Implicit Association of Concepts and Attitudes

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INTRODUCTION

Attitudes towards people with disabilities

The quality of life of people with disabilities has been improving (for example, the principal of normalization is becoming more accepted, the increase in number of barrier-free buildings and so on). However, there are still few opportunities for social participation. And there is the recurring problem of job opportunities and so on. Despite the changes, people with disabilities are still trying to be more socially accepted. Have the attitudes towards people with disabilities changed?

What do you think about people with disabilities? For example, someone says 'I don't discriminate against people with disabilities. I never dislike anyone at all.' Current measures of attitudes often question individual attitudes directly like this. However, are these real attitudes? He may be answering based on social desirability. In other words, he may be saying what he thinks others may want to hear, that is say. So, how do we assess real attitudes? The measure of implicit attitudes has one of the answers.

Methods of implicit attitudes apply for automatic process of human associative network concepts (Petty, Fazio & Brinol, 2009). When people imagine an 'apple', 'apple' concepts spread to other concepts, such as 'red', 'fruits', 'good' and so on. These concepts are associated with each other. But if you imagine an apple, do you associate it with a car? After you have imagined an apple, you can respond to fruits category more easily than to cars category. Strong associative concepts, such as fruits, are easy to respond to. On the other hand, weak associative concepts, such as cars, are difficult to respond to.

The affective reactions resulting from particular associations are activated automatically upon encountering a relevant stimulus (Fazio, 1995). Associative strength affects response to a relevant stimulus (Greenwald & Banaji, 1995). Such implicit attitudes predict spontaneous behavior (Dovidio, Kawakami, Johnson. C, Johnson. B & Howard, 1997; McConnell & Leibold, 2001). So, implicit attitudes are considered to be more difficult to control and change, even if one intends to do so.

Thus, we have to use such implicit measures to assess attitudes towards people with disabilities.

Regulate prejudice

However, if implicit attitudes by automatic process arouse spontaneous behavior, can't we control our spontaneous prejudiced behavior? What moderates automatic prejudice? As moderator of implicit attitudes, motivations are known. In 1998, Plant and Devine argued that there are two main kinds of motivations to moderate prejudice. Internal motivation is focused on the implications of appearing prejudice to oneself.

For example, 'I get angry with myself, when I have a thought that might be considered prejudiced'. External Motivation is focused on the implications of appearing prejudice to other people. For example, 'If I try to hide negative thoughts about Black people in order to avoid negative reaction from others.' They developed the 'Internal & External Motivation to Respond Without Prejudice' Scale. Moreover, they found out that those who have high internal motivation and low external motivation appeared to be effective in regulating prejudice towards Blacks. This indicates, internal motivation is effective in regulating attitudes, automatic processing. However, the effect depends on external motivation.

The present study has two main objectives. First, to examine the implicit attitudes towards people with disabilities by using an implicit measure. Second, to check the effects of internal and external motivation to respond without prejudice on regulating prejudice towards people with disabilities.

METHOD

Participants were 104 undergraduate students. They were asked to complete the FUMIE test and the 'Internal & External Motivation to Respond Without Prejudice' Scales. The target word used in the FUMIE test was 'people with disabilities'. First, participants answered the FUMIE test. Second, participants answered the scale.

Motivation to Regulate Prejudice

In 1998, Plant & Devine developed the 'Internal & External Motivation to Respond Without Prejudice' Scale (The IMS and the EMS, respectively). This scale assesses motivation to regulate prejudice towards Blacks. In this experiment, to examine the effect of motivation on implicit attitudes towards people with disabilities we applied this scale to 'disabled' version. All rating were made on 9-point scales rating from 1 (*strongly disagree*) to 9 (*strongly agree*). Each scale consisted of 5 items. The IMS and EMS were averaged each. Higher scores indicate higher level of the motivation.

Implicit measure of attitudes

The 'Filtering Unconsciousness Matching of Implicit Emotions' (FUMIE) test is the one of the measures of implicit attitudes (Mori et al., 2008). It measures the association strength of concepts between the targets and evaluations. The biggest advantage of the FUMIE test is that it is difficult to distort one's real attitudes.

We used the 'disabled' version of the FUMIE Test in this experiment. In the FUMIE test, three kinds of words are arranged in a line at random: 1) words with positive meaning, such as 'success' and 'victory', 2) words with negative meaning, such as 'death' and 'bad', 3) 'people with disabilities'. There were 6 lines in total. The task is to draw circles on the positive words and crosses on the negative words, as quickly as possible, and with as few errors as possible. The task repeated 6 times. In the 3 trials (trial-A), the participants are asked to draw a circle (○) on the 'people with disabilities' and positive words, and cross (×) on the negative words. Whereas in the other 3 trials (trial-B), the participants are asked to draw a cross (×) on the 'people with disabilities' and negative words, and circle (○) on the positive words. Participants conducted to draw the marks for 20 seconds/trial.

The indicator of the implicit attitudes towards people with disabilities is the implicit association score (IAS). IAS = (the average number of the trial-A drawings)-(the average number of the trial-B drawings). If a person has a positive implicit attitude towards them, association of concepts between positive evaluations and people with disabilities is stronger than association of concepts between negative evaluations and people with disabilities. Therefore, response speed is faster and the number of drawings is bigger in the '○' blocks than in the '×' blocks. Thus, positive attitude towards people with disabilities result in a positive implicit association score. Whereas negative attitudes towards them result in a negative implicit association score, defined operationally as 'prejudice' in this study. This way, the FUMIE test measures the automatic association strength of concepts/between the targets and evaluations.

RESULTS AND DISCUSSION

The average of all participants' implicit association score is -0.89. If implicit attitudes are positive, the score is also positive. And if implicit attitudes are negative, the score is also negative. All undergraduate students' scores are statistically significant negative scores ($t=-2.26$, $df=95$, $p<.05$). In other words, undergraduate students had a stronger association between 'negative evaluation' and people with disabilities than between 'positive evaluation' and them. Thus, in general, undergraduate students had an implicit prejudice towards people with disabilities. This result suggests that undergraduate students' attitudes that are internal attitudes are negative. Although, today's social world around people with disabilities, that is external attitudes has been changing to become more positive. This indicates that there is a gap between the social world and individual true attitudes.

The data of the internal motivation and external motivation from the participants in the top 30% and the bottom 30% were compared. The results are shown in the figure. The scores of those who have high internal and low external motivation are not negative. So, they were effective in regulating prejudice towards people with disabilities. That is, internal motivation is important to regulate prejudice. But if external motivation is also high, the effect of internal motivation is reduced. Motivation focused on self is effective on automatic association of concepts. In contrast, motivation focused on others either is not effective or simply interferes with internal motivation. The two motivations may be competing with each other. It is not a problem if motivation focused on the self is more powerful than motivation focused on others. But if the motivation focused on others is more powerful than motivation focused on the self, people may rebel against others because of self-efficacy. These results suggest that the two kinds of motivation interact.
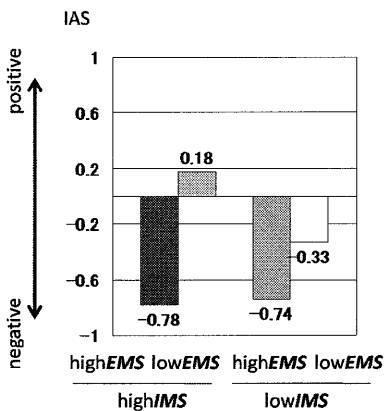

Figure The effect of the internal and external motivation on implicit attitudes toward people with disabilities

As implication of the results on implicit attitudes, individual attitudes haven't

caught up with social world's trend yet. We can't understand the matter only the either. And as implication of the result on motivation, internal motivation is effective in automatic process. However, it is also necessary to one's external motivation. We are influenced both by motivation focused on the self as well as by motivation focused on others. When assessing implicit attitudes, we should consider the interactions between the individual and the circumstances around the individual. The world affects individuals and individuals affect the world. In the same way, individuals affect and are affected by others. As this study shows, prejudice and motivation are different whether or not think about around individual. Individuals acquire and change their concepts in this context. These dynamics make our world.

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