Taking it personally: self-esteem and the protection of self-related attitudes
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Chapter 4

The best defense is offense:
Self-esteem and the effectiveness of two strategies for resisting persuasion

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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9 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 [unpublished manuscript]
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-
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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. 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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10 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-
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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,
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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 (α = .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 (α = .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 (α = .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
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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, \( t(80) = -2.11, p = .033 \). 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, \( t(80) = -2.15, p = .036, r = -.26 \). 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

\[11\] 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, \( t(80) = -2.30, p = .024, r = -.28 \). 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.
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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
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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.