Attitudes help us to make our way into the world by predisposing us to act toward an attitude-object in a predictable manner (Smith, Bruner, & White, 1956). For instance, a positive attitude toward Italian food diminishes the range of eligible restaurants to choose from, thereby making the choice less complex.

There is more to attitudes than them having objects and guiding our behavior. This becomes evident when examining how attitudes are defined. Attitudes have been defined as a “...psychological tendency to evaluate a particular entity with some degree of favor or disfavor” (Eagly & Chaiken, 1993, p. 1). This definition of attitudes as a *tendency* suggests that attitudes are to some degree stable, but can also be flexible. This is especially visible when we are confronted with persuasive appeals. Indeed, it is hard to think of situations void of attempts at persuasion. The moment we turn on our television, open a magazine or journal, travel through cyberspace or simply make our way in the “real” world, we are flooded by attempts to lure us into buying all kinds of consumer goods or by attempts to change our opinion on some societal issue. Estimates on the amount of advertisements we encounter daily in 1972 ranged from 117 to 484 (Britt, Adams & Miller, 1972). Nowadays, the Dutch are confronted every day with an amazing 2.005 television commercials, 2.452 radio commercials, 988 magazine and journal adds, not to mention the vast amounts of advertisements on the street, the internet and other locations (Acxiom, 2008). The sheer quantity and ubiquity of persuasive appeals suggests that they are effective in changing people’s attitudes. Indeed, our attitudes are often influenced by these appeals. An evocative example of how easily attitudes sometimes can be changed is related to the United States presidential election of 1960.

On the 26<sup>th</sup> of September of that year, Senator John F. Kennedy of Massachusetts, the Democratic candidate, and Vice President Richard Nixon, the Republican candidate took part in the first-ever televised presidential debate.



An estimated 80 million viewers tuned in to see this first of four “Great Debates” and were able to watch their candidates compete instead of listening to them on the radio or reading about them in the papers. The result was astonishing.

At the time, Nixon was just released from the hospital due to a knee injury. He looked tired (even more so because he refused to wear make-up), had lost a lot of weight, wore ill-fitting clothes and was visibly discomforted by the smooth delivery of his opponent. Indeed, Kennedy looked tanned, relaxed and confident. These contrasting appearances had a dramatic influence on people’s attitudes. After the debate, opinion polls indicated that the television viewers saw Kennedy as the absolute winner of the debate. However, people who had listened to the debate on the radio stated that Nixon had won the debate. At election time, more than half of the voters indicated that the televised debates had influenced their vote and 6 % based their vote entirely on the debates. Kennedy won the elections and became the thirty-fifth president of the United States of America.

The example above not only shows the tremendous impact television can have on us, but also shows how easily attitudes can sometimes be influenced. However, persuasive appeals are not always successful and it is these examples that have puzzled policy makers, advertisers and social psychologists most. An example of the difficulty of changing attitudes is the Dutch “no” with reference to a joint European constitution in 2005s referendum. In the run-up to the referendum, both the majority in the parliament as well as the government (especially the Dutch prime minister) incessantly stressed the importance of the constitution for the European Union as a whole and the Netherlands in specific. Despite these attempts, a vast majority of people voted against it. The same happened in France where only 45.1 % of citizens supported the constitution.

In the realm of consumer psychology, similar failures have occurred. In 1958 the first DAF passenger car was introduced to the Dutch public. This “DAF 600” had an innovative, fully automatic transmission system, the Variomatic, which made driving a lot easier. Although at first the DAF 600 was received positively by the public interest eventually waned due to image

## Taking it personally

problems. The car appealed mostly to seniors, especially elder women. As such, it became nicknamed as "*truttenschudder met jarretelaandrijving*" which means something like a twat-shaker with garter-drive, the garter referring to the rubber driver belts being part of the automatic transmission system. DAF was not able to turn the tide; in 1963 the production of the DAF 600 came to a halt and in 1975 DAF sold its passenger car division to Volvo.

These examples illustrate both the stability and flexibility of attitudes. However, it is often unclear why some attitudes are easily changed while others are not. The limited understanding of the factors contributing to persuasion has resulted in an accumulation of research on the how and when of persuasion. This research has looked at the phenomenon from diverse angles such as the message characteristics (e.g. strong versus weak arguments, Petty & Cacioppo, 1984), message source (e.g. expertise, Petty, Cacioppo, & Goldman, 1981), the receivers' responses to a persuasive message (Greenwald, 1968), the effects of fear aroused by a message (for a review see Ruiter, Abraham, & Kok, 2001), and characteristics of the attitude itself (e.g. ambivalence, Armitage & Conner, 2000; attitude importance, Zuwerinck & Devine, 1996), to name a few. However, the focus of this dissertation is not on persuasion per se, but rather is on the causes and consequences of resistance to persuasion.

The goal of getting people to change their attitudes – and the behavior that goes with it – seems to be opposite to that of attitude-holders themselves, because people often are motivated to protect their attitudes from change. This is apparent for instance in the tendency of people to avoid counter-attitudinal information and prefer exposure to information that supports their attitude (for a review, see Frey, 1989). This tendency is even more pronounced when the attitudes involved are "strong" (Brannon, Tagler, & Eagly, 2007).

Strong attitudes are characterized by their stability over time, resistance to persuasion and their strong impact on information processing and behavior (Krosnick & Petty, 1995). These four hallmarks of attitude-strength are related to various lower-order features of attitudes (i.e. attributes) such as the certainty with which they are held, the importance attached to them, their

accessibility and the amount of knowledge the attitude-holder has about an attitude-object, amongst others (e.g. Krosnick, Boninger, Chuang, Berent, & Carnot, 1993; Visser, Bizer, & Krosnick, 2006).

When examining attitude-strength features, it is evident that some reflect subjective and introspective judgments of attitude-holders with regard to their attitude (e.g. importance, certainty), while others represent structural properties of the attitude itself (e.g. accessibility). For example, accessibility of an attitude refers to the strength of the link between the representation of an attitude-object and its evaluation in memory measured as the speed with which an attitude is expressed. Attitude importance on the other hand, is based on a person's subjective feeling that an attitude is important. Important attitudes are thus attitudes that a person cares a lot about. It is this involvement that is assumed to motivate people to protect their attitude (Visser, Bizer, & Krosnick, 2006). Not surprisingly, higher levels of attitude importance are generally associated with lower levels of attitude change (e.g. Zuwerink & Devine, 1996). Attitude importance is thus a central ingredient and an important starting point for understanding resistance to persuasion.

Attitude importance is often treated as unitary construct, not divisible into other, lower-order constructs. However, this need not necessarily be the case. This point is best illustrated by thinking about what it is that makes an attitude important. For instance, I have a positive attitude toward spending the summer holidays in the south of France simply because I enjoy the sun, the sea and the French cuisine. This attitude is primarily based on personal experience and hedonistic aspects. My negative attitude toward university education becoming more and more scholastic on the other hand has nothing to do with how that affects me personally, but is caused primarily by my belief that students will learn more in a less scholastic environment; even if that means that they take longer to complete the curriculum. This attitude is mainly based on certain values I endorse. Even though both attitudes are equally important to me, they are so for different reasons. We will see that these different origins of attitude importance relate to how easily an attitude is changed.

## Taking it personally

In the literature, three different origins of attitude importance are being discerned: self-interest, social identification and value-relevance (e.g. Boninger, Krosnick, & Berent, 1995; Visser, Krosnick, & Norris, 2004, in Visser, Bizer, & Krosnick, 2006). Each of these three constructs was found to predict unique variance in the importance people attached to their attitudes. Hence, there is evidence suggesting that attitude importance is not a unitary construct. The three sources of attitude importance introduced above, map directly onto three psychological functions of attitudes described in the so-called functional theories of attitudes (Smith, Bruner, & White, 1956; Katz, 1960). The basic assumption of these theories is that instead of being motivationally void, attitudes fulfill important personal and social needs. These theories thus deal with the relationship an attitude-holder has with his or her attitude. The function of an attitude influences the quality of this relationship, the type of involvement a person has with an attitude and more importantly, the ease with which an attitude is changed. But before going into this, I will first briefly explain the three attitude-functions.

The social adjustment function is similar to the construct of social identification. According to the social adjustment function, attitudes can be used as a tool to maintain and facilitate or disrupt social relationships (Smith et al., 1956). For example, we tend to like people who have similar attitudes (Byrne, 1961; Byrne, & Griffitt, 1966). The utilitarian function maps onto the construct of self-interest. This function is based on the hedonic principle that people want to maximize rewards and minimize punishment (Katz, 1960). These attitudes thus serve an individual's (material) self-interest. For instance, my attitude toward spending my summer holidays in the South of France is based predominantly on hedonic principles. And last but not least, value-expressive attitudes are a means for expressing important personal values and central aspects of the self-concept. They are a reflection of who we are and what we stand for in life and expressing these attitudes is a means to self-actualize. My attitude toward university education becoming more and more scholastic is an example of an attitude that serves a value-expressive function for me. Crucially, the different attitude functions that correspond to the three antecedents of

attitude importance, affect how fiercely an attitude is protected. This will be explained below.

Attitudes serving a social adjustment function and attitudes serving a utilitarian function are more easily changed than attitudes serving a value-expressive function (Johnson & Eagly, 1989; Maio & Olson, 1995). The latter are highly resistant to persuasion. One explanation is that the former two functions are dependent upon external factors (social groups, material gains et cetera) that are susceptible to change and hence the attitude will change accordingly when the context changes. For example, my attitude toward spending the holidays in the South of France became more negative when I found out I was not the only one who liked France and had to share the beach with loads of other Francophiles. However, a value-relevant attitude is associated with, yet is even a part of a persons more stable self-concept and identity (Holland, 2003). If changing one's attitude implies changing the self, people should be reluctant to do so, as indeed they are.

Interestingly, the involvement people have with their value-expressive attitudes is equated with the involvement associated with another function of attitudes (Johnson & Eagly, 1989; Levin, Nichols, & Johnson, 2000): the externalization (Smith, Bruner, & White, 1956) or ego-defensive function (Katz, 1960). According to this function, people protect themselves from undesirable information about their personality, accomplishments, appearance et cetera. For instance, people engage in "memorial self-defense" when confronted with negative information about themselves: they tend to forget it (Sedikides & Green, 2004, 2000). Ego-defensive attitudes thus serve to defend one's self-image and self-esteem. If people are involved with their value-relevant attitudes in a way that is similar to that of ego-defensive attitudes, then defending an attitude in which one has high value-relevant involvement is equivalent to defending the self. Counter-attitudinal information can in this vein be considered as information that threatens the self and instigates self-protective behaviors. But what kind of behaviors do people perform to protect their value-relevant attitudes? This is the focus of the present dissertation.

## Taking it personally

If value-relevant attitudes are similar to ego-defensive attitudes, then the mechanisms that serve to protect them should also be similar. Katz (1960), building on Freudian principles, argues that ego-defensive attitudes can be protected via two separate classes of behavior. The essence of the first is the complete avoidance and denial of undesirable information; the second class has to do with rationalization, projection and displacement. Katz had distinctive views on these two classes arguing that the first class of behaviors is “primitive” and part of “the fantasy world of the paranoiac”, while the second behavioral class is “less handicapping” (p. 172). Although there is evidence that some of these Freudian defense-mechanisms do take place (Schimmel, Greenberg, & Martens, 2003; Baumeister, Dale, & Sommer, 1998), not all of these mechanisms let themselves translate easily to the situation where an individual is confronted with a counter-attitudinal message. For instance, it is hard to understand how projection - seeing (undesirable) traits that one thinks one does not possess in other people - might help a person in coping with the content of a message that is incongruent with his or her attitude on say, nuclear energy. However, a more basic understanding of these two behavioral categories would be that one is aimed at avoiding threatening, counter-attitudinal information altogether, while the other is aimed at dealing with it in a more direct fashion. Both strategies could be effective in protecting attitudes from change.

Although there is abundant evidence that the tendency to avoid or approach threatening information and situations exists (see Chapter 3, this dissertation), not much is known about when people are more likely to adopt one or the other strategy. In this dissertation I will explore the occurrence and outcomes of these two behavioral classes from an individual difference perspective. More specifically, I will investigate the role of self-esteem in relation to the two defensive strategies.

Self-esteem, in other words the attitude we have toward ourselves, is presumably the most consequential and important attitude we possess and the protection and enhancement of self-esteem is assumed to be a primary motive underlying human behavior (Allport, 1937; Brown & Dutton, 1995; Sedikides, 1993; Sedikides & Strube, 1997; Taylor & Brown, 1988; Tesser, 1988). The

range of behaviors people (can) employ in order to protect their self-esteem is infinite. All kinds of behaviors can serve to protect the self, a phenomenon that has been labeled fluid compensation (Tesser, 2000). For instance, after receiving negative feedback about my performance on an IQ-test, I can protect my self-esteem by just forgetting the feedback (Sedikides & Green, 2004), but can also do so by questioning the validity of the test, by making external attributions about the cause of my low score (e.g. I was tired; Miller & Ross, 1975; Zuckerman, 1979) or by lowering the importance I attach to the domain of the feedback (e.g. having a high IQ is not that important, but having a high EQ is; Simon, Greenberg, & Brehm, 1995). I can even try protecting my self-esteem before taking the IQ-test. For instance, I can drink too much alcohol the night before taking the test in order to have a good excuse for obtaining a low score, a tactic that falls under the umbrella of the more global construct of self-handicapping (Jones & Berglas, 1978). Whichever of these behaviors a person eventually performs, will in part depend on the situation. To give an example, if the IQ-test is a highly established and well-known test, questioning its validity will be difficult and it will be easier to attribute a low IQ-score to external sources such as noise, being tired, having a hang-over et cetera. However, in this dissertation I will focus on characteristics of the person instead of situational factors.

Although the self-defense motive is ubiquitous, a person's chronic level of self-esteem affects the specific shape this motivation takes on. Low self-esteem individuals appear to be focused primarily on avoiding the loss of self-esteem, while their high self-esteem counterparts are oriented toward enhancing their self-esteem (see Baumeister, Tice, & Hutton, 1989, for a review). These differences could contribute to low and high self-esteem individuals using different strategies in order to defend their self-esteem. For example, consider the possibility of presenting your research at a social psychology conference. On the one hand, there is much to gain from doing this such as getting acquainted with other researchers in your field, generating new ideas concerning your research, and receiving compliments about your presentation and research. On the other hand there is something to lose as well, such as potentially not being

## Taking it personally

able to answer tough questions from the audience, being visibly and audibly nervous, forgetting to convey crucial parts of your presentation, the audience not buying your story, and so on. If your motive is to avoid the loss of self-esteem, you would probably choose not to present at the conference. But if your motive is to enhance your self-esteem, presenting your research may not be such a bad idea.

The motive that is most likely to prevail could depend on level of self-esteem with low self-esteem individuals focusing on avoiding the loss of self-esteem and high self-esteem individuals focusing on enhancing their self-esteem. This implies that low and high self-esteem individuals may have different behavioral tendencies when dealing with situations that are a potential threat to the self. In this dissertation I will explore the attitude-protective strategies of low and high self-esteem people with respect to value-relevant attitudes.

## Overview of this dissertation

In this dissertation I will investigate how chronic levels of self-esteem relate to attitude-protective behaviors. More specifically, I will investigate if self-esteem is related to avoiding or dealing with threatening, counter-attitudinal information that is targeted at a value-relevant attitude. In Chapter 2, three studies are reported that investigate the relationship between self-esteem and memory for pro- and counter-attitudinal information. Since memory is the result of the way information was processed earlier on, participants' memory can reveal how attitude-relevant information was processed. In Chapter 3, the focus is on earlier stages of information processing. More specifically, the use of distraction as a means to avoid processing counter-attitudinal information is investigated. In Chapter 4 the effectiveness of different processing strategies on attitude maintenance is investigated. Finally, in Chapter 5 the main empirical findings and their implications for future research are discussed.







# Chapter 2

## Motivated memory: Memory for attitude-relevant information as a function of self-esteem <sup>1</sup>

In this chapter, we offer a new perspective on the contradictory findings in the literature on memory for attitude-relevant information. We propose that biases in memory are most likely to occur when the attitude involved is connected to personally important values and the self-concept, i.e. if the attitude serves a value-expressive function. Moreover, we argue that the nature of these biases depends on participants' self-esteem since self-esteem is related to the perceived individual ability to effectively refute counter-attitudinal information. Three studies show that for value-expressive attitudes, people with low self-esteem remembered more pro-attitudinal information while their high self-esteem counterparts remembered more counter-attitudinal information. We argue that this is the result of individual differences in processing style with high self-esteem participants employing active-defensive and low self-esteem participants using passive-defensive strategies. Implications and suggestions for future research are discussed.

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<sup>1</sup> This chapter is based on Wiersema, D.V., Van der Pligt, J., & Van Harreveld, F. (2008). Motivated memory: Memory for attitude-relevant information as a function of self-esteem. [under review].

## Taking it personally

Traditionally, psychologists have assumed that people have better memory for information supporting their attitude as opposed to information contrary to their attitude. Research on this so-called congeniality hypothesis (e.g. Eagly, Chen, Chaiken, & Shaw-Barnes, 1999) was inspired by Levine and Murphy's (1943) seminal finding that pro-communists had better memory for a pro-communist message, while anti-communists demonstrated enhanced recall for the anti-communist message.

The congeniality hypothesis can be related to people's motivation to defend their attitudes. For instance, people prefer information that supports their attitude over information that does not (Brannon, Tagler, & Eagly, 2007; Festinger, 1957; Frey, 1986; Smith, Fabrigar, Powell, & Estrada, 2007). However, people are not always in a position to choose which information they encounter. So what do people do when confronted with counter-attitudinal information? According to the congeniality hypothesis, people try to ignore it, pay little attention to it, or process it in a shallow manner. When both counter-attitudinal and pro-attitudinal information is present, as was the case in virtually all studies on the congeniality effect, the shallow processing of counter-attitudinal information should render it less memorable and consequently pro-attitudinal information relatively more memorable, thus establishing a congeniality effect (Eagly et al., 1999).

However, empirical evidence concerning the congeniality effect is rather mixed. Only a small majority of 70 studies included in an extensive meta-analysis displayed the congeniality effect, while the remaining studies showed no effect at all, or even an effect in the opposite direction (Eagly et al., 1999; see also Roberts, 1985). Moreover, when found, the congeniality effect was relatively weak. This led the authors to conclude that "the tendency for attitudes to bias memory in a congenial direction warrants description as extremely small or even as null" (Eagly et al., 1999, p. 84). Ever since publication of this meta-analysis the congeniality effect received only limited attention (but see Eagly, Kulesa, Brannon, Shaw, & Hutson-Cumeaux, 2000) and the puzzle remains unsolved. The current research aims to provide a solution to the contradictory findings in tests of the congeniality effect and provides new insights into the

onset, occurrence and direction of biases in memory for attitude-relevant information. More specifically, we will focus on the role of the self.

The assumption of enhanced memory for pro-attitudinal information fits well with early theories in psychology. In the work on cognitive dissonance for instance, it is argued that information that is incongruent (dissonant) with an existing set of beliefs will lead to feelings of discomfort (Festinger, 1957). This discomfort causes people to engage in actions to reduce it, for example by adjusting their attitude. Later work on the theory of cognitive dissonance has stressed the role of the self, claiming that it is not the cognitive dissonance per se, but rather the threat to self-integrity caused by a dissonant element that motivates people to reinstate consonance (Steele, 1988; Steele & Liu, 1983). When participants had the opportunity to self-affirm a personally important value or when they received positive feedback, thus safeguarding or boosting their self-integrity and self-esteem, dissonance effects decreased (Blanton, Pelham, DeHart, & Carvallo, 2001; Steele, Spencer, & Lynch, 1993).

The congeniality hypothesis seems to be, at least implicitly, based on a similar line of reasoning: counter-attitudinal information poses a threat to the self (via one's attitude) and therefore leads to self-protective, biased processing. We argue that this threat is likely to be more pronounced when it is targeted at an attitude closely connected to the self-concept. When this connection is weak, counter-attitudinal information should not pose a serious threat to the self-concept. In sum, biased memory should occur primarily for attitudes that are strongly linked to the self.

Attitudes that are said to have a strong link to the self are also known as serving a value-expressive function or having value-relevant involvement (Johnson & Eagly, 1989, 1990; Katz, 1960). Such attitudes are related to personally important values and moral judgments. Notwithstanding individual differences, typical examples of attitude-objects serving a value-expressive function are organ donation, a number of environmental issues, abortion, child adoption by homosexual couples and the death penalty. Interestingly, Holland (2003) demonstrated that attitudes that participants idiosyncratically rated as high in value-relevance became more accessible when primed with the self,

## Taking it personally

while those that were considered low in value-relevance did not. A reverse direction was also observed: priming with value-expressive attitudes made the self-concept more accessible while priming with attitudes that did not serve this function did not. These results suggest that there is an actual link between the self and value-relevant attitudes and support the claim that expressing an attitude with a value-expressive function is self-actualizing, reinstating self-identity (Katz, 1960).

The link with the self-concept can help to explain why value-expressive attitudes are so difficult to change (Johnson & Eagly, 1989; Maio & Olson, 1995). If changing one's attitude implies changing a cherished aspect of the self, people should be reluctant to do so. As Levin, Nichols and Johnson (2000, p. 164) state: "People who are involved with an attitude-issue in a manner similar to ... the value-expressive function are motivated to maintain their current attitude in defense of their values and self-concept". This involvement – also called ego-involvement (Sherif & Cantril, 1947) or value-relevant involvement (Johnson & Eagly, 1989) – can be equated with the involvement people have with attitudes serving an ego-defensive function (Johnson & Eagly, 1989; Katz, 1960; Levin, Nichols, & Johnson, 2000; also termed "externalization function": Smith, Bruner, & White, 1956). According to this function, people protect themselves from undesirable (i.e. negative) information about their personality, accomplishments, appearance et cetera. Ego-defensive attitudes thus serve to defend one's self-image and self-esteem. The finding that people typically have better memory for positive than for negative personal feedback illustrates this self-protection motive (Green & Sedikides, 2004; Sedikides & Green, 2004; 2000).

We argue that the self is contingent on value-expressive attitudes. By this we mean that information going against these attitudes is a potential threat to the self. This threat will instigate a need to protect the self. However, this does not necessarily imply that counter-attitudinal information is processed superficially as is assumed by the congeniality hypothesis. We believe that people can employ different methods to defend their attitude just as people can use different strategies to protect their self-esteem (see also Tesser, 2000).

Thus, instead of processing counter-attitudinal information passively, people can also employ more active strategies like counter-arguing.

This possibility was first introduced by Eagly and colleagues as a possible explanation for the limited empirical support for the congeniality hypothesis (Eagly, Kulesa, Brannon, Shaw, & Hutson-Cumeaux, 2000). They distinguished a passive-defensive and an active-defensive processing mode and argued that an absence of the congeniality effect could be attributed to people using active modes of processing instead of more passive ones. More specifically, the passive-defensive processing mode - where limited effort is expended at processing counter-attitudinal information - is associated with enhanced memory for pro-attitudinal information (i.e. the congeniality effect). In contrast, the essence of the active-defensive processing mode is the refutation of counter-attitudinal material, which necessarily implies more elaboration. In accordance with existing theories on human memory ( Craik & Lockhart, 1972), the degree of elaboration and processing depth is associated with the strength of a memory trace. Therefore, equal memory for counter- and pro-attitudinal information or even better memory for the first can be seen as the result of the more elaborate processing of counter-attitudinal content. These different processing modes may explain the mixed findings typically found in research on the congeniality effect. However, the question remains when either of these two modes is employed. We argue that individual differences in the strategy that is adopted for dealing with threats to the self-concept can give us further insight in the direction of biases in memory for attitude-relevant information. More specifically, we will focus on the role of self-esteem.

Because value-expressive attitudes are linked to the self-concept we expect self-esteem, being one of the most important and central aspects of the self-concept (Greenwald, Bellezza, & Banaji, 1988), to affect how people deal with counter-attitudinal information. Self-esteem, the esteem or worth one attributes to oneself, is related to the confidence one has in one's capacity to take on life's challenges, i.e. self-efficacy (e.g., Judge, Erez, Bono, & Thoresen, 2002) and perhaps as a result of that confidence with how one deals with situations that are threatening to the self (McGregor & Marigold, 2003;

## Taking it personally

Beauregard, & Dunning, 1998; Blaine & Crocker, 1993). With regard to attitudes, self-esteem is related to the concept of defensive confidence: the belief that one can successfully defend one's attitude. This conviction of high self-esteem participants led them for instance to select information incongruent with their attitude to a higher degree than participants with low self-esteem (Albarracín & Mitchell, 2004). Thus, high self-esteem participants tended to approach counter-attitudinal information to a higher degree than low self-esteem participants. We argue that this will also apply to the processing of attitude-relevant information itself, which will result in qualitative differences in memory for that information. More specifically, we expect participants with low self-esteem to have enhanced memory for pro-attitudinal information as a result of the passive-defensive processing of counter-attitudinal information. In contrast, their high self-esteem counterparts will demonstrate enhanced memory for counter-attitudinal information as a result of their active-defensive processing. We do not expect differences between low and high self-esteem participants in processing pro-attitudinal information since this information should not pose a threat.

## Overview

This chapter contains three studies that all investigate the hypothesis that biased memory is most likely to occur for attitudes in which people have high levels of value-relevant involvement. Furthermore, we expect the direction of this bias to depend on participants' level of self-esteem. We expect participants with high self-esteem to have enhanced memory for counter-attitudinal information, reflecting an active-defensive processing mode while those with low self-esteem will show a more passive-defensive processing mode, leading to a congeniality effect. In Study 2.1 participants' attitude, their value-relevant involvement and their self-esteem were measured and their combined effects on memory were investigated. In Study 2.2 we manipulated value-relevance in order to rule out an alternative hypothesis. In Study 2.3 we manipulated participants' self-esteem at different stages of information processing in order to find out where biases in memory originate.



## Study 2.1

## Method

*Participants.* A total of 46 undergraduate psychology students (39 female, 7 male;  $M_{\text{age}} = 20.22$ ,  $SD = 2.78$ ) at the University of Amsterdam took part in this study in exchange for course credit or money (€ 4).

*Materials and Procedure.* Participants were seated in separate cubicles. Up to eight participants were tested in each session. Participants completed the tasks independently on a personal computer. The study was introduced as a study on public opinion. The attitude-issue was the United States' military presence in Iraq. Participants' attitude was assessed with two items using 7-point scales (1 = *disagree*, 7 = *agree*; 1 = *negative*, 7 = *positive*). The mean score on these two items represented the overall attitude ( $r = .94$ ). Value-relevant involvement was measured with three items that were based on Pomerantz, Chaiken and Tordessilas (1995); "How central is your attitude toward the U.S. military presence in Iraq to your self-concept?" (1 = *not at all*, 7 = *very much*), "My attitude toward the U.S. military presence in Iraq reflects the kind of person I am." (1 = *disagree*, 7 = *agree*), and "My attitude toward the U.S. military presence in Iraq reflects values that are important to me." (1 = *disagree*, 7 = *agree*). These items tap on both the perceived link of an attitude with personally important values and the link with the self-concept. An index of the value-relevance was created out of the mean score on these three items ( $\alpha = .79$ ).<sup>2</sup> We also assessed attitude importance (1 = *unimportant*, 7 = *important*) and attitude certainty (1 = *uncertain*, 7 = *certain*). Subjective ambivalence was assessed with three items that tap into the cognitive, affective and behavioral bases of ambivalence (Priester & Petty, 1996). The mean score on these three items represented an index of ambivalence ( $\alpha = .81$ ). Participants' global self-esteem was measured with the Rosenberg Self-Esteem Scale (Rosenberg, 1965) that was administered as part of a mass-testing session participants attended to

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<sup>2</sup> Although these three items are presented as two separate concepts in the research of Pomerantz, Chaiken and Tordessilas (1995), we choose to combine them into one theoretical construct in order to be true to Katz's formulation of the value-expressive function of attitude.

## Taking it personally

approximately one month earlier. All scales were 7-point scales ranging from 1 (*does not describe me*) to 7 (*describes me*).

After the attitude measurements, participants were asked to memorize twelve statements about the U.S. military presence in Iraq. Six of these statements were in favor of and 6 were against the U.S. military presence in Iraq. Examples are: "The U.S. military presence in Iraq is beneficial to democracy." and "The U.S. military presence in Iraq leads to a worldwide radicalization of Islamic people." Each statement was presented for eight seconds and was followed by a blank screen. The blank screen was replaced after one second by the next statement. The order of statements was randomized. Subsequently, participants engaged in an unrelated filler-task for approximately ten minutes after which they were asked to report on all the presented statements they could remember. They were allowed to spend up to five minutes on this free-recall task. Finally, participants' attitudes were assessed for the second time after which they were thanked and debriefed.

## Results and Discussion

*Descriptives.* Two independent raters judged participants' retrievals. The agreement between the two raters was  $\kappa = .82$  for the statements favoring and  $\kappa = .88$  for the statements opposing the U.S. military presence in Iraq. Retrieval scores were combined into a mean score for the pro-statements and a mean score for the anti-statements. Of the twelve statements presented to participants, the mean number of correct retrievals was 4.19 ( $SD = 1.90$ ). The mean number of recalled pro-statements was 1.82 ( $SD = 1.20$ ). An average of 2.37 ( $SD = 1.32$ ) anti-statements were retrieved. One participant did not remember any of the statements and was excluded from the analyses.

Overall, the attitude toward the U.S. military presence in Iraq was somewhat negative ( $M = 3.40$ ,  $SD = 1.52$ ). The perceived value-relevance of the attitude was on average 3.89 ( $SD = 1.28$ ). The distribution of self-esteem scores in our sample was negatively skewed ( $M = 4.98$ ,  $SD = 1.07$ ).

*Memory.* In accordance with the recommendations of Aiken and West (1991), all predictors were centered to make their means equal to zero. Separate regressions were performed for memory for pro- and anti-statements.<sup>3</sup> All predictors (attitude, value-relevance and self-esteem) and their interaction terms were regressed simultaneously onto the dependent variable. For the anti-statements this yielded no significant results, but for the pro-statements a significant two-way interaction of value-relevance and self-esteem was found,  $\beta = .381$ ,  $t(44) = 2.32$ ,  $p = .026$ . This two-way interaction was further qualified by the expected three-way interaction of attitude, value-relevance and self-esteem,  $\beta = -.383$ ,  $t(44) = -2.28$ ,  $p = .029$ .

To find out if biases in memory are indeed more pronounced for participants for whom their attitude is high in value-relevance, separate regression analyses were performed for participants low ( $-1$  SD) and high in value-relevance ( $+1$  SD). As expected, for those having attitudes low in value-relevance the two-way interaction of attitude and self-esteem was not reliable ( $t < 1$ ). In contrast, for those with highly value-relevant attitudes the two-way interaction was reliable,  $\beta = .141$ ,  $t(44) = -3.26$ ,  $p = .002$ . Thus, participants with high, but not those with low value-relevant involvement show biases in memory.

Furthermore, we expected the direction of bias in memory to depend on participants' level of self-esteem. Therefore, we performed simple slope analyses at 1 standard deviation above and below the mean of the predictor self-esteem to further probe the significant interaction of self-esteem and attitude. The simple slope of attitude was significant for participants with relatively low self-esteem ( $-1$  SD),  $\beta = .621$ ,  $t(44) = 2.60$ ,  $p = .013$ ,  $pr = .39$ , as well as for those with relatively high self-esteem ( $+1$  SD),  $\beta = -.631$ ,  $t(44) = -2.22$ ,  $p = .032$ ,  $pr = -.34$ . This indicates that both high and low self-esteem participants have selective memory as a function of their attitude. Most relevant, the pattern of the interaction shows that the direction of this selective memory is different for

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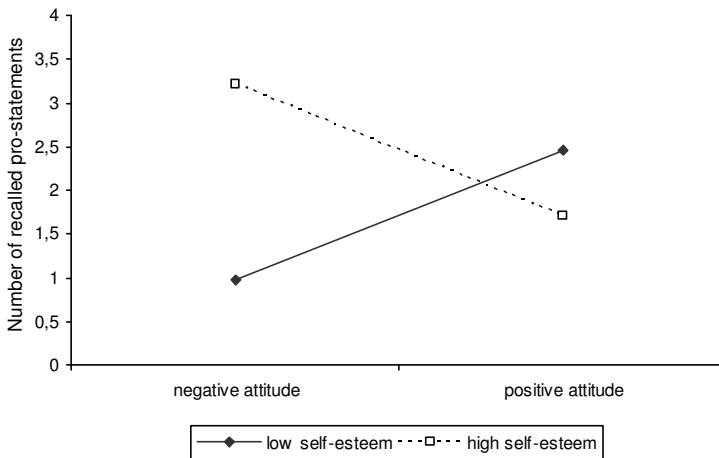
<sup>3</sup> We also performed a regression analysis on a difference score between amount of remembered pro- and anti-statements. This did not result in a significant outcome. The same is true for Study 2.2 and Study 2.3.

## Taking it personally

those with high and low self-esteem. Participants with high self-esteem remembered more pro-statements when having a more negative attitude. Participants with low self-esteem showed the congeniality effect. For them, positive attitudes coincided with enhanced recall for the pro-statements (see Figure 2.1).<sup>4</sup>

We also checked if attitude importance, certainty and ambivalence affected memory for these statements, which was not the case. Furthermore, memory for pro-and memory for anti-statements did not correlate significantly with amount of attitude change.

*Figure 2.1.* Memory for pro-statements for low and high self-esteem participants with attitudes high in value-relevant involvement.



These results provide support for the hypothesis that biases in memory are more likely to occur for attitudes that are high in value-relevance and that the nature of these biases depends on self-esteem. In terms of

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<sup>4</sup> Scores for different levels on the continuous, independent variables in Figure 2.1 are obtained by estimates at 1 standard deviation below and above the mean. This applies to all figures in this dissertation.

processing modes, the results suggest that participants with high self-esteem use active-defensive processing strategies that render counter-attitudinal information more memorable, while participants with low self-esteem adopt a more passive-defensive processing mode resulting in better memory for pro-attitudinal information.

Self-esteem did not correlate with any of the indices of attitude-strength (attitude importance, certainty, ambivalence, and value-relevance). This suggests that the differential effects on memory were not due to low and high self-esteem participants having differing levels of attitude strength. But value-relevant involvement is considered an aspect of attitude strength (Boninger, Krosnick, & Berent, 1995; Boninger, Krosnick, Berent, & Fabrigar, 1995). It is of no surprise then that our involvement measure did correlate with the other indices of attitude strength like ambivalence and certainty. Although these strength-indices were not related to memory for the statements, it could be premature to conclude that it is the link with the self that is responsible for the effects since the design of Study 2.1 was correlational. Hence, in our second study we seek to address this issue more directly by experimentally manipulating the perceived amount of value-relevant involvement. As in Study 2.1, we expect biases in memory to occur primarily at high involvement and that self-esteem affects the direction of this bias. A pilot study was conducted first in order to test our manipulation of value-relevance.

## Study 2.2

### Pilot-study

*Participants, Design, Manipulation, and Measures.* A total of 58 undergraduate students (49 female, 9 male;  $M_{age} = 20.16$ ,  $SD = 2.12$ ) at the University of Amsterdam participated for course credit or money (€ 3). Participants were randomly assigned to either the high value-relevance or low value-relevance condition.

The pilot-study was introduced as a study on students' opinions on societal topics. The target issue was the potential entry of Turkey into the European Union. This issue was covered often in the media at that time. Before participants were given the opportunity to express their attitude, involvement was manipulated by means of a rank ordering task. A list of four issues was presented to participants, the second of which was always the target issue of Turkey and the European Union. They were asked to rank order the issues in terms of how closely they felt connected to it. Depending on condition, the three issues surrounding the target issue were systematically varied. The rationale of this manipulation was, that the value-relevance of the target issue could be influenced by that of the remaining three issues. In the high value-relevance condition, the surrounding issues were assumed to be low in value-relevance as compared to the target issue. An example of such an issue assumed low in value-relevance is the prohibition of angling in a local river. The relative insignificance of the surrounding issues was hypothesized to raise the perceived value-relevance of the target issue. In the low value-relevance condition, the surrounding issues were presumably very high in value-relevance such as the debts of Third World countries and legalization of gay marriage, and were hypothesized to lower the perceived value-relevance of our target issue.

After the rank ordering task, participants' attitude toward the entry of Turkey in the European Union was assessed with two items on 9-point semantic differential scales ("With respect to Turkey's entry in the European Union, I..." 1 = *totally disagree*, 9 = *totally agree*; "My attitude toward Turkey's entry in the European Union is..." 1 = *extremely negative*, 9 = *extremely positive*). The mean

score of these two items constituted an index of participants' overall attitude ( $\alpha = .93$ ). We also assessed attitude importance, attitude certainty, ambivalence and the three items measuring value-relevance (see Study 2.1 for a description). The mean of these last three items formed an index of value-relevance and also served as the manipulation check ( $\alpha = .79$ ). All items were accompanied by 9-point scales.

*Results.* To check whether the rank ordering task did affect the perceived value-relevance of the attitudinal issue, an ANOVA was performed on the value-relevance index with condition (low value-relevance vs. high value-relevance) as independent variable. Results yielded a significant effect of condition,  $F(1, 57) = 4.92, p = .031, \eta^2 = .08$ . Participants in the low value-relevance condition rated their attitudes as less value-relevant ( $M = 3.79, SD = 1.44, n = 32$ ) than participants in the high value-relevance condition ( $M = 4.71, SD = 1.70, n = 26$ ). This difference was also reflected by the rank number that was assigned to the issue of Turkey's entry in the European Union. Participants in the high value-relevance condition assigned a higher position to the target issue ( $M = 1.92, SD = .83$ ) than participants in the low relevance condition ( $M = 3.17, SD = .87$ ). Furthermore, the manipulation only affected participants' ratings of value-relevance without affecting the attitude itself or the attitude strength measures ( $F_s < 1$ ). The only dependent variable approaching significance was importance ( $F = 1.7, ns.$ ), which is not surprising since value-relevant involvement is an antecedent of attitude importance (Visser, Bizer, & Krosnick, 2006). Since our manipulation worked and did not have any unwanted side effects, we decided to use it in Study 2.2.

## Method

*Participants.* Undergraduates of the University of Amsterdam ( $N = 57$ ; 50 females, 7 males;  $M_{\text{age}} = 20.40, SD = 3.64$ ) completed this study in exchange for course credit or money (€ 4).

*Materials and procedure.* Upon entry, participants were welcomed by the experimenter and seated in separate cubicles. Up to eight participants were

## Taking it personally

tested in each session. Participants completed the tasks independently on a personal computer. Participants were randomly assigned to either the high or low value-relevance condition. As in the pilot study, the experiment was introduced as a study on students' opinions on societal topics and the target issue was the possible entry of Turkey into the European Union. Before participants were given the opportunity to express their attitude on this issue, the perceived value-relevance was manipulated by means of the rank ordering task described above.

After the manipulation, participants' attitude toward the entry of Turkey in the European Union was assessed with two items on 9-point scales (1 = *extremely negative*, 9 = *extremely positive*; 1 = *totally disagree*, 9 = *totally agree*). An index of participants' overall attitude was created on the basis of the mean score on these two items ( $r = .87$ ). Participants' self-esteem was assessed with the Rosenberg Self-Esteem Scale (1965) that was administered at a mass testing session participants attended to approximately two months earlier. Ratings were made on scales ranging from 1 (*does not describe me*) to 7 (*describes me*). The self-esteem scale had good reliability ( $\alpha = .89$ ).

Subsequently, participants read an article supposedly from a Dutch newspaper. The article contained two interviews, each with a supposed Dutch member of the European Parliament. One of them was against the entry of Turkey in the European Union and the other favored Turkey's entry. Each respondent gave five statements in support of his opinion. The two interviews approximated each other in length (400 versus 376 words). Participants read the interviews at their own pace and – in contrast with Study 2.1 – did not know their memory for the statements was to be assessed later on. The order in which the two interviews were presented was systematically varied.



An example of a statement arguing against Turkey's entry in the EU is:

“When the geographical position of Turkey is taken into account, it stands out that Turkey is more part of Asia than Europe. More specifically, over 75% of Turkey's soil is located in Asia. Therefore, the mere consideration of Turkey as a possible member of the E.U. is strange, even more so given the fact that Morocco was denied access to the E.U. on geographical grounds. Europe should respect its own borders.”

An example of an argument favoring Turkey's entry is:

“The appeal of Turkey and Europe is not something new. Historically, Turkey and Europe always had close ties. For instance, as early as 1100 B.C. Greeks set foot on present Turkey's soil. The combination of the Greek culture and the influences of the original inhabitants led to a new highly developed culture. In the fourth century B.C., Alexander the Great conquered the area and in the second century B.C. Caesar Constantine even declared present Istanbul main capital of the Roman Empire. Thus, Turkey's entry in the E.U. would fit perfectly in this historical tradition.”

After a filler-task that took participants approximately ten minutes to complete, participants spent up to five minutes writing down the statements from the two interviews they could remember. Finally, their attitude was assessed once again after which they were thanked and debriefed.

## Results and Discussion

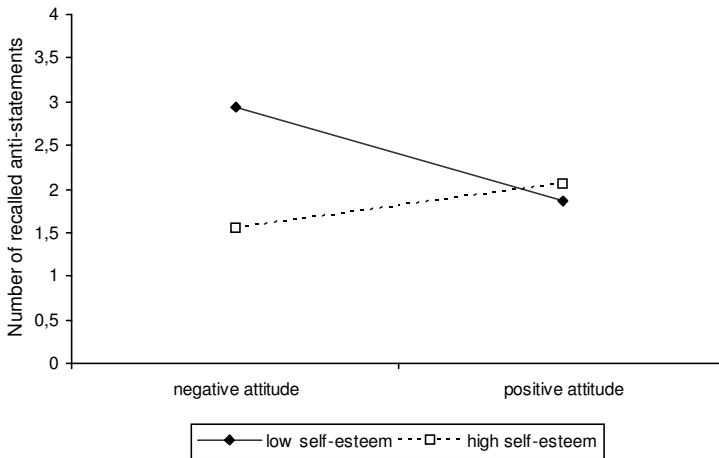
*Descriptives.* Two independent raters who were blind for condition coded the retrievals. The agreement between the two raters was  $\kappa = .76$  for the anti-statements and  $\kappa = .70$  for the pro-statements. The ratings for pro- and anti-statements were combined into one mean score for the number of recalled pro-statements and a mean score for the number of recalled anti-statements. First we checked for order effects of the two interviews. ANOVAs revealed that order did not affect the amount of pro- and anti-statements participants retrieved ( $F_s < 1$ ), so order was dropped from the analyses. Furthermore, none of the independent variables had independent effects on reading times. The mean

## Taking it personally

attitude score was slightly positive ( $M = 5.39, SD = 1.64$ ). The distribution of self-esteem was negatively skewed ( $M = 5.16, SD = 1.00$ ). There were no outliers.

*Memory.* Predictors were centered on their means and used as continuous variables (Aiken & West, 1991). Condition, attitude, self-esteem and their interaction terms were entered into the regression simultaneously. Results yielded a three-way interaction of condition, attitude and self-esteem on the anti-statements,  $t(56) = -2.83, p = .007$ . To test the hypothesis that biased memory is strongest in the high value-relevance condition two separate regression analyses were performed for participants in the low and high relevance condition using dummy coded variables. In the high value-relevance condition the two-way interaction approximated significance,  $t(56) = 1.97, p = .055$ . For participants lower in self-esteem, the simple slope of attitude was marginally significant,  $\beta = -.523, t(56) = -1.69, p = .098, pr = -.23$ . For those higher in self-esteem the simple slope was not significant ( $F > 1, pr = .16$ ). The pattern of the interaction though fully supports our hypothesis and replicates the pattern we found in Study 2.1 for participants high in value-relevance (see Figure 2.2). Low self-esteem participants show the congeniality effect; they remember more anti-statements when their attitude is against Turkey's entry into the European Union. High self-esteem participants on the other hand, have enhanced recall for anti-statements when they have a positive attitude toward Turkey's entry in the European Union.

Figure 2.2. Memory for anti-statements for low and high self-esteem participants in the high value-relevance condition.



In the low value-relevance condition an unexpected interaction of attitude and self-esteem was found,  $t(56) = -2.05, p = .046$ . The simple slopes of attitude were not reliable for either low (-1 SD) or high self-esteem participants (+1 SD). However, the data suggest a pattern opposite of that found in the high value-relevance condition. Thus, participants with low self-esteem remembered more anti-statements when being in favor of Turkey's entry in the EU while high self-esteem participants remembered more of these statements when being negative about Turkey's entry in the EU.

Again, memory for the pro- and anti-statements did not correlate with attitude change, although these correlations were marginally significant in the low value-relevance condition ( $ps \leq .10$ ). This seems to suggest that, when participants are highly involved in their attitude, the processing strategies they employ serve the goal to prevent their attitude from changing, while at low relevance memory these strategies are less a reflection of defensive processing.

### Study 2.3

The previous two studies showed that participants low and high in self-esteem differ qualitatively in their memory for attitude-relevant information. In the introduction, we related these differences to low self-esteem participants employing a passive-defensive and high self-esteem participants an active-defensive processing style. This idea places the origin of biases in memory at the encoding stage. That is, biases in memory are the result of the differential allocation of attention and resources to pro- and counter-attitudinal information at the first encounter. Of course one could also argue that these selective effects in memory are due to processes at the retrieval stage.

Thus, although pro- and counter-attitudinal information received equal amounts of attention at the encoding stage and thus should be similarly accessible at retrieval, still one will be recalled better than the other. This is the case for instance when the attitude itself serves as retrieval scheme (Bartlett, 1932), causing people to remember predominantly information that fits the scheme (i.e. pro-attitudinal information). Evidence for these reconstructive processes comes from the finding that sometimes biases in memory are somewhat stronger when the memory measurement is delayed rather than immediate (Eagly, Chen, Chaiken, & Shaw-Barnes, 1999; Roberts, 1985).

Study 2.3 addresses whether the selective effects on memory are due to processes at the encoding stage or at the retrieval stage. We do this by investigating the role of self-esteem at these two separate stages in information processing. In this study participants are given the opportunity to enhance their self-esteem either just before encoding the persuasive content or just before retrieving it. If biases in memory originate from processes during encoding, the self-esteem manipulation will affect the nature of biases in memory *only* when it precedes the encoding stage. When participants enhance their self-esteem after the encoding stage, this will not affect their memory since these biases originated earlier. Therefore, we do not expect the pattern of biased memory to be affected if the self-esteem manipulation follows upon the encoding stage. However, when the manipulation precedes encoding, low self-esteem

participants are expected to show the pattern of biased memory that is associated with high self-esteem participants due to the boost in their self-esteem. For an attitude object high in value-relevance, this would imply relatively better memory for incongruent information. We do not expect high self-esteem participants to be affected by the self-esteem manipulation because their self-esteem is high to begin with. This implies that they will demonstrate relatively better memory for incongruent information than for congruent information, irrespective of the manipulation. An additional benefit of this method is that it enables us to establish the role of self-esteem more firmly.

## Method

*Participants.* A total of 82 undergraduate psychology students (63 female and 19 male,  $M_{\text{age}} = 20.49$  years,  $SD = 2.59$ ) took part in this study in exchange for course credit or money (€ 4). Participants were randomly assigned to either the boost-before-encoding or boost-after-encoding condition.

*Materials and procedure.* Upon entry participants were seated in separate cubicles. Up to eight participants were tested simultaneously. They were told that they were to take part in a series of unrelated studies. Ostensibly, the goal of the first study was to compare several measurements of personality with each other. In between several filler items, participants' self-esteem was assessed with the Rosenberg Self-Esteem Scale (1965,  $\alpha = .88$ ) on a 7-point scale ranging from 1 (*does not describe me at all*) to 7 (*totally describes me*).

The next study was presented as a study on students' opinions. The attitude-issue was related to organ donation. More specifically, it was about the role of relatives of the deceased in giving permission to the donation of the organs of their deceased relative. In the Netherlands, even if a person has indicated to be willing to donate organs, close relatives can veto this decision if they do not feel comfortable with the organ donation. The issues of organ donation and the lack of donor organs were frequently covered in the media at that time and a pilot study established that this attitude-issue was highly value-

## Taking it personally

relevant to our participants.<sup>5</sup> Participants' attitude on the right of veto of close relatives in case of organ donation was assessed with two items using 9-point scales (1 = *extremely negative*, 9 = *extremely positive*; 1 = *totally disagree*, 9 = *totally agree*). The mean score on these two items constituted an index of participants' overall attitude ( $r = .90$ ).

After expressing their attitude, half of the participants were given the opportunity to enhance their self-esteem while the remaining participants were engaged in a neutral filler-task. Participants in the boost-before-encoding condition were given the opportunity to raise their self-esteem in a study that was supposedly about personality, values and personal experiences. For the manipulation of self-esteem we adopted a task developed by Cohen, Aronson and Steele (2000). First, participants selected from a list of eleven values the one value that was most important to them. Examples of values are music, sports, aesthetics and romance. Subsequently, they were asked to write down two personal experiences where this value played an important role. They were asked to make clear in their writings how this value relates to their experience and why this value is so important to them. Furthermore, the experiences they wrote down had to give them a positive feeling about themselves. We reasoned that writing about experiences that made participants feel good about themselves would temporarily boost their self-esteem.<sup>6</sup>

While participants in the boost-before-encoding condition were working on the personality and values task, participants in the boost-after-

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<sup>5</sup> Issues included in the pilot study were, among others: terrorism, a database of genetic profiles, and chemical castration of pedophiles. Participants expressed the amount of value-relevant involvement on 9-point semantic differential scales for each issue separately. Participants were most involved with the issue of organ donation ( $M = 5.26$ ,  $SD = 1.96$ ). Furthermore, when asked to indicate with which issue they felt least involved, only 3 out of 99 participants selected the topic of organ donation.

<sup>6</sup> Although Schmeichel and Martens (2005) did not find effects of this task on state self-esteem, we think that this may be caused by differences between the instruction Schmeichel and Martens gave participants and the instruction used by Cohen, Aronson and Steele (2000). More specifically, participants in the research by Cohen et al. were instructed to write about experiences that "made you feel good about yourself" while this sentence is absent in the Schmeichel and Martens instruction. Thus, in the current study we adopted the approach by Cohen et al.

encoding condition were asked to copy a neutral text on the production and usage of asphalt. Subsequently, all participants were welcomed back to the study on opinions. They were asked to memorize ten statements concerning close relatives' right of veto with regard to organ donation. Five of the ten statements were in favor and five were opposing the right of veto. Each statement was presented on the screen for ten seconds after which a blank screen followed. After one second, the blank screen was replaced by a new statement. Each statement was presented once and statements appeared in random order.

Following this encoding stage, all participants engaged in an unrelated filler-task that took approximately eight minutes. After this, participants in the boost-before-encoding condition, who already received the self-esteem manipulation, copied the text on asphalt while participants in the boost-after-encoding condition engaged in the task designed to heighten their self-esteem. Thus, in the end all participants performed the same tasks, but the order in which the tasks were presented was systematically varied. The final phase of this experiment consisted of the free recall task for which participants were given up to five minutes followed by a repeated measure of their attitude.

## Results and Discussion

*Descriptives and outliers.* Two independent raters judged participants' retrievals. The agreement was  $\kappa = .80$  for anti-statements and  $\kappa = .92$  for pro-statements. Two indices of participants' memory were created from the mean of the two coding schemes for pro-statements and the mean of the coding schemes for anti-statements. Memory for the anti-statements ( $M = 2.16, SD = 1.04$ ) was somewhat better than that for pro-statements ( $M = 1.70, SD = .95$ ). On average, participants remembered a total of 3.86 statements ( $SD = 1.52$ ).

Participants were moderately negative about relatives having the right to veto someone's decision to donate organs ( $M = 4.09, SD = 2.16$ ). The distribution of the self-esteem score was negatively skewed ( $M = 5.08, SD = .47$ ). Participants with outlying self-esteem scores ( $z$  value more than 3 or less than

## Taking it personally

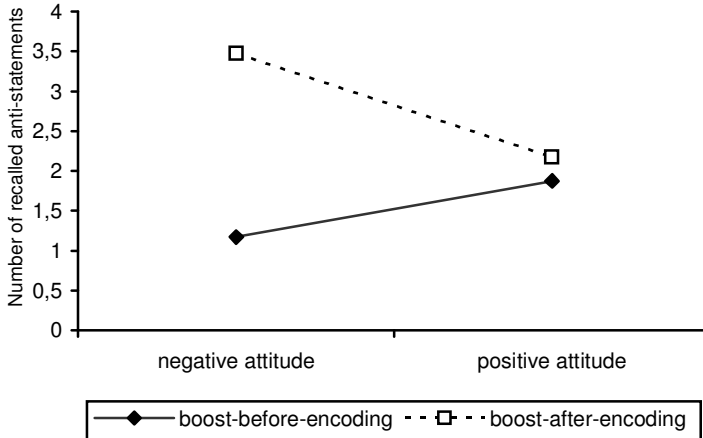
minus 3,  $n = 2$ ; Stevens, 1996) were excluded from the analyses as well as participants who did not remember any of the presented statements ( $n = 6$ ). The final sample thus consisted of 74 participants.

*Memory.* All independent variables were centered before entering them in the regression (Aiken & West, 1991). Condition, attitude and self-esteem as well as their interaction terms were entered simultaneously. No effects were found on the pro-statements. For the anti-statements results yielded a marginally significant main effect of self-esteem,  $\beta = -.228$ ,  $t(73) = -1.85$ ,  $p = .055$ . More importantly, the hypothesized three-way interaction of condition, self-esteem and attitude was found,  $t(73) = 2.56$ ,  $p = .013$ .

To test the hypothesis that low but not high self-esteem participants are affected by the timing of the self-esteem manipulation, separate regression analyses were performed for low ( $-1$  SD) and high self-esteem ( $+1$  SD). For participants with low self-esteem, we found the expected two-way interaction of condition and attitude,  $t(73) = -2.02$ ,  $p = .048$ . We tested the simple slopes of attitude for each condition separately using dummy coded variables for condition. In the boost-before-encoding condition, the simple slope of attitude was significant,  $\beta = .482$ ,  $t(73) = 2.15$ ,  $p = .035$ ,  $pr = .26$ . In the boost-after-encoding condition the slope was not significant ( $t < 1$ ,  $pr = -.11$ ). The pattern of biased memory supports our expectations. When the self-esteem manipulation followed encoding, participants with low self-esteem and a negative attitude remembered more anti-statements. Thus, when self-esteem is heightened after encoding it does not affect the nature of bias in memory. However, when the self-esteem boost preceded encoding, the nature of biased memory reverses. Now participants with a dispositional low self-esteem remember more anti-statements when their attitude is more positive (see Figure 2.3). This pattern reflects that normally found for participants with dispositional high self-esteem.



Figure 2.3. Memory for anti-statements for low self-esteem participants as a function of condition (boost-before-encoding vs. boost-after-encoding).



A somewhat surprising finding was that, for high self-esteem participants the two-way interaction of condition and attitude was marginally significant,  $\beta = .46$ ,  $t(73) = 1.80$ ,  $p = .08$ . This suggests that they also are somewhat affected by the manipulation. Although the simple slopes of attitude do not reach significance in either of the two conditions the pattern of results reveals that, when the self-esteem boost follows upon encoding, high self-esteem participants with a positive attitude remember more anti-statements. When participants performed the self-esteem task before encoding, they remember more anti-statements when their attitude is also more negative. This pattern resembles that normally found for participants with dispositional low self-esteem.

The reason why participants with high levels of self-esteem are somewhat affected by the manipulation is unclear. Inspection of the correlation between the (log-transformed) time participants spent on the affirmation task and their self-esteem scores does reveal that high self-esteem participants spent less time writing down positive experiences than low self-esteem participants ( $r$

## Taking it personally

= -.25,  $p = .031$ ). Furthermore, this overall negative correlation is caused primarily by the relationship between self-esteem and the time spent writing up a second experience ( $r = -.30$ ,  $p = .01$ ). The same pattern was found for the amount of words participants wrote down. However, since they already had high self-esteem, it is unlikely that spending less time on a task designed to heighten self-esteem should in fact lower it.

Another possibility is that thinking about why values are important to you and consciously thinking of an experience that made you feel good about yourself, somehow made participants doubt about the reasons for their high level of self-esteem. This kind of effect is found in research on a related concept, that of self-concept clarity. Self-concept clarity refers to the degree to which someone's self-beliefs are clearly and confidently defined, internally consistent and stable. Participants with higher levels of self-esteem tend to also have higher levels of self-concept clarity (Campbell et al., 1996). However, it was found that self-reflection lowered self-concept clarity (and thus possibly self-esteem) for female participants, but only for those who initially scored high on self-concept clarity (Csank & Conway, 2004). Since our sample mainly consists of women, it could well be that our self-esteem manipulation had the same kind of effect on our high self-esteem participants.

We also tested if our independent variables affected participants' Time 2 attitude. This was not the case. Memory for pro- and anti-statements also did not correlate with the attitude change score, implying that participants' processing was targeted at maintaining the attitude.

Although the reasons for the marginal reversal of the nature of memory bias for high self-esteem in the boost-before-encoding condition remain unclear, the results of Study 2.3 clearly suggest that biased memory is due to processes at the encoding and not the retrieval stage. The patterns of biased memory for both low and high self-esteem participants were affected only when the self-esteem manipulation was presented before the encoding stage. Furthermore, these results confirm the role of self-esteem in affecting memory for information related to an attitude that is connected to the self-concept. Low self-esteem participants who raised their self-esteem right before

encoding the information, showed the pattern of biased memory associated with high self-esteem participants.

### General discussion

The present studies help to explain contradictory findings in the literature regarding memory for attitude-relevant information and suggest an important role for the self. The findings reveal biases in memory for attitude-relevant information and these biases occur primarily for attitudes that are perceived as connected to personally important values and the self. Moreover, the direction of these biases depends on level of self-esteem.

Results of Study 2.1 show that participants high in self-esteem tend to have better memory for information that contrasts their attitude while participants low in self-esteem tend to selectively retain congruent information. This pattern was only found in case of high value-relevance. In Study 2.2 the perceived value-relevance of the attitude was experimentally manipulated. Only in the high value-relevance condition the pattern of biased memory of Study 2.1 was replicated. Again participants with high self-esteem demonstrated relatively better recall for counter-attitudinal as opposed to the situation where this information was pro-attitudinal, while their low self-esteem counterparts showed the opposite pattern. In the low value-relevance condition an unexpected interaction of self-esteem and attitude was found. The pattern of this interaction was exactly opposite from that found in the high relevance condition.

The goal of Study 2.3 was twofold. One aim was to investigate the causal role of self-esteem more directly by employing an experimental design in which self-esteem was manipulated. The pattern of biased memory of participants with low self-esteem, who were provided the opportunity to boost their self-esteem, reflected that of participants with high self-esteem: both remembered more anti-statements when having a positive attitude. Interestingly, this was only the case when the self-esteem manipulation preceded the encoding of attitude-relevant information. This finding pertains to

## Taking it personally

the second goal of Study 2.3; i.e. to shed more light on when biases in memory originate. Since the self-esteem manipulation only affected the nature of biased memory when it was presented before encoding, this suggests that biases in memory originate at the encoding stage. This is in accordance with the conception of the active-defensive and passive-defensive processing modes.

It must be noted that in all three studies the hypothesis was confirmed only for one set of statements. For instance, in Study 2.1 the predicted effects were found for the pro-statements, while there were no effects for the anti-statements. In Study 2.2 and Study 2.3, the effects were obtained for the anti-statements. Generally, the congeniality effect is tested by computing a difference score (the number of remembered pro- versus anti-statements) and no separate analyses are reported for pro- and anti-statements. Our research shows considerable variation when we look at pro- and anti-statements separately. It may well be the case that strong effects on one set of statements also predominantly drove effects in previous research. Some of the earlier studies that *have* reported statistical data on both argument-sets confirm this. For instance, participants in a study by Furnham and Singh (1986) demonstrated biased memory only for the pro-statements. Likewise, Jamieson (1970) finds an effect only for participants who were identified as pro.

The differences between sets of statements could be due to a number of factors such as the relative novelty of pro- versus anti-statements. For instance, one could argue that due to the notably negative attention given to the American military presence in Iraq in the Dutch media, the positive side of the story was less familiar to participants and therefore more threatening. It might thus be that statements that are relatively new to participants and not yet very well incorporated into their attitudinal structure are more threatening than “old” statements and therefore more likely to lead to defensive processing. Future research should shed more light on this issue.

Encoding information and being able to retrieve it at a later point in time are intrinsically related. Basically, memory can be seen as a reflection of processes taking place earlier in the sequence of the different stages of information processing. This implies that our data reveal something about the

way information was encoded in the first place. Thus, the finding that participants with high self-esteem demonstrate enhanced memory for counter-attitudinal information indicates that they encoded this material in a more elaborate fashion than the pro-attitudinal material. We suggest that the essence of this elaboration primarily concerns the refutation of uncongenial material. If this is indeed the case, then preventing high self-esteem participants from counter-arguing should result in more attitude change than would be the case in “normal” processing conditions. The biased memory of low self-esteem participants on the other hand suggests a processing mode low in elaboration that is best described as shallow. Yet, it is less clear what this shallow processing actually encompasses. To elucidate this point, assume that low and high self-esteem people have the same amount of resources to begin with. If high self-esteem people use the bulk of their resources to rebut uncongenial material, where do low self-esteem people expend their resources?

People can use multiple methods more or less at the same time for dealing with uncongenial information and some of these methods need not necessarily concern the uncongenial information itself. A possibility that has not been covered extensively in the literature on the congeniality effect is that of low self-esteem people shifting attention to congenial information. The congeniality hypothesis and the active- and passive-defensive processing modes are formulated wholly in terms of how people process uncongenial information. For example, the idea that the shallow processing of uncongenial information in the passive-defensive processing mode renders congenial information relatively more memorable says nothing about how people process the latter. Memory for congenial information is thus primarily seen as a result of the way uncongenial information is processed. However, it could be that in addition to or instead of the shallow processing of uncongenial material, low self-esteem people focus more on congenial material as a means of coping with uncongenial information. This could have been the case in Study 2.2 and Study 2.3 where the differences between low and high self-esteem people are most pronounced when information matched their attitude. Thus, future research should also address what people do with information that does match their attitude.

## Taking it personally

Another strategy for dealing with counter-attitudinal content is by mentally distracting attention away from the threatening material. In the coping literature this is known as avoidant or emotion-focused coping (Folkman & Lazarus, 1980). According to this strategy, instead of dealing with the problem itself, people allocate attention to other aspects of their life. In our case, people with low self-esteem could have disengaged themselves mentally by thinking for instance about the coffee date they have planned after the experimental session or even literally disengage themselves by looking away from the computer screen and investigating the color of the wall paint. Since low self-esteem participants lack in defensive confidence (Albarracin & Mitchell, 2004) shifting attention away from the threat seems to be a safe way to go. If this is indeed the case, then individuals with low self-esteem will be more readily distracted by stimuli unrelated to the counter-attitudinal information as opposed to high self-esteem individuals. The aim of Chapters 2 and 3 in this dissertation is to improve our insight into the nature of the active-defensive and passive-defensive processing styles.

Attitudes guide information processing, but people turn out to be selective in the attitudes they use as guiding principles. Although Eagly and colleagues (1999) already hinted at the possible role attitude functions could play, the present research is the first to experimentally demonstrate the effects value-expressive attitudes exert on memory and information processing. These effects show that people are headstrong when it comes to their self-concept and values. Changing a value-expressive attitude is undesirable since it would imply admitting that one's core values, the things one stands for in life and the stuff that constitutes one's self-concept, are wrong. Although people low and high in self-esteem use different strategies to protect their attitudes, leading to differences in memory and possibly different long-term effects on their attitudes, they share the same intention: the aim to protect valued attitudes.







## Chapter 3

### Shut your eyes and think of something else: Self-esteem and the use of distraction in dealing with counter-attitudinal content <sup>7,8</sup>

Three studies investigated the hypothesis that people with low but not high self-esteem tend to avoid (the processing of) information that is incongruent with prior attitudes in which they have high levels of value-relevant involvement. In Study 3.1 participants were given the opportunity to postpone and avoid reading a counter-attitudinal article. Participants with low self-esteem did so to a higher degree than high self-esteem participants. In Study 3.2, low self-esteem participants performed better than high self-esteem participants on a distracting task immediately after they heard that they were going to read a counter-attitudinal article. In Study 3.3, participants watched an interview containing several arguments related to their attitude. The interview also contained distracting news headlines that were presented as scrolling text at the bottom of the screen. When the content of the interview was incongruent with participants' attitudes, low self-esteem participants had better memory for the news headlines than their high self-esteem counterparts.

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<sup>7</sup> This Chapter is based on Wiersema, D. V., Van der Pligt, J., & Van Harreveld, F. Shut your eyes and think of something else: Self-esteem and the use of distraction in dealing with counter-attitudinal content. [unpublished manuscript]

<sup>8</sup> We would like to thank Chantal den Daas for help in collecting the data of Study 3.2.

## Taking it personally

The phrase “Tell me what you read, and I tell you who you are” illustrates the popular belief that the books we read, and more in general our possessions, reveal something about who we are. Research has indeed shown that the objects we possess and the way our homes are decorated and furnished tells something about our personality and that people are intuitively quite accurate at grasping other people’s personality on the basis of their possessions (Gosling, Ko, Mannarelli, & Morris, 2002). Thus, it seems that people can be identified by their possessions. Similarly, objects like our car, clothes, and designer couch can become part of our extended self-concept (Belk, 1988). We would like to argue that this idea not only applies to physical properties but also to immaterial domains such as beliefs, attitudes and preferences. Abelson (1986) was one of the first to characterize beliefs and attitudes as “possessions”.

People value properties that are connected to their self-concept more than those not connected to their self-concept. This is evidenced for instance by the mere ownership effect and the effects associated with the “minimal group” paradigm. These effects show that objects or groups that are (experimentally) linked to the self are assigned a higher value by participants than objects and groups that are not linked to the self (e.g. Beggan, 1992; Gawronski, Bodenhausen, & Becker, 2006; Tajfel, Billig, Bundy, & Flament, 1971). Similarly, properties that are intrinsically tied to the self, like the letters in our name, are generally assigned a higher value than properties not connected to the self (Nuttin, 1985; 1987).

It is of no surprise then that people cherish and protect these self-symbols. The (potential) loss of, or damage to self-symbols is often interpreted as a threat to the self and is likely to instigate self-protective actions. For example, we protect our house and possessions by installing burglar alarms and we protect our favorite skirts, jackets et cetera from moths by keeping them in a plastic cover. This is not only true for the material properties we collect, but also applies to immaterial domains. For instance, De Dreu and Van Knippenberg (2005) proposed that arguments and beliefs can become part of our extended self-concept leading to defensive cognitions and behavior when these beliefs are challenged. Thus, defending an attitude can be paralleled with defending the

self. However, past research has indicated that people are not equally protective of all attitudes. People are especially protective about attitudes that are perceived as being identity-defining and part of the self-concept (Johnson & Eagly, 1989; Maio & Olson, 1995; Zuwerink & Devine, 1996). These personally important attitudes are referred to as attitudes serving a value-expressive function (Katz, 1960), or attitudes in which we have value-relevant involvement (Johnson & Eagly, 1989). In Chapter 2, we presented several examples of these attitudes such as organ donation, a number of environmental issues, abortion, child adoption by homosexual couples and the death penalty. In relation to these attitudes, people tend to be less open minded to new, incongruent information and are more motivated to maintain their attitude.

Not surprisingly, the same applies to the attitude most closely connected to our self-concept: our self-esteem. It is generally assumed that the protection and enhancement of self-esteem is a primary motive underlying human behavior (Allport, 1937; Brown & Dutton, 1995; Sedikides & Strube, 1997; Taylor & Brown, 1988; Tesser, 1988). This motive is especially potent when a threat is present (for review, see Campbell & Sedikides, 1999). Past research has indicated that there are multiple means to protect a threatened self-concept and self-esteem. An example is Tesser's work on fluid compensation (Tesser, 2000, 1988). We argue that the same should hold for the ways in which value-relevant attitudes are being protected.

In the realm of attitudes, two global defensive strategies are being discerned: a passive-defensive and an active-defensive strategy (Eagly, Kulesa, Brannon, Shaw, & Hutson-Cumeaux, 2000). People employing the first strategy are primarily concerned with avoiding (the processing of) information that is incongruent with their attitude. People who adopt an active-defensive strategy on the other hand, aim to rebut the counter-attitudinal information. Both strategies are concerned with resisting persuasion, but do so in entirely different ways.

The two strategies outlined above seem to have a lot in common with a variety of other psychological constructs. Examples are the distinction between problem-focused versus emotion-focused coping (Folkman & Lazarus,

## Taking it personally

1980) and the similar distinction between active versus avoidant coping (Holahan & Moos, 1987). Coping theory is concerned with how people deal with stressful and unpleasant situations. People who employ emotion-focused coping strategies are concerned primarily with getting a grip on their emotional and physical reactions as well as with avoiding the problem altogether. One way to accomplish this is by seeking (mental) distraction. The key is that people employing emotion-focused coping do not deal with the problem itself which is exactly what people using problem-focused coping intend to do. They attend to the problem at hand in order to solve it.

A similar distinction can be found in personality systems interactions (PSI) theory (Kuhl, 2000). According to this theory, affect-regulation can be divided into two broad categories: state- versus action-orientation. Individuals who are action-oriented will take goal-oriented actions when faced with worsened basic affect - the goal of course is to feel more positive - while state-oriented individuals dwell upon their negative affect (rumination) and show a lack of appropriate actions. Other psychological constructs that rely on such a distinction are, amongst others promotion versus prevention focus (Higgins, 1997), monitoring versus blunting (Miller, 1980), sensitization versus repression (Byrne, 1964; Gudjonsson, 1981; Houston & Hodges, 1970), and behavioral activation (BAS) versus behavioral inhibition (BIS) (Carver & White, 1994, Gray, 1981; 1982). In sum, all these distinctions correspond with the taxonomy of Eagly et al. (2000) who contrast a passive-defensive with an active-defensive strategy of dealing with counter-attitudinal information. Interestingly, there is only limited information about when and why people are more likely to adopt either one of these two strategies. We propose that people's self-esteem predicts which strategy is employed.

First, when choosing to face a difficult situation instead of ignoring that situation, a person needs to have confidence in the ability to solve the problem. These kinds of generalized self-efficacy beliefs are more common for high self-esteem individuals. Moreover, there is evidence suggesting that self-esteem and generalized self-efficacy are part of the same higher-order construct (Judge, Erez, Bono, & Thoresen, 2002). On a more specific level, high self-esteem

individuals tend to have more faith in their capability to defend their attitudes (defensive confidence). This confidence, in turn, translates into behavior: individuals with higher levels of defensive confidence expose themselves to counter-attitudinal information to a higher degree than those low on that trait (Albarracin & Mitchell, 2004). It is clear that these behaviors bear possible risks and could have negative effects. For instance, by exposing oneself to counter-attitudinal information, the persuasive appeal could result in unwanted attitude change (see Albarracin & Mitchell, 2004). Nonetheless, it is well documented that people with high self-esteem engage in risky behaviors more readily than people low in self-esteem (e.g. Lakey, Rose, Campbell, & Goodie, 2007; McElroy, Seta, & Waring, 2007; Wild, Flisher, Bhana, & Lombard 2004). However, it is not necessarily the case that high self-esteem individuals take these risks without taking precautions. When a threatening and unpleasant situation was forewarned, high but not low self-esteem people took preparations in order to cope successfully (anticipatory coping; Newby-Clark, 2004). For instance, high self-esteem individuals can prepare for an upcoming confrontation with a counter-attitudinal essay by generating arguments in advance that support their attitude. To summarize, the self-efficacy beliefs that accompany high self-esteem will lead high self-esteem individuals to actively approach threatening situations to a higher degree than low self-esteem individuals.

It seems intuitively appealing that the tendency that someone exhibits at an early stage is related to how a person behaves later on. In other words, if one tends to seek out information that goes against one's attitude, it seems unlikely that one backs out when being confronted with the counter-attitudinal content. Thus, the behavior one exhibits at the exposure stage should be related to how the information one is being exposed to is being processed at subsequent stages of information processing (i.e. attention and memory). The literature provides some confirmatory evidence for this assumption. For instance, bias at exposure of information did predict bias at later stages of information processing (Smith, Fabrigar, Powell, & Estrada, 2007). Therefore, we may assume that the higher levels of defensive confidence (associated with high self-esteem) that lead to the selection of counter-attitudinal information (Albarracin

## Taking it personally

& Mitchell, 2004), will also lead to less avoidant behavior when the threatening information is to be dealt with. Thus, threatening information will be attended to more, and remembered better by high self-esteem individuals. Indeed, the research described in Chapter 2 (this dissertation) showed that individuals with high self-esteem tended to have better memory for information that went against their attitude than low self-esteem individuals. This implies that high self-esteem individuals attended more to the counter-attitudinal content than their low self-esteem counterparts.

Interestingly, several correlational studies show that people with low self-esteem tend to rely on avoidant strategies such as mental disengagement while people with high self-esteem use more active, problem-focused coping strategies (Carver, Scheier, & Weintraub, 1989; Holahan & Moos, 1987; Mullis & Chapman, 2000; Smith, Wethington, & Zhan, 1996). Self-esteem is also positively correlated with dispositional tendencies toward behavioral activation (BAS), promotion focus and action orientation which are all associated with movement toward goals, rewards and dealing with difficult situations, while low self-esteem is related to behavioral inhibition (BIS) and rumination (Study 2, McGregor, Gailliot, Vasquez, & Nash, 2007) which are associated with anxiety and movement away from goals. Our own correlational data confirm that high self-esteem individuals are more action oriented than low self-esteem individuals (Wiersema, 2007). In the light of these findings, we expect high self-esteem individuals not only to actively approach potentially threatening, counter-attitudinal information to a higher degree than low self-esteem individuals, but also to process this information in an active-defensive manner while low self-esteem individuals will resort to more passive-defensive strategies.

## Overview

We tested these ideas in three studies. In Study 3.1 participants were given a say in when (and if) they would read a counter-attitudinal essay in order to investigate their tendency to approach or avoid counter-attitudinal information. In Study 3.2 participants thought that they were going to read a counter-attitudinal essay but were presented with an unrelated task first. Performance on this task was taken as a measure of participants' motivation to avoid thinking about the upcoming counter-attitudinal content. Finally, in Study 3.3 attitude-relevant information was presented simultaneously with information unrelated to the focal issue. Memory for the unrelated information was taken as a measure of the use of avoidant strategies for coping with the counter-attitudinal content.

## Study 3.1

### Method

*Participants.* A total of 105 undergraduate students (78 female, 27 male) from the Radboud University Nijmegen participated for money (€ 3). Their mean age was 20.03 ( $SD = 2.95$ ). Participants were randomly assigned to condition.

*Materials and procedure.* Up to seven participants were tested in one session. Upon arrival, participants were welcomed by the experimenter and were seated behind a personal computer in separate cubicles.

The first part of the experiment was presented as a study on personality characteristics. Self-esteem was measured with the ten item Rosenberg Self-Esteem Scale (Rosenberg, 1965). Items were rated on 9-point scales ranging from 1 (*does not describe me*) to 9 (*describes me*). The self-esteem scale had good reliability ( $\alpha = .87$ ). When participants completed the personality study, a new study "Opinion Poll 2006" was introduced which was supposedly on students' opinions about societal issues, in this case about their opinion about the possible entry of Turkey in the European Union. However, before allowing participants to express their opinion, they were asked to rank order

## Taking it personally

four issues, including the target issue, in terms of how important they were for their personal identity. The goal was to manipulate the perceived value-relevance of the target issue. The procedure was the same as in Study 2.2 in Chapter 2. In the low value-relevance condition, the issue of Turkey and the EU was surrounded by three highly value-relevant topics: euthanasia, developmental aid and sustainable energy. We expected the perceived value-relevance of the target issue to go down. In the high value-relevance condition, the surrounding issues were presumed low in value-relevance (the issues concerned street lamps, a silly television game show and font sizes on labels on consumer goods). We expected that the relative insignificance of these issues with reference to the target issue would heighten its perceived value-relevance. Next, participants' attitude was measured with one dichotomous item (*pro – con*). Based on their score on the dichotomous attitude measure, participants who were against Turkey's entry in the EU were thanked for their participation and debriefed.

Participants who were in favor of Turkey's entry in the EU (62.9 %) took part in the following experiment. They were informed that they were about to read an article on Turkey's possible entry in the European Union that supposedly had appeared in a Dutch newspaper ("De Volkskrant") recently. The title of the article was provided in order for participants to find out if the nature of the content would be pro- or counter-attitudinal. The title was: "Beauty on the outside, ugly on the inside: Why Turkey should not be part of the European Union". However, the article never followed. Rather, participants were informed that they were to take part in an experiment aimed to make psychological experiments more agreeable by giving them control over the sequence of the experiments. Therefore, they were allowed to have a voice in the order of the experiments planned in the current experimental session. The titles of four studies were given, one of which was the study participants were just participating in: "Opinion Poll 2006–continued". The other titles were unknown and neutral to participants ("UOPL-III", "Navon Task", and "Herrek Inventory – Dutch"). Participants were asked to rank order the four experiments in terms of which one they wanted to perform first, second, and so on. They were also



informed that although they were supposed to complete all four of the studies, experience learned that there was not enough time to complete all four. This implies that, if participants were unwilling to read the article concerning Turkey's entry in the EU, they could accomplish this by assigning a higher rank-number to it. After rank ordering the four studies, participants were thanked and debriefed.

## Results and Discussion

*Descriptives and outliers.* On the dichotomous attitude measure 62.9 % of participants ( $n = 66$ ) expressed a positive attitude toward Turkey's entry in the EU. A Chi Square Test confirmed that no differences emerged in participants' attitudes as a function of condition. The definitive sample thus consisted of 66 participants (74.2 % female,  $M_{\text{age}} = 20.14$ ,  $SD = 2.98$ ). The distribution of participants between the two conditions was satisfactory with 53% of participants ( $n = 35$ ) in the low value-relevance condition. The distribution of participants' self-esteem scores was negatively skewed ( $M = 6.46$ ,  $SD = .92$ ). The mean rank number assigned to the target experiment was 2.32 ( $SD = 1.28$ ) and participants used the total range (1 to 4). There were no outliers.

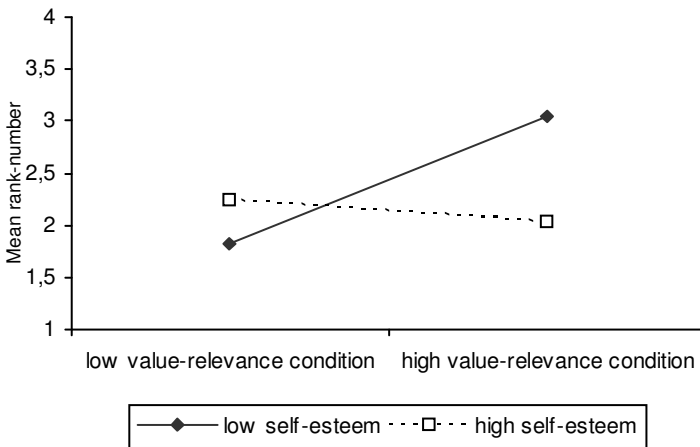
*Task avoidance.* We expected participants with low self-esteem to assign a lower position (i.e. a higher rank number) to the target experiment "Opinion Poll 2006" than participants with higher self-esteem as a means to avoid reading the counter-attitudinal article. However, we expected these differences to emerge only in the high value-relevance condition. Thus, we expected to find a two-way interaction of condition and self-esteem.

First, we centered the independent variables (Aiken & West, 1991). Subsequently, condition and self-esteem and their interaction term were entered in the regression simultaneously. The interaction was reliable,  $t(65) = -2.373$ ,  $p = .021$ . In order to perform separate regressions in each of the two conditions, condition was dummy-coded. As expected the simple slope of self-esteem was only significant in the high value-relevance condition (low value-relevance,  $t < 1$ ),  $\beta = -.396$ ,  $t(65) = -2.50$ ,  $p = .015$ ,  $pr = -.303$ . Participants with

## Taking it personally

low self-esteem assigned a higher rank number to the target than their high self-esteem counterparts. This suggests that participants low in self-esteem tried to avoid future confrontation with the counter-attitudinal information.

Figure 3.1. Mean rank-number assigned to the experiment containing the counter-attitudinal content as a function of condition (low or high value-relevance) and self-esteem.



Note. Higher rank-numbers signify that participants are motivated to postpone or avoid reading the counter-attitudinal article.

As can be seen in Figure 3.1, only low self-esteem participants seem to differ between conditions in their behavioral tendencies to avoid counter-attitudinal content. The tests of the simple slopes for low and high self-esteem confirms this: the main effect of condition was only reliable for low self-esteem participants,  $\beta = .49$ ,  $t(65) = 2.88$ ,  $p = .005$ ,  $pr = .344$ .

The results of this experiment suggest that low self-esteem participants are motivated to postpone or even avoid confrontation with counter-attitudinal information to a higher degree than high self-esteem participants. This finding is in accordance with the literature on self-esteem showing that people rely on behavioral tendencies that can be roughly classified

as tendencies to approach or avoid situations that pose a threat to the self. More specifically, these results are in line with the findings of Albarracín and Mitchell (2004) who showed that participants with high defensive confidence (i.e. high self-esteem) tended to select more counter-attitudinal information than participants low in defensive confidence (i.e. low self-esteem) who tended to prefer pro-attitudinal information. However, the Albarracín and Mitchell experiment dealt explicitly with information selection since participants were instructed to select pro- and/or counter-attitudinal information. In our research, participants' awareness of them selecting (or not) counter-attitudinal information was less evident because they chose between different experiments. Moreover, the choice alternatives (i.e., remaining experiments that participants could choose from) were neutral to participants while this is not the case when choosing between pro- and counter-attitudinal information.

Participants with low self-esteem seem motivated to avoid exposure to counter-attitudinal content. They did so by choosing to engage in other experiments first. By postponing exposure to the counter-attitudinal content by preferring to engage in other experiments, they could avoid thinking about the upcoming counter-attitudinal contents. If this is true, we expect low self-esteem participants to be eager to invest resources in tasks that are unrelated to the counter-attitudinal content, resulting in better performance on these tasks than their high self-esteem counterparts. Accordingly, in Study 3.2 we investigate if the desire to distract attention away from counter-attitudinal content results in better performance on an unrelated task. In this study, participants engage in a working memory task directly after being informed about an upcoming counter-attitudinal article they have to read. If participants want to avoid thinking about the upcoming counter-attitudinal article, they can do so by allocating attention to the working memory task. We expect this to be especially the case for low self-esteem participants. For high self-esteem participants we expect performance on the working memory task to be impaired relative to a pre-measure. Impaired performance is taken as evidence that high self-esteem participants are already preparing for the upcoming confrontation with the

## Taking it personally

counter-attitudinal article, for instance by generating arguments that support their initial attitude.

### Study 3.2

#### Method

*Participants.* A total of 66 undergraduate psychology students (46 female, 20 male;  $M_{\text{age}} = 22.77$ ,  $SD = 8.02$ ) at the University of Amsterdam took part in this study in exchange for course credit or money (€ 4).

*Materials and Procedure.* Participants were seated in separate cubicles. Up to eight participants were tested in each session. Participants completed the tasks independently on a personal computer.

The first part of the experiment consisted of the pre-measure of working memory performance. Participants were presented with a total of 60 sentences in a fixed order. The goal was to memorize the last word of each sentence until cued to write them down. This had to be done in the exact order of presentation. The amount of words participants had to store in working memory went up from two to six words and every amount was tested three times. Thus, first participants had to remember two words three times. Then participants memorized three words three times et cetera. Participants remembered a total of 60 words. Participants' entries were saved.

The next study was introduced as a study on public opinion. The attitude-issue was nuclear energy. More specifically, we asked our Dutch participants to indicate if they thought their country should invest (more) in nuclear energy, for instance by building a new nuclear power plant. Participants expressed their attitude on two 7-point scales (1 = *disagree*, 7 = *agree*; 1 = *negative*, 7 = *positive*). The mean score on these two items represented the overall attitude ( $r = .90$ ). Value-relevance was measured with three items taken from Pomerantz, Chaiken and Tordessilas (1995). These items assess both value-relevance and the perceived link with the self. An example of the latter is: "How central is your attitude toward investing in nuclear energy to your self-concept?" (1 = *not at all*, 7 = *very much*). An example of an item measuring the

link with values is: “My attitude toward investing in nuclear energy reflects values that are important to me” (1 = *disagree*, 7 = *agree*). An index of value-relevance was created out of the mean score on these three items ( $\alpha = .79$ ).

Participants’ global self-esteem was measured with the Rosenberg Self-Esteem Scale (1965) that was administered as part of a mass-testing session participants attended to approximately one month earlier. All scales were 7-point scales ranging from 1 (*does not describe me*) to 7 (*describes me*). Reliability was good ( $\alpha = .82$ ).

After participants expressed their attitude, they were told that they were about to read an article on nuclear energy that had allegedly appeared in a Dutch newspaper (“*De Volkskrant*”) recently. The title of the article was included to give participants an idea about the valence of the article. The title was: “The nonsense of fear: How an irrational fear for a second Tsjernobyl leads to severe shortage of our national energy supply”. When participants pressed the “ok” button to start reading the article, the post-measure of the working memory task was presented to them. This task was identical to the pre-measure except for the content of the sentences and thus the words they had to memorize. The difference in performance between the pre- and post-measure is taken as a measure of distraction seeking. After completing this task, participants were thanked and debriefed.

## Results and Discussion

*Descriptives and outliers.* Participants’ performance on the working memory task was coded as follows. Every word that was retrieved on the position corresponding with the presentation order was rewarded with one point. For instance, if one of the sequences consisted of the words “dog”, “garden” and “refrigerator” and a participants’ response was: “dog”, “refrigerator” and “garden”, only one point was given. A maximum of sixty points could thus be obtained. Separate sum-scores were created for the pre- and post-measure. Finally, subtracting the post-measure from the pre-measure created a difference score. A negative difference score implies better

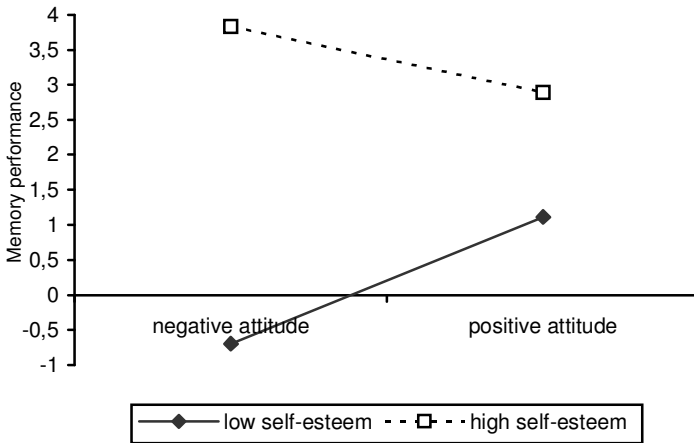
## Taking it personally

performance on the post-measure. A paired samples t-test indicated that the overall performance on the pre-measure ( $M = 40.23$ ,  $SD = 9.55$ ) was somewhat better than that on the post-measure ( $M = 38.80$ ,  $SD = 9.31$ ),  $t(65) = 2.04$ ,  $p = .046$ .

Participants had slightly negative attitudes toward investing in nuclear energy ( $M = 36.91$ ,  $SD = 22.87$ ). Mean value-relevance was 40.55 ( $SD = 22.52$ ). Self-esteem was negatively skewed ( $M = 6.87$ ,  $SD = 1.08$ ). There were no outliers on any of the independent or dependent variables.

*Working memory capacity.* In accordance with the recommendations of Aiken and West (1991) predictors were centered to make their means equal to zero. There were no effects on either the pre- or the post-measure separately. We then simultaneously regressed attitude, value-relevance, self-esteem and their interaction terms onto the working memory difference score. Results yielded a three-way interaction,  $t(65) = -2.45$ ,  $p = .017$ . To find out if working memory was affected primarily for participants for whom the attitude was high in value-relevance, separate regression analyses were performed for participants low ( $-1$  SD) and high in value-relevance ( $+1$  SD). Only at high value-relevance a significant two-way interaction of attitude and self-esteem was obtained,  $t(65) = -3.48$ ,  $p = .001$ . Because we expected working memory capacity to be affected only when the article was counter-attitudinal that is for participants having negative attitudes, we performed separate regressions for the negative ( $-1$  SD) and positive ( $+1$  SD) attitude. Only for the negative attitude, the simple slope for self-esteem was significant,  $\beta = .82$ ,  $t(65) = 3.09$ ,  $p = .003$ ,  $pr = .376$ . Participants with high self-esteem performed worse on the post-measure (positive difference score) than participants with low self-esteem (see Figure 3.2).

Figure 3.2. Performance on the memory task as a function of self-esteem and attitude.



Note. The performance scores are difference scores obtained by subtracting performance on the post-measure from the pre-measure. Thus, positive scores indicate a worse performance on the post-measure relative to the pre-measure.

We also tested the simple slopes of attitude for low ( $-1$  SD) and high ( $+1$  SD) self-esteem separately. These slopes were reliable for both low self-esteem ( $\beta = -.47$ ,  $t(65) = -2.50$ ,  $p = .015$ ,  $pr = .31$ ) and high self-esteem ( $\beta = .57$ ,  $t(65) = 2.49$ ,  $p = .016$ ,  $pr = -.31$ ). Participants with high self-esteem performed worse when their attitude did not match the valence of the article (negative) than when it did. This impaired performance could be due to high self-esteem participants preparing mentally for the task ahead, i.e. reading a counter-attitudinal article, for instance by bolstering their attitude and by formulating counter-arguments to the expected contents of the counter-attitudinal article. Low self-esteem participants showed the opposite pattern; their performance got somewhat better when the to-be-read article was incongruent with their attitude (negative). We suggest that this is the case because low self-esteem participants were motivated to avoid thinking about the potentially threatening situation ahead and made use of the memory task in order to do so. In our next

## Taking it personally

study, we further explore this possibility by providing distracting information simultaneously with the attitude-relevant information. Participants watch an interview containing several attitude-relevant statements. During the interview, scrolling news items appear at the bottom of the screen. Memory for the contents of these items is taken as a measure of distraction seeking.

### Study 3.3

#### Method

*Participants.* A total of 81 undergraduate psychology students from the University of Amsterdam participated for course credit or money (€ 4). Due to a programming error the data of nine participants were not saved. The remaining sample thus consisted of 72 participants (27 men, 45 women). Their mean age was 22.54 ( $SD = 5.74$ ).

*Materials and procedure.* Up to seven participants were tested per session. Upon arrival, participants were welcomed by the experimenter and were seated behind a personal computer in separate cubicles.

First, explicit self-esteem was measured with the ten items of the Rosenberg Self-Esteem Scale (Rosenberg, 1965;  $\alpha = .87$ ). Then, a study on students' opinions was introduced. Participants gave their opinion on four different issues. The first three issues had to do with legislation concerning persons seeking political asylum in the Netherlands, higher taxes for fatty foods, and higher public transport rates in rush hours. The fourth issue was the target issue of this experiment: abolishing the possibility of having a dual nationality. The order was fixed with the target issue of the dual nationality always last. At the time of the study, this issue was discussed in the media extensively. The discussion centered on two Dutch politicians who had a second nationality, besides the Dutch. For instance, one of these politicians has a Dutch as well as a Moroccan nationality. Opponents of the dual nationality were mainly worried about the possible negative effects of being loyal to two countries at the same time and suggested abolishing the possibility of having two nationalities.



Participants' global attitude was assessed with three items on Visual Analogue Scales (1 = *totally disagree*, 100 = *totally agree*; 1 = *completely negative*, 100 = *completely positive*; 1 = *completely bad*, 100 = *completely good*). The mean score of these items constituted an index of overall attitude ( $\alpha = .98$ ). Next, value-relevance was assessed with the three items based on Pomerantz, Chaiken and Tordessilas (1995, for a description, see Study 3.2 this dissertation), again on Visual Analogue Scales. The mean score of these items constituted an index of value-relevance ( $\alpha = .87$ ).

The final part was introduced as a study on the effects of different media-formats. Participants were told that there are many different ways to convey information nowadays, for instance via free newspapers in public transport, the internet and television. Participants were told that they were about to see a television-interview and that there would be some questions afterwards. The experimenter started the video and made sure participants wore their headphone.

In the video (duration 8:07 minutes) an alleged historian was interviewed about the issue of dual nationality. He strongly advocated the abolishment of the right to have a dual nationality and supported his views with several arguments. During the complete interview news headlines appeared as scrolling text at the bottom of the screen (see Betsch, Kaufmann, Lindow, Plessner, & Hoffmann, 2006), as is seen in daily news shows such as Newsnight. These headlines concerned issues unrelated to the contents of the interview, such as financial and political news, weather forecasts, traffic information and other news (e.g. "Dutch film wins prestigious prize in Berlin"). There were fifteen of these headlines and each of them was shown three times. The idea is that, when the information contained in the interview is incongruent with participants' attitudes, one possible way to shift attention away from the interview is by focusing on the scrolling text. As a result of this, memory for the content of the scrolling text should improve.

After watching the interview, participants were presented with a surprise recall test. First, memory for the content of the interview was assessed with fifteen multiple-choice questions. Participants had to choose the correct

## Taking it personally

answer from three choice-alternatives. The fifteen questions were presented in a fixed order since the wording of some of the questions gave away the answer for other questions. An example of an item is: "What country does not permit giving up its nationality? A. Turkey, B. Morocco, C. the Netherlands". Second, memory for the news headlines was assessed with fifteen multiple-choice items: one item for each news headline. Again, participants had to choose the correct answer from three possible options. An example of an item is: "In which of these cities did a Dutch film win a prize? A. Rome, B. Cannes, C. Berlin". These questions were presented in random order. Finally, participants were thanked and debriefed.

## Results and Discussion

*Descriptives and outliers.* In general, participants had a slightly negative attitude toward the issue of dual nationality ( $M = 30.80$ ,  $SD = 26.21$ ). The mean score on the value-relevance index was positioned mid-scale ( $M = 54.18$ ,  $SD = 23.97$ ). The distribution of self-esteem scores was skewed ( $M = 7.0$ ,  $SD = 1.14$ ). One participant was excluded because of an outlying self-esteem score ( $z$  value  $< -3$ , Stevens, 1996). The definite sample thus consisted of 71 participants.

Each correct answer on the memory measure was assigned a value of one. Two sum-scores were created, one representing memory performance for the interview and one for the scrolling news headlines. The scores of each index could vary between zero and 15. Performance for the interview ( $M = 9.56$ ,  $SD = 1.87$ , range 5 - 13) was somewhat better than performance for the news headlines ( $M = 8.34$ ,  $SD = 2.68$ , range = 3 - 14),  $t(70) = -2.95$ ,  $p = .004$ .

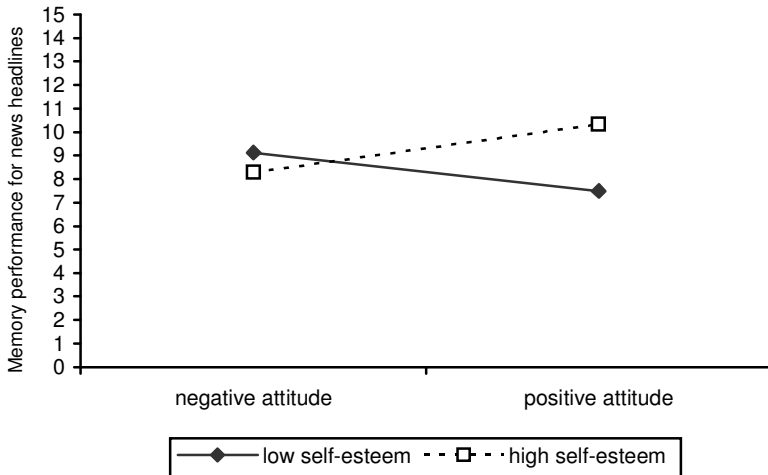
*Memory performance.* In accordance with the recommendations of Aiken and West (1991) predictors were centered to make their means equal to zero. We first checked for the effects on memory performance for the interview. No significant effects emerged. We then checked for effects on memory performance for the news headlines. Results yielded a significant three-way interaction of attitude, value-relevance and self-esteem,  $t(70) = 2.11$ ,  $p = .039$ . To

investigate the nature of this interaction, we performed separate regressions at low (- 1 SD) and high (+ 1 SD) value-relevance. We expected to find a significant two-way interaction of attitude and self-esteem only in case of high value-relevance. Results confirmed this expectation,  $t(70) = 2.16$ ,  $p = .034$ . Thus, memory for the news headlines was affected by participants' attitude and self-esteem, but only when participants perceived their attitude as highly value-relevant. We further expected low self-esteem participants to display enhanced memory for the news headlines when the valence of the interview was incongruent with their attitude. This would imply a negative attitude since the historian in the interview was in favor of the possibility to have a dual nationality. For high self-esteem participants we expected to find the opposite pattern. Therefore, we tested the simple slopes for low (- 1 SD) and high self-esteem (+ 1 SD) participants separately. For high self-esteem participants, a marginally significant main effect of attitude was found,  $\beta = .48$ ,  $t(70) = 1.97$ ,  $p = .054$ ,  $pr = .241$ . This main effect illustrates the tendency for high self-esteem participants to have enhanced memory for the news headlines when the content of the interview matched their attitude. In other words, when the interview was counter-attitudinal they did not attend to (and recalled) the news headlines (see Figure 3.3). The simple slope for low self-esteem participants failed to reach significance,  $t < 1$ ,  $p = .25$ ,  $pr = -.14$ .

As can be seen in Figure 3.3 (next page), low self-esteem participants do tend to perform somewhat better when the interview was counter-attitudinal (negative attitude). And under these circumstances their performance is better than that of high self-esteem participants. However, the only slope being reliable is that of attitude for high self-esteem participants. Nonetheless, the overall pattern of the interaction supports the idea of low self-esteem participants using distraction as a means to cope with counter-attitudinal information more so than their high self-esteem counterparts.

## Taking it personally

Figure 3.3. Memory performance for news headlines as a function of self-esteem and attitude.



We did not find any effects on participants' memory for the contents of the interview itself. This performance measure also did not correlate significantly with memory performance for the news headlines, although the correlation was in the expected, negative direction ( $r = -.16, p = .20, N = 71$ ). These null findings for the interview could be due to the fact that one had to focus visual attention to the news headlines in order to learn its content, while this was not necessary for the interview. The contents of the interview were transferred via an auditory channel. Furthermore, the performance measure for the news headlines was presented after performance for the interview was assessed which followed directly after watching the interview. Indeed, performance on the interview was superior to that for the news headlines. A last possibility is that the performance measure for the interview was not sensitive enough to pick up differences between participants. The lower standard deviation of this measure, relative to that for the news headlines could provide some support for this idea.

## General discussion

People differ in the way they cope with situations that are threatening and potentially stressful. These differences have often been subsumed in dichotomies such as action versus state orientation or problem-focused versus emotion-focused coping. The general tenet of these dichotomies is that they distinguish between behavioral tendencies that aim at dealing with the stressful situation at hand versus coping with that situation by avoiding it, for instance by seeking distraction.

We applied the idea of two coping strategies to the domain of attitudes and, more specifically, to the domain of attitude-protection and investigated the role of self-esteem. We were able to show that, in case of high value-relevance, participants with low self-esteem were more likely to avoid reading a counter-attitudinal text (Study 3.1), performed better on an unrelated, distracting task (Study 3.2) and had better memory for information unrelated to the attitude-issue if the simultaneously presented attitude-relevant information was incongruent with prior attitudes (Study 3.3) as compared with participants high in self-esteem. These results suggest that individuals with low-esteem tend to avoid confrontation with and thinking about potentially threatening, counter-attitudinal content, as we expected they would. Those higher in self-esteem did not shun confrontation with counter-attitudinal content (Study 3.1) and seemed to have ignored the unrelated information that was presented simultaneously with the attitude-relevant information, perhaps because they were busy scrutinizing the attitude-relevant information itself (Study 3.3). Moreover, their impaired performance on a task administered directly after announcing a counter-attitudinal text suggests that they were already preparing for the upcoming confrontation with the counter-attitudinal text (Study 3.2). The essence of this preparation presumably consisted of (a combination of) bolstering their current attitude and counter-arguing expected persuasive arguments. This preparation of high self-esteem participants is in line with the findings of Newby-Clark (2004) who showed that people high self-esteem take preparations in order to cope successful with an upcoming, threatening task.

## Taking it personally

It must be noted that we did not directly show that high self-esteem participants were engaged in counter-arguing and attitude bolstering at the time that they engaged in the unrelated task. We infer this on the basis of their impaired performance on the unrelated task. One alternative explanation could be that high self-esteem participants became worse performers because the upcoming counter-attitudinal text annoyed and irritated them and therefore made them less motivated to perform well. Likewise, in Study 3.3 memory for the distracting news headlines did not co-vary with memory for the counter-attitudinal information. Thus, we cannot state that the impaired memory performance of high self-esteem participants for news headlines was due to their heightened attention to the counter-attitudinal information. Likewise, we cannot prove that the enhanced memory of low self-esteem participants for news headlines is caused by their avoidance of the counter-attitudinal information transferred by the interviewee. Therefore, future research should assess if counter-arguing and attitude bolstering actually takes place, for instance by administering a thought-listing task afterwards.

The divergent behavioral patterns of low and high self-esteem individuals were visible only when the attitudes were high in value-relevance. This supports the notion that individuals are especially protective of attitudes that are important to their identity and value-system. The present research has shown that these protective behaviors are activated as soon as only a very limited amount of counter-attitudinal information is provided, such as the title of a newspaper-article. If the goal of these behaviors is the protection of the attitude, they should result in resistance to persuasion to a higher degree than when that same attitude is perceived low in value-relevance. Indeed, attitudes high in value-relevant involvement have been shown to be more resistant to persuasion than those low in this type of involvement (Johnson & Eagly, 1989). However, it would be interesting to find out if the two defensive strategies are equally successful in accomplishing resistance to persuasion. This question is addressed in Chapter 4.







## Chapter 4

### The best defense is offense: Self-esteem and the effectiveness of two strategies for resisting persuasion <sup>9</sup>

In the present research, we investigated the relationship between self-esteem and pliability. We hypothesized that individuals with high self-esteem are persuaded less than those with lower levels of self-esteem. We argue that this is due to low and high self-esteem individuals employing different strategies for resisting persuasion, with high self-esteem individuals using active-defensive strategies like counter-arguing and low self-esteem individuals using passive-defensive strategies like distraction. Furthermore, we expect these differences to emerge predominantly when information is targeted at an attitude strongly connected to participants' self-concept and values. In order to test these ideas, half of the participants encoded counter-attitudinal information while under cognitive load. We hypothesized that our load manipulation should disturb the active-defensive processing of high self-esteem individuals, resulting in higher levels of attitude change as opposed to the no load condition. With respect to low self-esteem individuals, we expected the opposite because the load task should help them to avoid processing counter-attitudinal content. Results supported our predictions.

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<sup>9</sup> This Chapter is based on Wiersema, D. V., Van der Pligt, J., & Van Harreveld. The best defense is offense: Self-esteem and the effectiveness of two strategies for resisting persuasion. [unpublished manuscript]

## Taking it personally

The research presented in chapters 2 and 3 shows that the (expected) confrontation with counter-attitudinal content targeted at an attitude high in value-relevance, leads to behaviors aimed at maintaining the attitude. We have used the terms passive- and active-defensive strategy to distinguish two broad behavioral categories of attitude-protection and showed that individuals high in self-esteem tend to use an active-defensive strategy while those lower in self-esteem tend to rely on a passive-defensive strategy. Although the aim of these strategies is to protect a cherished attitude from changing, it is unknown which of these two strategies is more successful in accomplishing this. First, we will examine the literature on resistance to persuasion to see if it can provide us with insights concerning the relative effectiveness of the two behavioral categories.

A straightforward finding is that the valence of the reactions someone has to a persuasive message is a strong predictor of attitude change in the sense that more favorable reactions are associated with higher levels of change (cognitive response model, Greenwald, 1968; Petty, Ostrom, & Brock, 1981). But from simply coding participants' responses in terms of their valence (positive, negative, neutral) as done in research inspired by the cognitive response model, we do not learn a lot about the content and character of these responses and how they relate to resistance to persuasion. In order to further our understanding in how people defend their attitudes, a more detailed description of what these responses entail is needed. Jacks and Cameron (2003) divided responses into different categories. The categories were: attitude bolstering (generating thoughts that support the initial attitude), counter-arguing (the rebuttal of the arguments contained in the message), negative affect such as getting angry or irritated, selective exposure (tuning out of the persuasive content), social validation (bringing to mind important others who share one's original attitude), source derogation (trying to bring down the source), and simply asserting confidence that nothing could change one's mind.

One thing that stands out is that some of these categories aim at undermining informational influence directly (attitude bolstering and counter-arguing) while others try to accomplish this in a more indirect fashion (e.g.

selective exposure and source derogation). As such, they can be subsumed in the distinction of an active-defensive and a passive-defensive processing mode (Eagly, Kulesa, Brannon, Shaw, & Hutson-Cumeaux, 2000). To be more specific, attitude bolstering and counter-arguing match the description of the active-defensive processing mode while particularly selective exposure matches the passive-defensive processing mode that is being described as a strategy aimed at avoiding (processing) counter-attitudinal information. The question is which of the two strategies is more successful in resisting persuasion.

There are several reasons conceivable to assume that active-defensive processing will in general be more successful in protecting attitudes from changing than passive-defensive processing. First of all, it appears that the indirect methods for resisting persuasion are more dependent on external factors such as knowing who the message source is, knowing what the attitudes of important others are, having the opportunity to walk away from the message or tune out otherwise while counter-arguing and attitude bolstering seem less dependent on contextual factors. Since direct methods are less dependent on situational and external factors, they should be applied more readily than indirect methods and this should translate in generally lower levels of attitude change resulting from the employment of active methods.

Second, previous research has shown that manipulations believed to heighten active-defensive processing, such as forewarning subjects of persuasion (for a review, see Papageorgis, 1968) or confronting subjects with one weaker counter-attitudinal statement in advance (inoculation theory; McGuire, 1964; McGuire, 1961a, 1961b) diminishes persuasion for a message that follows.

Finally, counter-arguing was found to be the most effective strategy for resisting persuasion (Jacks & Cameron, 2003). Therefore, we expect the attitudes of participants employing an active-defensive processing mode to prove more resistant to persuasion than those using a passive-defensive processing mode. The research presented in Chapters 2 and 3 (this dissertation) suggests that participants with high self-esteem tend to rely on an active-defensive strategy while those low in self-esteem tend to rely on a more passive-

## Taking it personally

defensive strategy. As a consequence, we expect high self-esteem participants to be more successful in protecting their attitudes from change than their low self-esteem counter-parts.

We are not the first to link personality and pliability. The Yale Communication and Persuasion Program is the most well known research program that suggested a role for individual differences in pliability (e.g. Hovland, Janis, & Kelley, 1953; Hovland, Lumsdaine, & Sheffield, 1949). According to the Yale program, persuasion requires three steps: attention to the message, comprehension of its contents and acceptance of the message position. Each of these steps could be influenced by characteristics of the persuasive communication on the one hand (e.g. expertise of the message source) and factors unrelated to the message such as individual differences, on the other hand.

McGuire further elaborated on the effects of individual differences (1968a, 1968b). McGuire was intrigued by the mixed results obtained in research on the relationship between self-esteem and pliability and especially by some studies that reported curvilinear relationships (e.g. Silverman, 1964). He suggested that these curvilinear relationships are the result of self-esteem (or any other, arbitrary, individual difference variable) exerting opposing effects on the different steps in persuasion. McGuire distinguished two steps: retention and yielding.<sup>10</sup> Retention, measured as recall of the message arguments, is comprised of the first two steps in the Yale Program that is attention and comprehension while yielding matches the third step. With respect to self-esteem, he claimed that not only are individuals with high self-esteem better able to attend to and comprehend a message but also that they are better in defending their initial attitudes than those that score lower on the trait. He also stated that low self-esteem individuals are more anxious and distracted leading to degraded levels of attention and comprehension (McGuire, 1986b). These contrasting effects on retention and yielding should result in maximum attitude

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<sup>10</sup> Actually, McGuire initially (1968a) distinguished six steps. However, he elaborated only on three of them (attention, comprehension and yielding) and decided to treat attention and comprehension as one step.

change at intermediate levels of the personality variable. Thus, individuals with either very low or very high levels of self-esteem will have small amounts of attitude change while the highest amounts of change will be observed for individuals with intermediate levels of self-esteem.

Rhodes and Wood (1992) performed a meta-analysis and found overall support for the model. First of all, there was an overall negative relationship between self-esteem and pliability such that individuals scoring higher on the trait demonstrated lower levels of attitude change than those with lower levels of self-esteem. More importantly, the few studies in the meta-analysis that allowed for a comparison of three levels of self-esteem (low, intermediate, high) corroborated the inverted U-shaped relationship predicted by the model.

The majority of studies in the meta-analysis looked at the relationship of self-esteem and yielding, but a few also tested the relation between self-esteem and retention. These studies demonstrated a small to moderate (see Cohen, 1992) positive relationship between retention and self-esteem. The research presented in Chapter 2 (this dissertation) also shows a positive association between self-esteem and the retention of counter-attitudinal content such that individuals with high self-esteem in general displayed better memory for this information than those with relatively low self-esteem. An additional factor of importance in these studies is the value-relevance of the attitude. The effects were found only for attitudes high in value-relevance as compared to attitudes low in value-relevance. Thus, the amount of value-relevant involvement in an issue is a prerequisite for finding these effects.

We argue that high self-esteem individuals employ direct methods for undermining informational influence such as counter-arguing. Thus, high self-esteem individuals focus on the content of the communication in order to refute it. The amount of attitude change will then depend on the success of these attempts at rebuttal. However, since previous research has shown that counter-arguing is the most effective strategy for resisting persuasion, we expect the attitudes of individuals with high self-esteem to be more resistant to change than those of individuals scoring lower on self-esteem. The scenario for low self-

## Taking it personally

esteem individuals is different. First however, it should be noted that the mean self-esteem scores obtained in research are usually higher than the theoretical midpoint of the scale and tend to be negatively skewed (Baumeister, Tice, & Hutton, 1989). Thus, our college student samples generally report high levels of self-esteem, such that those individuals termed low in self-esteem actually possess intermediate levels of self-esteem. Very low levels of self-esteem, for instance a self-esteem score of 3 on a 9-point scale, are almost never observed and would count as outlier. Thus, when we refer to low self-esteem individuals, we are actually referring to individuals with intermediate levels of self-esteem.

The defensive strategy of individuals with relatively low self-esteem is aimed at avoiding counter-attitudinal information. They can do so by distracting attention away from the information. This can be accomplished mentally, by thinking of something else, or physically by focusing attention on different aspects of the physical environment. This implies that the distraction process can be aided by the presence of distracting factors in the environment that help low self-esteem individuals to divert attention away from the persuasive communication. Thus, mental distraction is aided by external stimuli. Therefore, lower levels of attitude change can be expected when it is easier to divert attention away from counter-attitudinal information. The opposite can be expected for the attitudes of high self-esteem individuals. Distractors will disturb the active-defensive strategy of high self-esteem since high self-esteem individuals need all their resources in order to rebut the arguments contained in the message. Thus, when attention is divided by means of distractors in the environment this should result in higher levels of attitude change than is the case when no distractors are present. Indeed, previous research has shown that distraction can increase yielding by inhibiting counter-arguing (Osterhouse & Brock, 1970).

In the present study, participants encoded attitude-relevant information with or without distraction. To be more specific, processing ability was challenged for half of the participants by means of a cognitive load manipulation. We hypothesized that, since load should disturb the active-defensive processing mode, this should result in higher attitude change scores

for high self-esteem participants than is the case under normal processing conditions. The more passive processing mode aimed at avoiding (the thorough processing of) counter-attitudinal information on the other hand will be aided by the load manipulation. Therefore, we expect the attitudes of low self-esteem participants to become more resistant under conditions of cognitive load as opposed to the no load condition. Furthermore, when the attitude-relevant information is encoded under normal processing conditions (no load), the attitudes of high self-esteem participants will prove somewhat more resistant to change than those of low self-esteem participants.

These hypotheses were put to the test in Study 4.1. To facilitate generalizations across studies, the design of Study 4.1 was similar to the studies presented in Chapter 2 of this dissertation with only a few exceptions. Because the main focus of this experiment is on attitude change, participants received a series of univalent statements instead of receiving both pro- and anti-statements. Furthermore, half of the participants encoded the persuasive content while under cognitive load.

## Study 4.1

### Method

*Participants.* A total of 125 psychology students (87 female, 38 male) at the University of Amsterdam participated for course credit or money (€ 4). Participants' mean age was 20.23 years ( $SD = 2.80$ ). Assignment to either the load or no load condition was random.

*Materials and procedure.* On arrival participants were seated behind a personal computer in separate cubicles. Up to eight participants were tested each session. All instructions appeared on the computer. First of all, participants completed the Rosenberg Self-Esteem Scale (Rosenberg, 1965) in a seemingly unrelated study. All items had 9-point scales ranging from 1 (*does not describe me at all*) to 9 (*totally describes me*). The scale had good reliability ( $\alpha = .84$ ).

Subsequently, participants were introduced to a study on opinions. The attitude-issue was related to the issue of organ donation. More specifically,

## Taking it personally

we were interested in participants' attitude toward a potential new legislation on organ donation, which we termed the quid-pro-quo system. According to this legislation, people who are willing to donate organs will also have higher priority to receive donor organs than people who do not agree to donate their organs. The attitude measure consisted of three items measured on 100-point Visual Analogue Scales, "I ... with the quid-pro-quo system." (0 = *agree* - 100 = *do not agree*); "My attitude toward the quid-pro-quo system is..." (0 = *negative* - 100 = *positive*; 1 = *bad* - 100 = *good*). A Time 1 overall attitude score was created on the basis of the mean of these three items ( $\alpha = .97$ ). Participants also expressed their attitude on a dichotomous measure (*in favor* vs. *against*). The value-relevance of the attitude was measured with the same three items as in the previous studies (see chapters 2 and 3) using 100-point Visual Analogue Scales. The mean score of these items was taken as an index of value-relevant involvement ( $\alpha = .80$ ).

The next task was supposedly about memory. Participants in the no load condition were asked to memorize a series of statements. Nine statements, all arguing against the quid-pro-quo system, were presented in a randomized order. An example of a statement is: "The quid-pro-quo system will not result in more organ donors because most people die of age so their organs will be worthless". Each statement remained on screen for ten seconds and was followed by a blank screen that was replaced by a new statement after one second.

Participants in the load condition were told that the task was about memory for sentences and memory for meaningless number-letter sequences. They were instructed that their recall for the sentences and that for the number-letter sequences was equally important. The procedure was slightly different from that in the no load condition. Now, the presentation of a statement was always preceded by the presentation of a number-letter sequence. This sequence was displayed for three seconds and was immediately followed by the presentation of a statement that was presented for ten seconds. Subsequently, participants were asked to report the sequence they saw right before the statement. After they had entered the sequence and pressed "ok", a new trial



commenced after one second. All statements and sequences were presented in a randomized order.

The sequences consisted of numbers (1-9) and letters (B, C, D, F, G, H, J, K, and L) that were combined in a sequence according to the following rules: every sequence started with a number, numbers and letters alternated, and the same number or letter was never repeated within a sequence (Rotteveel, 2003). Each sequence consisted of five elements. An example of a sequence is “3D6G5”. Because participants in the load condition had to keep the sequence in working memory until the moment they could report it, which was not until after presentation of the statement, working memory capacity was temporarily diminished. This should reduce the capacity to actively refute counter-attitudinal material.

After the single presentation of the nine statements, participants' attitude was measured for the second time with the same three items used in the Time 1 measure. A Time 2 overall attitude score was created on the basis of the mean of these three items ( $\alpha = .98$ ). Finally, participants were thanked, debriefed, and rewarded.

## Results

*Descriptives.* An index of attitude change was created by subtracting the Time 2 overall attitude score from the Time 1 score, such that a positive difference score indicates attitude change in the direction of the persuasive content. In general, participants' Time 2 attitudes ( $M = 56.29, SD = 23.27$ ) were somewhat more negative as opposed to the Time 1 measure ( $M = 48.56, SD = 22.06$ ),  $t(124) = 7.98, p < .001$ .

Because we were interested in the effects of either pro- or counter-attitudinal information on attitude change, we excluded participants who had more neutral attitudes because for them the information would be neither pro-attitudinal nor counter-attitudinal in nature. In order to exclude those participants with more neutral attitudes, we split participants in three equally sized groups on the basis of their attitude score on the Time 1 index. We then

## Taking it personally

removed the middle group from the analyses (42 participants, 33.6 %). Of the remaining 83 participants, 51.8 % indicated being in favor of the new system for organ donation and 48.2 % indicated being against it on the dichotomous attitude measure.

The performance of participants in the load condition with respect to the number-letter sequences was coded. For each sequence a score ranging from zero to five could be obtained. No points were allocated when none of the elements were correct or in the correct position and the maximum score of five was granted when participants reported the entire number-letter sequence correctly. For example, when a participant reported the sequence "3D2F5" instead of the originally presented "3D6G5", three points were allocated. The points for each sequence were summed to create an overall performance score. Performance could range from zero to forty-five. The average performance score was 36.98 ( $SD = 7.53$ ). The performance score of one participant was out of range (16 points,  $z$  value = -2.79) indicating that this participant probably did not engage seriously in the load task. We therefore decided to exclude this participant from further analyses.

The mean score on the index of value-relevance was positioned mid-scale ( $M = 54.61$ ,  $SD = 18.30$ ). The mean self-esteem score in this sample was 6.78 ( $SD = .98$ ). As in the previous studies, the distribution was negatively skewed. On the basis of an outlying self-esteem score ( $z$  value < -3.5), one participant was excluded from the analyses. The definite sample thus consisted of 81 participants.

*Resistance to persuasion.* All independent variables were centered (Aiken & West, 1991). Condition, the dichotomous attitude score, value-relevance, self-esteem and their interaction terms were regressed simultaneously onto the attitude change score. Results yielded a significant main effect of attitude,  $\beta = .40$ ,  $t(80) = 3.69$ ,  $p < .001$ ,  $pr = .42$ . This main effect was further qualified by a four-way interaction of condition, attitude, value-relevance and self-esteem,  $t(80) = -2.65$ ,  $p = .01$ .

Because we only expected effects for attitudes high in value-relevance, separate regressions were performed for participants with attitudes high (+ 1 SD) and low (- 1 SD) in value-relevance. In accordance with our hypothesis, the three-way interaction of condition, attitude and self-esteem was present for participants with attitudes high in value-relevance,  $t(80) = -2.11, p = .033$ .<sup>11</sup> In case of high value-relevance, we did not expect any effects for those participants who indicated having a negative attitude because for them the presented statements supported their attitude. For those participants with a positive attitude, we expected an interaction between condition and self-esteem. To test this, separate regression analyses were performed for those who indicated a negative attitude and those who indicated a positive attitude, using dummy-coded variables for attitude. For the negative attitude there was no significant interaction between condition and self-esteem ( $p > .28$ ), however we did find this interaction to be marginally significant for the positive attitude,  $t(80) = -1.94, p = .057$ . Thus, only when the persuasive content did not match participants' attitudes, low- and high self-esteem participants were differentially affected by the load manipulation. To find out if condition affected the amount of attitude change, we tested the simple slope of condition separately for low self-esteem (-1 SD) and high self-esteem (+1 SD) participants. Only high self-esteem participants showed a significant effect of condition,  $t(80) = -2.15, p = .036, pr = -.26$ . This effect shows high self-esteem participants' attitudes change more when they processed counter-attitudinal information under load. The overall pattern of the interaction of condition and self-esteem is depicted in Figure 4.1 and shows that - under normal processing conditions - the attitudes of participants with low self-esteem changed somewhat more than those of participants with

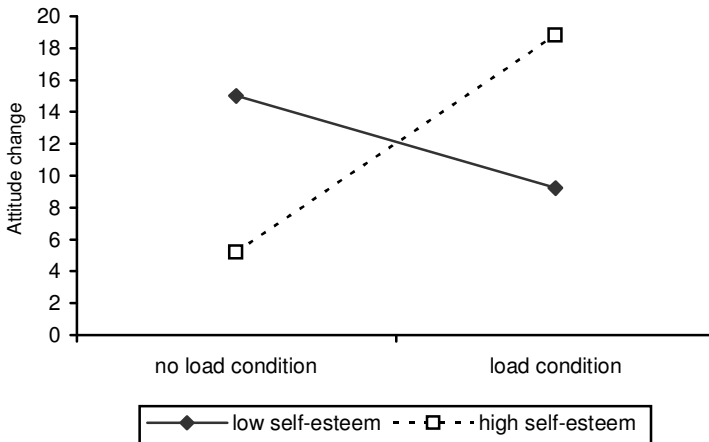
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<sup>11</sup> Unexpectedly, the three-way interaction was also present in case of low value-relevance,  $t(80) = -2.45, p = .017$ . The interaction was only significant in case of positive attitudes,  $t(80) = -2.26, p = .027$ . Within positive attitude, the simple slope of condition was only significant for high self-esteem participants,  $t(80) = -2.30, p = .024, pr = -.28$ . This effect shows that when high self-esteem participants' low value-relevant attitudes are challenged by incongruent information, their attitudes change less when under load than is the case under normal processing conditions. This effect reflects the decreased motivation to argue against counter-attitudinal messages that are irrelevant to the self.

## Taking it personally

high self-esteem. But when under load, those with high self-esteem show the highest change scores while the attitudes of participants with low self-esteem became somewhat more resistant, although this effect was not significant.

*Figure 4.1.* Amount of attitude change for low and high self-esteem participants with positive attitudes as a function of condition (load vs. no load) in case of high value-relevance.



Note. Higher change scores indicate higher levels of attitude change in the direction of the persuasive content.

## Discussion

The results of the present study confirm the hypothesis that – under normal processing conditions – high self-esteem individuals are more capable in defending their attitudes than low self-esteem individuals. We suggest that this is due to high self-esteem individuals using an active-defensive approach for dealing with counter-attitudinal content, such as counter-arguing. Previous research established that counter-arguing is the most effective means for protecting one’s attitude from change. Thus, when the ability to counter-argue was hindered by means of a cognitive load manipulation the attitudes of high

self-esteem individuals became less resistant to persuasion. Low self-esteem individuals showed the opposite pattern. We assume this is the case because the load manipulation helped them in avoiding processing of the counter-attitudinal content. Hence, their attitudes changed less in the load condition as opposed to the no load condition. When attitudes are perceived as low in value-relevance, results suggest that high self-esteem participants use different processing strategies. Their attitudes change the most when the capacity to process counter-attitudinal information is not challenged. This could suggest that they were open-minded to the counter-attitudinal information and used their processing capacity to incorporate this new information into their attitude. However, when the capacity to process the incoming information was challenged, the amount of attitude change was reduced. The amount of attitude change of low self-esteem participants was not affected by the manipulation of processing capacity when their attitudes were low in value-relevance.

By combining insights from the literature on self-esteem and pliability on the one hand and the literature on strategies for resisting persuasion on the other hand, we were able to further our understanding of why the attitudes of high self-esteem individuals are generally found to be more resistant than those of low self-esteem individuals.

In the present research, attitude change was assessed immediately after presenting the persuasive content. It would be interesting to see what happens when the repeated measure of attitude is assessed with a longer time lag with respect to the presentation of the persuasive content. By doing so, one could gain insight into the longevity of the effects. With respect to high self-esteem individuals, one can assume that their Time 2 attitudes prove relatively stable over time since they are the result of high elaboration processes. However, the picture for low self-esteem individuals is less clear. The stability of their Time 2 attitudes will depend on the way counter-attitudinal information is avoided. Until now, we have assumed that low self-esteem individuals use distraction as a means to avoid processing counter-attitudinal information. Thus, when confronted with counter-attitudinal information, low self-esteem individuals make use of distracting stimuli in the environment or try to distract

## Taking it personally

themselves mentally by thinking of issues unrelated to the counter-attitudinal content. This self-distraction process could however also be accompanied by an active blocking of thoughts about the counter-attitudinal content, in other words suppression.

The effects of suppression have been shown in the work of Wegner and colleagues (e.g., Wegner, Schneider, Carter, & White, 1987; Wenzlaff, & Wegner, 2000). They showed that thoughts that have been suppressed became more accessible at a later point in time than was the case when these same thoughts were not suppressed. This paradoxical effect is termed the post-suppressional rebound effect. If low self-esteem individuals use suppression to avoid thinking of counter-attitudinal information, then – consistent with the post-suppressional rebound effect – this information should become more accessible over time. Since individuals with low self-esteem did not build up defenses against this information by counter-arguing, their attitudes could be affected by the counter-attitudinal information resulting in higher levels of attitude change. Thus, when attitude change is measured some time after presenting counter-attitudinal information instead of immediately, the attitudes of low self-esteem individuals could show even higher levels of change than is evident on an immediate change measure.

The reasoning outlined above suggests that the attitudes of low self-esteem individuals will in general prove less stable over time and that they do not necessarily have insight in the causes of these fluctuations in their attitudes. The present research suggests that this should be especially the case for attitudes that are perceived as part of the personal identity. This implies that low self-esteem individuals will experience more shifts in their self-concept than high self-esteem individuals. This line of reasoning is supported by research on the concept of self-concept clarity. Self-concept clarity refers to the extent to which the contents of self-beliefs are clearly and confidently defined. It was repeatedly shown that individuals with low self-esteem lack a clear, stable and consistent understanding of themselves (Campbell, 1990). For instance, the self-descriptions of low self-esteem individuals were less stable over time and showed less internal consistency than their high self-esteem counterparts. We

believe that the experience of having unstable attitudes in combination with a lack of knowledge in what produced these changes could contribute to low self-esteem individuals becoming less certain of whom they are. It would be interesting for future research to investigate the link between the pliability of attitudes and the self more thoroughly.





# Chapter 5

General discussion

## Taking it personally

“Talk to the hand ‘cause the face ain’t listening!” According to Urban Dictionary ([www.urbandictionary.com](http://www.urbandictionary.com)), this saying is used “to ignore and disregard a comment or an insult when you can’t think of a way to counter it.” At times, all of us are confronted with information that we prefer not to hear. This could be an unfavorable appraisal by students of one’s teaching, a rejection by a journal or potential partner, or information that challenges a treasured attitude. However, the reaction outlined above is just one of many possible reactions. For instance, one could also try to rebut the comment, start to cry, derogate the source or simply walk away. The present dissertation focused on how people manage unfavorable information targeted at an attitude that is closely connected to how they see themselves and explored the role of self-esteem. In this final chapter, I will first summarize the main empirical findings of chapters 2 to 4 and discuss their implications. Moreover, some limitations to this research will be presented and I will outline a number of directions for future research.

## Main Contributions

The goal of this dissertation was to advance our understanding of the strategies individuals rely upon in order to protect cherished attitudes. The first contribution of the present research is that it underlines the benefits of a functional approach to the study of attitudes. The recent literature on attitudes and attitude change pays limited attention to the functional value of attitudes and this relative neglect might explain some of the contradictory findings obtained in this research field. Our emphasis on the value-expressive function of an attitude and value-relevant involvement also triggered the decision to look at the role of self-esteem and self-defense. Perhaps the most important contribution of this dissertation is that it combines insights from previous research on attitude-protection with research on self-defense and self-esteem. This made it possible to generate and test new predictions with respect to how we defend our attitudes. More specifically, by treating attitudes as part of the

self-concept, the motive to protect an attitude could be translated to a self-defense motive, thereby unlocking the literature on self-esteem. I related self-esteem to two behavioral strategies of attitude-protection, that is, an active-defensive and a passive-defensive strategy, and investigated their nature and impact. This distinction provided a possible explanation for the mixed findings obtained in research on the congeniality effect, i.e. the tendency to remember pro-attitudinal information better than counter-attitudinal information.

An additional methodological contribution concerns the manipulation of value-relevance. Quite often value-relevance has been included as a continuous variable given the individual differences in the perceived value-relevance of most if not all attitudinal issues. The resulting correlational analyses do tell us something about the role of value-relevant involvement. However, an experimental manipulation of the context in which the attitudinal issue is judged provides a way to manipulate the perceived value-relevance of a specific attitudinal issue and allows more firm causal inferences about the role of this factor.

### Main findings, limitations, implications and directions for future research

A key assumption in this dissertation is that counter-attitudinal information targeted at an attitude that is connected to the self-concept, poses a threat to the recipients' self and self-esteem. Similar ideas have been put forward in the literature on stereotype threat (e.g. Fein & Spencer, 1997; Förster, Higgins, & Werth, 2004) and memory for negative feedback (Sedikides & Green, 2000, 2004). Often these kinds of assumptions lack direct empirical validation. The research presented in this dissertation provides new evidence for this assumption, but future research should further investigate the dynamics of self-related attitudes under threat. For instance, one would expect participants to be more involved in tasks that offer them a chance to enhance their self-esteem after confrontation with counter-attitudinal information. Indeed, our more recent studies show that participants spent more time on a

## Taking it personally

task that offered them the opportunity to enhance their self-esteem after having read a counter-attitudinal essay (Wiersema, 2008). Interestingly, the strength of these effects did not depend on participants' self-esteem. Thus, participants low and high in self-esteem were equally motivated to enhance their self-esteem. These results lend support to the claim that information that contradicts attitudes connected to the self-concept is a threat to the self and triggers self-protective behaviors. Other means to test this assumption are employing direct measures of self-esteem.

As described earlier in this dissertation, self-esteem is related to two global strategies of attitude-protection. These were introduced as strategies either aimed at dealing with counter-attitudinal information directly or avoiding counter-attitudinal information altogether. It was expected that low and high self-esteem individuals differed in their preferred strategy, with low self-esteem individuals using a passive-defensive strategy and high self-esteem individuals employing an active-defensive strategy. Moreover, these differences should be more pronounced when the attitude in question is high in value-relevance. The research presented in Chapter 2 was a first step in finding support for these predictions. The focus was on memory for attitude-relevant information. It was expected that the mixed findings obtained in research inspired by the congeniality hypothesis could be attributed to low and high self-esteem individuals employing different processing strategies when dealing with counter-attitudinal content. More specifically, the passive-defensive processing of counter-attitudinal information of low self-esteem participants should render pro-attitudinal relatively more memorable while the active-defensive processing employed by high self-esteem individuals will result in better memory for counter-attitudinal information. In order to test these predictions, participants were confronted with statements that were either pro- or counter-attitudinal. At a later stage we tested their memory for these statements.

Results of Study 2.1 confirmed our predictions. Moreover, as expected, these differences in memory were found only at high levels of value-relevant involvement. These results provided support for the predictions concerning the impact of self-esteem, i.e. low self-esteem individuals having enhanced memory

for pro-attitudinal information and high self-esteem individuals having enhanced memory for counter-attitudinal information. However, a limitation of Study 2.1 was the correlational design. In order to corroborate the role of value-relevant involvement, the amount of value-relevant involvement was manipulated in Study 2.2. In the high value-relevance condition, results confirmed the pattern of biased memory obtained in Study 2.1. Unexpectedly, the low value-relevance condition revealed a reversal of this. At this point, I do not have an explanation for this effect.

The goal of Study 2.3 was twofold. The first aim was to firmly establish the role of self-esteem by manipulating it. The second aim was to investigate *when* differences in memory originate. The idea of two defensive processing strategies places the origin of biases in memory at the encoding stage. However, another possibility is that these differences originate when information is retrieved from memory. By manipulating self-esteem either before or after encoding (but before retrieval), the origin of biased memory could be located. Since the manipulation consisted of providing participants with the opportunity to enhance their self-esteem, the manipulation should only affect low self-esteem participants. Indeed, results indicated that enhancing the self-esteem of low self-esteem participants affected memory for attitude-relevant information when this *preceded* encoding. That is, in this condition the pattern of memory of low self-esteem participants resembled the pattern normally obtained for high self-esteem individuals. Thus, in this condition, low self-esteem participants demonstrated enhanced memory for counter-attitudinal information. However, when the same manipulation was administered after encoding, low self-esteem participants showed their “usual” pattern that is, enhanced memory for pro-attitudinal statements.

All in all, results of this study strongly indicate that differences in memory for attitude-relevant information are the result of processes taking place while encoding information as opposed to processes taking place at retrieval. Moreover, the role of self-esteem was established more firmly by including a manipulation of self-esteem.

## Taking it personally

The research presented in Chapter 2 demonstrates that self-esteem affects memory for attitude-relevant information. More specifically, Study 2.3 demonstrates that this memory results from processes taking place at the encoding stage, lending further support for the idea of two different defensive processing strategies. These results are important for understanding the mixed results obtained in prior research on memory for attitude-relevant information. However, as mentioned before, the two strategies that are assumed to cause these biases in memory were treated as global strategies. As such, there is still a lot we do not know about the specific contents of the two strategies. This particularly pertains to the passive-defensive strategy, as I will explain below. But first, I would like to focus on the active-defensive strategy. In discussing the two strategies, I will summarize the main findings of the research presented in chapters 3 and 4 of this dissertation.

There are several reasons for claiming that counter-arguing is the essence of the active-defensive processing mode. First, because counter-arguing is the one behavior that will result in enhanced memory for counter-attitudinal content. Second, the fact that counter-arguing requires a certain amount of cognitive capacity implies that attitude change should increase when counter-arguing by high self-esteem individuals is impaired. This hypothesis was investigated in Study 4.1. In this study, half of the participants encoded counter-attitudinal information under cognitive load. In the load condition, the attitudes of high self-esteem participants proved less resistant to persuasion relative to the condition where their capacity was not impaired. These results confirm that high self-esteem individuals most likely use counter-arguing to prevent their attitude from changing. A limitation of the studies reported in this dissertation is that they do not show that counter-arguing actually take place. Thus, future research should employ more direct measures, for instance by including a thought-listing task.

The focus of the passive-defensive processing mode is said to be the avoidance of (the processing of) counter-attitudinal content. Theoretically, this can be established by several means, for instance by source derogation, suppression, or distraction. The aim of the research in Chapter 3 was to gain a

more concrete understanding of this strategy. More specifically, I investigated whether the use of distraction is part of the passive-defensive strategy. In the first study (Study 3.1), participants had the opportunity to postpone reading a counter-attitudinal article by engaging in other experiments first. It was expected that especially low self-esteem participants would take this chance and that this effect would be more pronounced in the high value-relevance condition. Results confirmed these predictions.

In Study 3.1, the motivation to engage in other experimental tasks was interpreted as a distraction-strategy. If low self-esteem individuals are so eager to engage in distracting tasks, one would also expect them to perform better on these tasks. Since the allocation of resources to another task directs attention away from the counter-attitudinal information, this fits the passive-defensive strategy that focuses on the avoidance of counter-attitudinal information. In the next study (Study 3.2), distraction was thus operationalized as a performance score on a task that participants performed before having to read a counter-attitudinal article (which, in fact, they never did). Low self-esteem participants performed better on this task relative to a pre-measure, but only when the article was counter-attitudinal and only when their attitudes were high in value-relevant involvement. High self-esteem participants demonstrated the opposite pattern, suggesting that they preferred allocating their resources to the upcoming counter-attitudinal article, most likely by counter-arguing expected counter-attitudinal statements.

The last study of Chapter 3, Study 3.3, provided the most rigorous test of the idea that distraction is part of the tools of low self-esteem individuals. In this study, attitude-relevant information was presented simultaneously with distracting information. Participants watched an interview with an alleged historian, which contained several attitude-relevant statements. At the same time, scrolling news headlines were presented at the bottom of the screen. Afterwards, participants' memory for the attitude-relevant information and that for the news headlines was assessed. In case of high value-relevance, the interaction of self-esteem and attitude indicated that low self-esteem participants tended to demonstrate better memory for the distracting

## Taking it personally

information when the information conveyed by the interviewee was incongruent as opposed to congruent with their attitude. For high self-esteem participants, the opposite pattern was found. These findings lend further support to the idea that low self-esteem individuals use distraction in order to avoid counter-attitudinal material. Low and high self-esteem individuals did not differ in their memory for the attitude-relevant information itself, which was opposite to expectations. I have argued that this could be due to the absence of a filler task after watching the interview and before the memory-assessment. In this study, the use of distraction was inferred from participants' performance on a memory task. The next step would be to employ a more direct measure of distraction, such as an eye tracker to assess the attention paid to the different sources of information. As such, one could actually assess distraction in a direct manner.

The three studies presented in Chapter 3 together support the claim that low self-esteem individuals use distraction in order to avoid processing counter-attitudinal content. Of course, this need not imply that other strategies, such as source derogation and suppression, are not part of the passive-defensive style of low self-esteem participants. Probably, the strategy that is being employed depends on situational influences and opportunity. For instance, in order to derogate the source, one needs to know who the source is. It is up to future research to explore what other strategies are being employed by low self-esteem individuals.

The research in this dissertation indicates that low and high self-esteem individuals employ different strategies of attitude-protection. However, results also contain some inconsistencies, as discussed earlier in this dissertation. A possible explanation for these inconsistencies is illustrated by recent research that distinguishes specific forms of self-esteem. In particular, the focus of this research is on individuals that are high in self-esteem but uncertain nonetheless. This uncertainty stems from the self-esteem being unrealistically high, from self-esteem that fluctuates a lot (i.e. unstable high self-esteem; e.g. Kernis, Cornell, Sun, Berry, & Harlow, 1993), or from high explicit self-esteem that is accompanied by low levels of implicit self-esteem (i.e.



defensive self-esteem, e.g. Jordan, Spencer, Zanna, Hoshino-Brown, & Correll, 2003). The uncertain nature of their high self-esteem makes these individuals highly sensitive to events that threaten their self-esteem, even if these events are not directly relevant to their self-esteem (Greenier et al., 1999). Moreover, they are keen to exploit and seek out situations that give them the opportunity to validate their high level of self-esteem (e.g. Foster & Trimm, 2008).

With respect to the topic of this dissertation, one might expect these individuals to have stronger reactions to counter-attitudinal information that targets a cherished attitude. It could even be possible that they employ defensive strategies that differ from those employed by individuals who possess more stable (secure and less defensive) forms of self-esteem. Although going into these extra distinctions within the concept of self-esteem was beyond the scope of the present dissertation, it would be interesting for future research to investigate their effects.

An important contribution of this dissertation is that it underlines the functional value of attitudes and the “personal” relationship people have with their attitudes. This aspect has often been ignored in prior research. Thus, attitudes on issues such as the death penalty and organ donation have been treated in the same way as attitudes on for example implementing a new kind of examination in universities. Obviously, these attitudes are not the same and are likely to have a different base as well as having a different functional value. For one, attitudes that are (typically) high in value-relevant involvement, such as the above examples of the death penalty and organ donation, have been found to be more resistant to persuasion than attitudes that are low in this kind of involvement, or that fulfill other psychological functions (e.g. the utilitarian function). This persistence of value-relevant attitudes (and thus behavior) is a challenge to governments, institutions and others who try to instigate (societal) change. For instance, there is still an enormous lack of organ donors even though a considerable amount of effort has been made to persuade people to consent to donate their organs.

## Taking it personally

One explanation in this dissertation for the recurring stability of value-relevant attitudes is that they are tied to the self-concept. Since people are generally quite reluctant to change their self-concept, they are automatically also reluctant to change attitudes linked to their self-concept. In addition, the arguments and beliefs that apply to value-relevant attitudes seem to differ from the arguments that apply to other kinds of attitudes. The arguments and beliefs that people associate with their value-relevant attitudes often relate to underlying norms and values, to feelings of “right” and “wrong”. For instance, the discussion on abortion is often summarized as pro-life versus pro-choice, where the opposing viewpoints represent different moral convictions. Other value-relevant attitudes also tend to be rooted in moral convictions.

This moral aspect of attitudes has a strong impact on how an individual thinks, feels, and behaves (e.g. Rokeach, 1973; Rozin, 1999). For instance, the moralization of cigarette smoking as causing harm to others has had a strong impact on how we think about smoking and people who smoke nowadays (see Rozin, 1999). Other examples are attitudes toward wearing fur and commercial hunting of whales. These attitudes have also become moralized and are likely to be based on basic values for a majority of the people in Western society. Thus, value-relevant attitudes have a strong personal impact. However, they are also important on an interpersonal level. For instance, we tend to like others that share similar attitudes (law of attraction, Byrne, 1961; Byrne & Griffitt, 1966). Indeed, groups and whole societies are built upon the sharing of values. Moreover, attitudes grounded in moral convictions are often associated with a specific class of emotions: the moral emotions. These encompass such emotions as disgust, anger and contempt, but also sympathy and empathy (see Haidt, 2003). Depending on which specific emotion is activated, moral emotions can bind people together or set them apart. As such, it is important that we gain understanding on the workings of values and value-relevant attitudes. This dissertation has taken an important first step, showing that low and high self-esteem individuals use different strategies to protect their value-relevant attitudes.





## References

- Abelson, R. P. (1986). Beliefs are like possessions. *Journal for the Theory of Social Behavior, 16*, 223-250.
- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: testing and interpreting interactions*. Newbury Park, Ca. Sage Publications, Inc.
- Albarracin, D., & Mitchell, A. (2004). The role of defensive confidence in preference for pro-attitudinal information: How believing that one is strong can sometimes be a defensive weakness. *Personality and Social Psychology Bulletin, 30*, 1565-1584.
- Allport, G. W. (1937). The functional autonomy of motives. *American Journal of Psychology, 50*, 141-156.
- Armitage, C. J., & Conner, M. (2000). Attitudinal ambivalence: A test of three key hypotheses. *Personality and Social Psychology Bulletin, 26*, 1421-1432.
- Bartlett, F. C. (1932). *Remembering: a study in experimental and social psychology*. Oxford, England: Macmillan.
- Baumeister, R. F., Dale, K., & Sommer, K. L. (1998). Freudian defense mechanisms and empirical findings in modern social psychology: reaction formation, projection, displacement, undoing, isolation, sublimation, and denial. *Journal of Personality, 66*, 1018-1024.
- Baumeister, R. F., Tice, D. M., & Hutton, D. G. (1989). Self-presentational motivations and personality differences in self-esteem. *Journal of Personality, 57*, 547-579.
- Beauregard, K. S., & Dunning, D. (1998). Turning up the contrast: Self-enhancement motives prompt egocentric contrast effects in social judgment. *Journal of Personality and Social Psychology, 74*, 606-621.

## Taking it personally

- Beggan, J. K. (1992). On the social nature of nonsocial perception: The mere ownership effect. *Journal of Personality and Social Psychology*, *62*, 229-237.
- Belk, R. W. (1988). Possessions and the extended self. *Journal of Consumer Research*, *15*, 139-168.
- Blaine, B., & Crocker, J. (1993). Self-esteem and self-serving biases in reactions to positive and negative events: An integrative review. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp.55-85). New York, NY, US: Plenum Press.
- Blanton, H., Pelham, B. W., DeHart, T., & Carvallo, M. (2001). Overconfidence as dissonance reduction. *Journal of Experimental Social Psychology*, *37*, 373-385.
- Boninger, D. S., Krosnick, J. A., & Berent, M. K. (1995). The origins of attitude importance: Self-interest, social identification, and value-relevance. *Journal of Personality and Social Psychology*, *68*, 61-80.
- Boninger, D. S., Krosnick, J. A., Berent, M. K., & Fabrigar, L. R. (1995). The causes and consequences of attitude importance. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 159-189). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Brannon, L. A., Tagler, M. J., & Eagly, A. H. (2007). The moderating role of attitude strength in selective exposure to information. *Journal of Experimental Social Psychology*, *43*, 611-617.
- Britt, S. H., Adams, S. C., & Miller, A. S. (1972). How many advertising exposures per day? *Journal of Advertising Research*, *12*, 3-9.
- Brown, J. D., & Dutton, K. A. (1995). Truth and consequences: The costs and benefits of accurate self-knowledge. *Personality and Social Psychology Bulletin*, *21*, 1288-1296.
- Byrne, D. Repression-sensitization as a dimension of personality. In B. A. Maher (Ed.), *Progress in experimental personality research*. Vol. 1. New York: Academic Press, 1964, 169-220.
- Byrne, D. (1961). Interpersonal attraction and attitude similarity. *The Journal of Abnormal and Social Psychology*, *62*, 713-715.

- Byrne, D., & Griffitt, W. (1966). A developmental investigation of the law of attraction. *Journal of Personality and Social Psychology, 4*, 699-702.
- Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology, 59*, 538-549.
- Campbell, J. D., & Sedikides, C. (1999). Self-threat magnifies the self-serving bias: A meta-analytic integration. *Review of General Psychology, 3*, 23-43.
- Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavallee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology, 70*, 141-156.
- Carver, A. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*, 267-283.
- Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS Scales. *Journal of Personality and Social Psychology, 67*, 319-333.
- Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155-159.
- Cohen, G. L., Aronson, J., & Steele, C. M. (2000). When beliefs yield to evidence: Reducing biased evaluations by affirming the self. *Personality and Social Psychology Bulletin, 26*, 1151-1164.
- Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior, 11*, 671-684.
- Csank, P. A. R., & Conway, M. (2004). Engaging in self-reflection changes self-concept clarity: On differences between women and men, and low- and high-clarity individuals. *Sex Roles, 50*, 469-480.
- De Dreu, C. K., W., & van Knippenberg, D. (2005). The possessive self as a barrier to conflict resolution: Effects of mere ownership, process accountability, and self-concept clarity on competitive cognitions and behavior. *Journal of Personality and Social Psychology, 89*, 345-357.
- Eagly, A. H., & Chaiken, S. C. (1993). *The Psychology of Attitudes*, Fort Worth, TX: Harcourt Brace Jovanovich.

## Taking it personally

- Eagly, A. H., Chen, S., Chaiken, S., & Shaw-Barnes, K. (1999). The impact of attitudes on memory: An affair to remember. *Psychological Bulletin, 125*: 64-89.
- Eagly, A. H., Kulesa, P., Brannon, L. A., Shaw, K., & Hutson-Cumeaux, S. (2000). Why counterattitudinal messages are as memorable as pro-attitudinal messages: The importance of active defense against attack. *Personality and Social Psychology Bulletin, 26*, 1392-1408.
- Emmons, R.A., & McCullough, M.E. (2003). Counting blessings versus burdens: Experimental studies of gratitude and subjective well-being. *Journal of Personality and Social Psychology, 84*, 377-389
- Fabrigar, L. R., Priester, J. R., Petty, R. E., Wegener, D. T. (1998). The impact of attitude accessibility on elaboration of persuasive messages. *Personality and Social Psychology Bulletin, 4*, 339-352.
- Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality and Social Psychology, 73*, 31-44.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21*, 219-239.
- Förster, J., Higgins, E. T., & Werth, L. (2004). How threat from stereotype disconfirmation triggers self-defense. *Social Cognition, 22*, 54-74.
- Foster, J. D., & Trimm IV, R. F. (2008). On being eager and uninhibited: Narcissism and approach-avoidance motivation. *Personality and Social Psychology Bulletin, 34*, 1004-1017.
- Frey, D. (1989). Recent research on selective exposure to information. *Advances in Experimental Social Psychology, 19*, 41-80.
- Furnham, A., & Singh, A. (1986). Memory for information about sex differences. *Sex Roles, 15*, 479-486.
- Gawronski, B., Bodenhausen, G. V., & Becker, A. P. (2007). I like it, because I like myself: Associative self-anchoring and post-decisional change of implicit evaluations. *Journal of Experimental Social Psychology, 43*, 221-232.



- Gosling, S. D., Ko, S. J., Mannarelli, T., & Morris, M. E. (2002). A room with a cue: Personality judgments based of offices and bedrooms. *Journal of Personality and Social Psychology, 82*, 379-398.
- Gray, J. A. (1981). A critique of Eysenck's theory of personality. In H. J. Eysenck (Ed.), *A model for personality* (pp. 246-276). Berlin: Springer-Verlag.
- Gray, J. A. (1982). *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system*. New York: Oxford University Press.
- Green, J. D., & Sedikides, C. (2004). Retrieval selectivity in the processing of self-reverent information: Testing the boundaries of self-protection. *Self and Identity, 3*, 69-80.
- Greenier, K. D., Kernis, M. H., McNamara, C. W., Waschull, S. B., Berry, A. J., Herlocker, C. E., & Abend, T. A. (1999). Individual differences in reactivity to daily events: Examining the roles of stability and level of self-esteem. *Journal of Personality, 67*, 185-308.
- Greenwald, A. G. (1968). Cognitive learning, cognitive response to persuasion, and attitude change. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), *Psychological foundations of attitudes* (pp. 147-170). San Diego, CA: Academic Press.
- Greenwald, A. G., Bellezza, F. S., & Banaji, M. R. (1988). Is self-esteem a central ingredient of the self-concept? *Personality and Social Psychology Bulletin, 14*, 34-45.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist, 52*, 1280-1300.
- Holahan, C. J., & Moos, R. H. (1987). Personal and contextual determinants of coping strategies. *Journal of Personality and Social Psychology, 52*, 946-955.
- Holland, R. W. (2003). *On the structure and consequences of attitude strength*. Unpublished doctoral thesis.
- Houston, B. K., & Hodges, W. F. (1970). Situational denial and performance under stress. *Journal of Personality and Social Psychology, 16*, 726-730.
- Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and persuasion*. New Haven, CT: Yale University Press.

## Taking it personally

- Hovland, C. I., Lumsdaine, A. A., & Sheffield, F. D. (1949). *Experiments on mass communication* (Vol. 3). Princeton, NJ: Princeton University Press.
- Jacks, J. Z., & Cameron, K. A. (2003). Strategies for resisting persuasion. *Basic and Applied Social Psychology, 25*, 145-161.
- Jamieson, B. D. (1970). Attitude, plausibility, and the learning and recall of controversial material. *Journal of Psychology: Interdisciplinary and Applied, 76*, 169-174.
- Johnson, B. T., & Eagly, A. H. (1990). Involvement and persuasion: Types, traditions, and the evidence. *Psychological Bulletin, 107*, 375-384.
- Johnson, B. T., & Eagly, A. H. (1989). Effects of involvement on persuasion: A meta-analysis. *Psychological Bulletin, 106*, 290-314.
- Jones, E. E., & Berglas, S. (1978). Control of attributions about the self through self-handicapping strategies: The appeal of alcohol and the role of under achievement. *Personality and Social Psychology Bulletin, 4*, 200-206.
- Jordan, C. H., Spencer, S. J., Zanna, M. P., Hoshino-Browne, E., & Corell, J. (2003). Secure and defensive high self-esteem. *Journal of Personality and Social Psychology, 85*, 969-978.
- Judge, T. A., Erez, A., Bono, J. E., Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common construct? *Journal of Personality and Social Psychology, 83*, 693-710.
- Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly, 24*, 163-204.
- Kernis, M. H., Cornell, D. P., Sun, C., Berry, A., & Harlow, T. (1993). There's more to self-esteem than whether it's high or low: The importance of stability of self-esteem. *Journal of Personality and Social Psychology, 65*, 1190-1204.
- Krosnick, J. A., Boninger, D. S., Chuang, Y. C., Berent, M. K., & Carnot, C. G. (1993). Attitude strength: One construct or many related constructs? *Journal of Personality and Social Psychology, 65*, 1132-1151.
- Krosnick, J. A., & Petty, R. E. (1995). Attitude strength: An overview. In J. A. Krosnick, & R. E. Petty (Eds.), *Attitude strength: Antecedents and*

- consequences*. (pp. 1-24). Hillsdale, NJ, England: Lawrence Erlbaum Associates.
- Kuhl, J. (2000). A functional-design approach to motivation and self-regulation: The dynamics of personality systems interactions. In M. Boekaerts, P. R. Pintrich, & M. Zeidner, (Eds.), *Handbook of self-regulation* (pp. 111-169). San Diego, CA: Academic.
- Lakey, C. E., Rose, P., Campbell, W. K., & Goodie, A. S. (2008). Probing the link between narcissism and gambling: The mediating role of judgment and decision-making biases. *Journal of Behavioral Decision Making*, *21*, 113-137.
- Levin, K. D., Nichols, D. R., & Johnson, B. T. (2000). Involvement and persuasion: Attitude functions for the motivated processor. In J. M. Olson, & G. R. Maio (Eds.), *Why we evaluate: Functions of attitudes*. (pp. 163-194). Mahwah, NJ, US: Lawrence Erlbaum Associates, Publishers.
- Levine, J. M., & Murphy, G. (1943). The learning and forgetting of controversial material. *Journal of Abnormal Social Psychology*, *38*, 507-517.
- Maio, G. R., & Olson, J. M. (1995). Involvement and persuasion: Evidence for different types of involvement. *Canadian Journal of Behavioral Science*, *27*, 64-78.
- McElroy, T., Seta, J. J., Waring, D. A. (2007). Reflections of the self: How self-esteem determines decision framing and increases risk taking. *Journal of Behavioral Decision Making*, *20*, 223-240.
- McGregor, I., Gailliot, M. T., Vasquez, N. A., & Nash, K. A. (2007). Ideological and personal zeal reactions to threat among people with high self-esteem: Motivated promotion focus. *Personality and Social Psychology Bulletin*, *33*, 1587-1599.
- McGregor, I., & Marigold, D. C. (2003). Defensive zeal and the uncertain self: What makes you so sure? *Journal of Personality and Social Psychology*, *85*, 838-852.
- McGuire, W. J. (1968a). Personality and attitude change: An information-processing theory. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), *Psychological foundations of attitudes* (pp. 171-196). San Diego, CA: Academic Press.

## Taking it personally

- McGuire, W. J. (1968b). Personality and susceptibility to social influence. In E. F. Borgatta & W. W. Lambert (Eds.), *Handbook of personality theory and research* (pp. 1130-1187). Chicago: Rand McNally.
- McGuire, W. J. (1964). Inducing resistance to persuasion: Some contemporary approaches. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 1, pp. 191-229). San Diego, CA: Academic Press.
- McGuire, W. J. (1961a). Resistance to persuasion conferred by active and passive prior refutation of the same and alternative counterarguments. *Journal of Abnormal and Social Psychology*, *63*, 326-332.
- McGuire, W. J. (1961b). The relative efficacy of various types of prior belief-defense in producing immunity against persuasion. *Journal of Abnormal and Social Psychology*, *62*, 327-337.
- Miller, S. M. (1980). When is a little information a dangerous thing?: Coping with stressful life-events by monitoring vs. blunting. In S. Levine & H. Ursin (Eds.), *Coping and Health* (pp. 145-169). New York: Plenum Press.
- Miller, D. T., & Ross, M. (1975). Self-serving biases in the attribution of causality: Fact or fiction? *Psychological Bulletin*, *82*, 213-225.
- Mullis, R. L., & Chapman, P. (2000). Age, gender, and self-esteem differences in adolescent coping styles. *Journal of Social Psychology*, *140*, 539-541.
- Newby-Clark, I. (2004). Getting ready for the bad times: Self-esteem and anticipatory coping. *European Journal of Social Psychology*, *34*, 309-316.
- Nuttin, J. M. (1987). Affective consequences of mere ownership: The name letter effect in twelve European languages. *European Journal of Social Psychology*, *17*, 381-402.
- Nuttin, J. M. (1985). Narcissism beyond Gestalt and awareness: The name letter effect. *European Journal of Social Psychology*, *15*, 353-361.
- Osterhouse, R. A., & Brock, T. C. (1970). Distraction increases yielding to propaganda by inhibiting counterarguing. *Journal of Personality and Social Psychology*, *15*, 344-358.
- Papageorgis, D. (1968). Warning and persuasion. *Psychological Bulletin*, *70*, 271-283.

- Petty, R. E., & Cacioppo, J. T. (1984). The effects of involvement on responses to argument quantity and quality: Central and peripheral routes to persuasion. *Journal of Personality and Social Psychology, 46*, 69-81.
- Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of Personality and Social Psychology, 41*, 847-855.
- Petty, R. E., Ostrom, T. M., & Brock, T. C. (1981). Historical foundations of the cognitive response approach to attitudes and persuasion. In R. E. Petty, T. M. Ostrom, & T. C. Brock (Eds.), *Cognitive responses in persuasion* (pp. 5-29). Hillsdale, NJ: Erlbaum.
- Pomerantz, E. M., Chaiken, S., & Tordessilas, R. S. (1995). Attitude strength and resistance processes. *Journal of Personality and Social Psychology, 69*, 408-419.
- Priester, J. R., & Petty, R. E. (1996). The gradual threshold model of ambivalence: Relating the positive and negative bases of attitudes to subjective ambivalence. *Journal of Personality and Social Psychology, 71*, 431-449.
- Rhodes, N., & Wood, W. (1992). Self-esteem and intelligence affect influenceability: The mediating role of message reception. *Psychological Bulletin, 111*, 156-171.
- Roberts, J. V. (1985). The attitude-memory relationship after 40 years: A meta-analysis of the literature. *Basic and Applied Social Psychology, 6*, 221-241.
- Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press
- Rotteveel, M. (2003). *Affect & action: Contrasting conscious and nonconscious processes*. Unpublished doctoral thesis.
- Ruiter, R. A. C., Abraham, C., & Kok, G. (2001). Scary warnings and rational precautions: A review of the psychology of fear appeals. *Psychology and Health, 16*, 613-630.
- Schimmel, J., Greenberg, J., & Martens, A. (2003). Evidence that projection of a feared trait can serve a defensive function. *Personality and Social Psychology Bulletin, 29*, 969-979.

## Taking it personally

- Schmeichel, B. J., & Martens, A. (2005). Self-affirmation and mortality salience: Affirming values reduces worldview defense and death-thought accessibility. *Personality and Social Psychology Bulletin*, *31*, 658-667.
- Sedikides, C. (1993). Assessment, enhancement, and verification determinants of the self-evaluation process. *Journal of Personality and Social Psychology*, *65*, 317-338.
- Sedikides, C., & Green, J. D. (2004). What I don't recall can't hurt me: Information negativity versus information inconsistency as determinants of memorial self-defense. *Social Cognition*, *22*, 4-29.
- Sedikides, C., & Green, J. D. (2000). On the self-protective nature of inconsistency-negativity management: Using the person memory paradigm to examine self-referent memory. *Journal of Personality and Social Psychology*, *79*, 906-922.
- Sedikides, C., & Strube, M. J. (1997). To thine own self be good, to thine own self be sure, to thine own self be true, and to thine own self be better. In M. A. Zanna (Ed.), *Advances in Experimental Social Psychology* (pp. 209-269). San Diego, CA, US: Academic Press
- Sherif, M., & Cantril, H. (1947). *The psychology of ego-involvements: Social attitudes & identifications*, New York, Wiley.
- Silverman, I. (1964). Differential effects of ego-threat upon pliability for high and low self-esteem subjects. *The Journal of Abnormal and Social Psychology*, *69*, 567-572.
- Simon, L., Greenberg, J., & Brehm, J. (1995). Trivialization: The forgotten mode of dissonance reduction. *Journal of Personality and Social Psychology*, *68*, 247-260.
- Smith, M. B., Bruner, J. S., & White, R. W. (1956). *Opinions and personality*. New York: Wiley.
- Smith, S. M., Fabrigar, L. R., Powell, D. M., & Estrada, M. J. (2007). The role of information-processing capacity and goals in attitude-congruent selective exposure effects. *Personality and Social Psychology Bulletin*, *33*, 948-960.
- Smith, M., Wethington, E., & Zhan, G. (1996). Self-concept clarity and preferred coping style. *Journal of Personality*, *64*, 407-434.

- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 261-302). Hillsdale, NJ: Erlbaum.
- Steele, C. M., & Liu, T. J. (1983). Dissonance processes as self-affirmation. *Journal of Personality and Social Psychology, 45*, 5-19.
- Steele, C. M., Spencer, S. J., & Lynch, M. (1993). Self-image resilience and dissonance: The role of affirmational resources. *Journal of Personality and Social Psychology, 64*, 885-896.
- Stevens, J. P. (1996). *Applied multivariate statistics for the social sciences (3<sup>rd</sup> edition)*, Mahwah, NJ: Lawrence Erlbaum Associates.
- Tajfel, H., Billig, M., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behavior. *European Journal of Social Psychology, 1*, 149-178.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193-210.
- Tesser, A. (2000). On the confluence of self-esteem maintenance mechanisms. *Personality and Social Psychology Review, 4*, 290-299.
- Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. In Berkowitz, L. (Ed.), *Advances in Experimental Social Psychology* (pp. 181-227). San Diego, CA, US: Academic press
- Visser, P. S., Bizer, G. Y., & Krosnick, J. A. (2006). Exploring the latent structure of strength-related attitude attributes. *Advances in Experimental Social Psychology, 38*, 1-67.
- Wegner, D. M., Schneider, D. J., Carter, S. R., & White, T. L. (1987). Paradoxical effects of thought suppression. *Journal of Personality and Social Psychology, 53*, 5-13.
- Wenzlaff, R. M., & Wegner, D. M. (2000). Thought suppression. *Annual Reviews of Psychology, 51*, 59-91.
- Wiersema, D. V., (2008). [self-enhancement after confrontation with counter-attitudinal information] unpublished raw data.
- Wiersema, D. V., (2007). [relationship of self-esteem and action-orientation] unpublished raw data.

## Taking it personally

Wild, L. G., Flischer, A. J., Bhana, A., & Lombard, C. (2004). Associations among adolescent risk behaviors and self-esteem in six domains. *Journal of Child Psychology and Psychiatry, 45*, 1454-1467.

Zuckerman, M. (1979). Attribution of success and failure revisited, or: The motivational bias is alive and well in attribution theory. *Journal of Personality, 47*, 245-287.

Zuwerink, J. R., & Devine, P. G. (1996). Attitude importance and resistance to persuasion: It's not just the thoughts that count. *Journal of Personality and Social Psychology, 5*, 931-944.







## Summary

We hold attitudes towards objects (cars, tulips), persons or groups (Jan-Peter Balkenende, vegans), institutions (The University of Amsterdam, the Catholic Church) and ideas (gay-marriage). Attitudes guide behavior; a positive evaluation of French fries and hamburgers will result in frequent visits of fast-food restaurants. Besides attitudes guiding behavior, an important characteristic of attitudes is their stability and flexibility. Some attitudes remain stable throughout our life-span while others change easily. The stability of attitudes is noteworthy, especially in a society that floods us with information that challenges our attitudes. Luckily, most of this information is unsuccessful, otherwise we would buy three new cars every week. This dissertation focuses on the stability of attitudes and the ways in which people accomplish this stability.

Chapter 1 provides a description of the theoretical framework that the research described in this dissertation is based upon. Not all attitudes are stable and resistant to change. This stability depends, in part, on the psychological function attitudes fulfill. Especially attitudes that reflect who we are and what we stand for, the so-called value-expressive or value-relevant attitudes, are characterised by high levels of stability. Examples of such attitudes are attitudes regarding gay-marriage, the death-penalty and organ-donation.

Previous research has shown that value-relevant attitudes are highly resistant to change. This suggests that people are motivated to protect their value-relevant attitudes. It seems plausible that this defense-motivation is induced by the direct link between the attitude and the self-concept. Because of

## Taking it personally

this link, information that is a threat to the attitude, is a threat to the self. The question that is addressed in this dissertation is which strategies people employ for defending their value-relevant attitudes. A distinction is made between people with high and low levels of self-esteem.

Self-esteem can be defined as a global evaluation of the self. Prior research has established it to be an important predictor of the ways in which people deal with self-threats. Generally, people with high self-esteem are motivated to (further) enhance their self-esteem. This motivation to enhance self-esteem results in high self-esteem individuals taking on challenges that offer them the chance to heighten their self-esteem. People with low self-esteem are motivated to prevent their self-esteem from dropping. Because of a lack in confidence in their capacity to succeed, they tend to avoid situations that could challenge their self-esteem. I expect these two general foci to also affect how low and high self-esteem individuals protect their value-relevant attitudes and how they deal with counter-attitudinal information. The next three chapters of this dissertation explore this idea from different angles.

In Chapter 2, two different strategies of attitude-protection are introduced, an active-defensive and a passive-defensive strategy, that correspond roughly with the above mentioned differential foci of low and high self-esteem individuals. I expected high self-esteem individuals to use the active-defensive strategy of attitude-protection. The essence of this strategy is refutation of counter-attitudinal information. Low self-esteem individuals were expected to use the passive-defensive strategy aimed at avoiding information that is incongruent with their attitude. Furthermore, these modes of attitude-protection were predicted to be activated predominantly when the attitude under attack is high in value-relevance. The research presented in Chapter 2 investigates how self-esteem and the two strategies of attitude-protection relate to memory for information that is counter-attitudinal and pro-attitudinal.

An important hypothesis in research on memory for attitude-relevant information is the congeniality hypothesis. This hypothesis claims that people have better memory for information that matches their attitude relative to information incongruent with their attitude. This implies that people employ a

passive-defensive processing mode in dealing with counter-attitudinal information. In this mode, counter-attitudinal information is avoided and given less attention. This results in degraded memory for this information relative to pro-attitudinal information. However, research inspired by the congeniality hypothesis has resulted in mixed findings. I argue that these mixed findings can be explained by the fact that low and high self-esteem individuals employ different strategies of attitude-protection. If this is the case, the memory of low self-esteem individuals should correspond with the congeniality hypothesis (i.e. better memory for pro-attitudinal information) while their high self-esteem counterparts should demonstrate an opposite effect due to the active-defensive processing mode where counter-attitudinal information is given more attention. Results of three studies confirm that high self-esteem individuals have better memory for counter-attitudinal information while their low self-esteem counterparts demonstrate better memory for pro-attitudinal information. Moreover, this pattern is found predominantly when the attitude is high in value-relevance. The results also show that these biases in memory for attitude-relevant information are the result of processes taking place at the encoding stage and not at retrieval.

I assume that the differences in memory for attitude-relevant information between people low and high in self-esteem, result from them employing different modes of information-processing. The goal of the research presented in Chapter 3 of this dissertation is to gain a more detailed understanding of these two modes. The emphasis is on the passive-defensive mode of processing.

The passive-defensive mode of processing is aimed at avoiding information that is incongruent with the attitude. One potential means to accomplish this is by distraction, for instance by using cues in the environment that are irrelevant to the attitude. Study 3.1 showed that participants with low self-esteem tended to delay reading a counter-attitudinal essay as opposed to high self-esteem participants if their attitude was high in value-relevance. In stead of choosing to read the counter-attitudinal essay, low self-esteem participants chose to engage in other research experiments first. The tendency

## Taking it personally

to delay confrontation with the counter-attitudinal message by engaging in other tasks first can be understood as a means of distraction. Results of Study 3.2 showed that low self-esteem participants performed better on a distracting task than high self-esteem participants if they thought they had to read a counter-attitudinal essay immediately after this task. This effect was found only when the attitude was rated as high in value-relevance. The degraded performance of high self-esteem participants is argued to be caused by the fact that these participants were focused on the expected counter-attitudinal information, for instance by already counter-arguing expected counter-attitudinal statements. This fits the active-defensive strategy of attitude-protection. In Study 3.3, low self-esteem participants relative to high self-esteem participants had better memory for distracting information that was presented simultaneously with counter-attitudinal information. Since memory is a reflection of the amount of attention given to information earlier, the better memory of low self-esteem participants is indicative of them allocating more attention to the distracting information. Again, this effect was found only when the attitude was high in value-relevance.

The results of the three studies presented in Chapter 3 together strongly support the idea that distraction is part of the behavioral repertoire of low self-esteem individuals for dealing with information that threatens a cherished attitude. High self-esteem individuals do not shun away from this information. This fits the profile of the active-defensive strategy that aims at counter-arguing persuasive content.

The goal of both the active-defensive and the passive-defensive strategy is assumed to be the maintenance of the attitude. The question remains, which of these strategies is more successful in accomplishing this goal. The research presented in Chapter 4 shows that the attitudes of participants with high levels of self-esteem change less after confrontation with counter-attitudinal information, than those of participants with low self-esteem. This suggests that the active-defensive strategy of rebutting counter-attitudinal information is the more effective one of the two. When high self-esteem participants' capacity to engage in counter-arguing was diminished by means of

a second task that had to be performed simultaneously, their attitudes changed more. For participants low in self-esteem, the dual-task condition did not affect their attitudes in the same way. Their attitudes changed less under these conditions. I suggest that this is the case because the second task helped them to distract their attention away from the counter-attitudinal information.

In Chapter 5, I provide a summary of the most important findings of the research presented in this dissertation, and discuss some implications and possible routes for future research. The findings show that low and high self-esteem individuals use different strategies to protect cherished attitudes from changing and that this affects memory for attitude-relevant information and the stability of their attitude. Also, this dissertation has contributed to a more detailed understanding of the passive-defensive strategy by showing that distraction is part of this strategy.





## Samenvatting

### *Summary in Dutch*

Mensen hebben attitudes over objecten (auto's, tulpen), personen of groepen (Jan-Peter Balkenende, veganisten), instituten (de Universiteit van Amsterdam, de katholieke kerk) en over ideeën (het homo-huwelijk, rekeningrijden). Attitudes vormen een leidraad voor ons gedrag. Zo zal een positieve evaluatie van patat en hamburgers waarschijnlijk resulteren in een frequent bezoek aan fast-food restaurants. Naast het feit dat attitudes richting geven aan ons gedrag, is een belangrijk kenmerk van attitudes hun stabiliteit of veranderbaarheid. Sommigen dragen we een leven lang met ons mee, terwijl andere attitudes veel sneller veranderen. Vooral de stabiliteit van attitudes is een interessant en opvallend gegeven binnen een maatschappij waarin we overspoeld worden met informatie die onze attitudes op de proef stelt en ons uitdaagt onze attitudes te herzien. De meeste van die informatie is (gelukkig) niet succesvol, anders zouden we elke week drie nieuwe auto's kopen en om de week op vakantie moeten. Dit proefschrift richt zich op de stabiliteit van attitudes en de wijze waarop mensen deze stabiliteit realiseren.

In hoofdstuk 1 wordt de theoretische context geschetst die ten grondslag ligt aan dit proefschrift. In de eerste plaats wordt de stabiliteit van een attitude gerelateerd aan de specifieke psychologische functie die zij voor een individu vervult. Niet alle attitudes zijn namelijk stabiel en resistent tegen verandering, dit geldt met name voor attitudes die een directe uiting zijn van onze identiteit, de zogenaamde waarde-expressieve of waarde-relevante attitude. Deze attitudes reflecteren wie wij zijn en voor welke waarden wij

## Taking it personally

staan. Voorbeelden van zulke attitudes zijn attitudes ten aanzien van het homo-huwelijk, de doodstraf en orgaan-donatie.

Uit eerder onderzoek is gebleken dat mensen er alles aan doen om hun waarde-expressieve attitudes te handhaven en verdedigen. Het lijkt aannemelijk dat deze defensiviteit gerelateerd is aan de directe link die – zo heeft onderzoek laten zien – bestaat tussen de attitude en het zelf-concept. Dus: kom je aan mijn waarde-expressieve attitude, dan kom je aan mij. De vraag die in dit proefschrift centraal staat, is welke strategieën mensen hanteren om hun waarde-expressieve attitudes te handhaven. Hierin wordt onderscheid gemaakt tussen mensen met een hogere en lagere zelfwaardering.

Zelfwaardering kan gedefinieerd worden als een globale evaluatie van het zelf en talloze onderzoeken hebben inmiddels aangetoond dat zelfwaardering een belangrijke voorspeller is van de wijze waarop men reageert op bedreigingen van het zelf. In het algemeen kan gesteld worden dat mensen met een hoge zelfwaardering erop uit zijn om hun zelfwaardering verder te verhogen. Hierdoor zullen zij uitdagingen aangrijpen die hun de kans bieden succes te behalen. Mensen met een lage zelfwaardering zijn vooral gericht op het voorkomen van verdere daling van hun zelfwaardering. Omdat zij tevens het vertrouwen missen in hun capaciteit om uitdagingen tot een succesvol einde te brengen, gaan zij uitdagingen liever uit de weg. Ik verwacht dat deze twee foci ook terug te vinden zijn in de wijze waarop mensen met een hoge en lage zelfwaardering hun waarde-relevante attitudes beschermen en omgaan met counter-attitudinale informatie. De volgende drie hoofdstukken belichten dit idee vanuit verschillende invalshoeken.

In hoofdstuk 2 worden twee manieren van attitude-bescherming geïntroduceerd die grofweg corresponderen met de hierboven geïntroduceerde foci, te weten een actief-defensieve en een passief-defensieve stijl. Verwacht wordt dat mensen met een hoge zelfwaardering een actief-defensieve stijl hanteren die probleemgericht is, namelijk op het *weerleggen* van de aangeboden informatie. Ten tweede wordt verwacht dat mensen met een lage(re) zelfwaardering een passief-defensieve stijl hanteren die vooral gericht is op het *vermijden* van informatie die tegen de eigen attitude ingaat. Verder

wordt verwacht dat deze verdedigingsmechanismen met name in werking zullen treden wanneer de attitude hoog waarde-relevant is. Ik heb onderzocht hoe zelfwaardering (en verdedigingsstijl) gerelateerd is aan het geheugen dat mensen hebben voor counter- en pro-attitudinale informatie.

Een belangrijke hypothese binnen onderzoek naar geheugen voor attitude-gerelateerde informatie, de congenialiteitshypothese, stelt dat mensen een beter geheugen hebben voor informatie die de eigen attitude ondersteunt. Dit impliceert een passief-defensieve verwerkingsstijl omdat hierbij counter-attitudinale informatie wordt vermeden (minder aandacht krijgt) en dus minder goed zal worden onthouden. Echter, onderzoek geïnspireerd door deze hypothese liet gemengde resultaten zien. Dit zou het gevolg kunnen zijn van de verschillende verwerkingsstijlen die mensen met een hoge en lage zelfwaardering hanteren. Verwacht werd dat mensen met een lage zelfwaardering het congenialiteits-effect zouden laten zien (i.e. een beter geheugen voor pro-attitudinale informatie), terwijl mensen met een hoge zelfwaardering een beter geheugen voor counter-attitudinale informatie zouden laten zien als gevolg van hun actief-defensieve verwerkingsstijl. De resultaten van de drie studies laten zien dat proefpersonen met een hoge zelfwaardering inderdaad een beter geheugen hebben voor counter-attitudinale informatie terwijl proefpersonen met een lage zelfwaardering juist pro-attitudinale informatie beter onthouden. Overeenkomstig de verwachting wordt dit patroon alleen gevonden wanneer de attitude hoog waarde-relevant is. Tevens laten de resultaten van Studie 2.3 zien dat deze vertekeningen in het geheugen het resultaat zijn van processen die plaatsvinden tijdens het encoderen van de attitude-gerelateerde informatie en niet tijdens het ophalen van de informatie uit het geheugen.

Aangenomen wordt dat deze verschillen in het geheugen van personen met een hoge en lage zelfwaardering het resultaat zijn van twee verschillende stijlen van informatie-verwerking, te weten een actief-defensieve en een passief-defensieve stijl. Het doel van het onderzoek dat gepresenteerd wordt in hoofdstuk 3 was om een specifiek beeld te krijgen van deze twee verwerkingsstijlen, met name de passief-defensieve verwerkingsstijl.

## Taking it personally

De passief-defensieve verwerkingsstijl is gericht op de vermindering van informatie die tegen de eigen attitude indruist. Een potentiële manier om dit te bewerkstelligen is door afleiding te zoeken of door in de context aanwezige afleiding aan te grijpen. De resultaten van Studie 3.1 lieten zien dat proefpersonen met een lage zelfwaardering meer geneigd waren het lezen van een artikel dat informatie bevat die tegen de eigen attitude inging, uit te stellen dan proefpersonen met een hoge zelfwaardering wanneer de attitude hoog waarde-relevant was. Studie 3.2 toonde aan dat proefpersonen met een lage zelfwaardering ook beter presteerden op een afleidende taak dan proefpersonen met een hoge zelfwaardering wanneer zij dachten dat zij meteen na deze taak een artikel zouden lezen dat informatie bevatte die in strijd was met de eigen attitude. Dit effect werd alleen gevonden wanneer de attitude idiosyncratisch als hoog waarde-relevant werd beoordeeld. De verslechterde prestatie van proefpersonen met een hoge zelfwaardering kan gezien worden als indicatie dat zij zich mentaal al richten op de verwachte counter-attitudinale informatie, bijvoorbeeld door tegen-argumenten te genereren.

De resultaten van Studie 3.3 lieten zien dat proefpersonen met een lage zelfwaardering een beter geheugen hadden voor afleidende informatie die gelijktijdig met counter-attitudinale informatie was aangeboden dan proefpersonen met een hoge zelfwaardering. Dit geheugen is een reflectie van de hoeveelheid aandacht die ze eerder aan de afleidende nieuwsberichten hebben geschonken. Ook dit effect werd alleen gevonden wanneer de attitude als hoog waarde-relevant werd beoordeeld.

De resultaten van de drie studies in hoofdstuk 3 geven een sterk bewijs voor het idee dat afleiding onderdeel is van het gedragsrepertoire van mensen met een lage zelfwaardering in het omgaan met informatie die een gekoesterde attitude bedreigt. Mensen met een hogere zelfwaardering lijken deze bedreigende informatie juist niet uit de weg te gaan. Dit past binnen een actief-defensieve verwerkingsstijl die gericht is op het “bevechten” van informatie die tegengesteld is aan de eigen attitude.

Verondersteld wordt dat beide strategieën tot doel hebben de attitude te handhaven. De vraag rijst welke van deze twee strategieën het meest effectief

is in het handhaven van de attitude. Het onderzoek dat in hoofdstuk 4 gepresenteerd wordt, laat zien dat de attitudes van proefpersonen met een hoge zelfwaardering minder veranderen na confrontatie met counter-attitudinale informatie dan de attitudes van proefpersonen met een lage zelfwaardering. Dit doet vermoeden dat de actief-defensieve verwerkingsstijl die bestaat uit de refutatie van counter-attitudinale informatie, succesvoller is dan de passief-defensieve verwerking. Een kanttekening hierbij is dat wanneer proefpersonen met een hoge zelfwaardering ten tijde van de verwerking van counter-attitudinale informatie nog een andere taak moesten doen die de capaciteit tot refutatie beperkte, hun attitudes juist meer veranderden. Voor proefpersonen met een lage zelfwaardering gold dat hun attitudes minder veranderden wanneer zij een tweede taak deden. Dit komt waarschijnlijk omdat de tweede taak hen hielp om hun aandacht af te leiden van de counter-attitudinale informatie.

In hoofdstuk 5 worden de belangrijkste bevindingen van dit proefschrift samengevat en worden de implicaties van deze bevindingen benoemd alsook mogelijke wegen voor vervolgonderzoek. De bevindingen van dit proefschrift wijzen uit dat personen met een hoge en lage zelfwaardering verschillende strategieën hanteren om gekoesterde attitudes te handhaven en dat dit consequenties heeft voor het geheugen voor attitude-gerelateerde informatie en de resistentie van de attitude. Tevens is een duidelijker beeld ontstaan van de passief-defensieve strategie door aan te tonen dat het gebruik van afleiding onderdeel is van deze strategie.



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