

A Study Review about Cultural and Social Dimensions of Implicit Attitudes

Ziyan Chu *

College of liberal and science. University of Illinois Urbana-Champaign, Champaign, Illinois, United States

* Corresponding Author Email: zchu4@illinois.edu

Abstract. The research on implicit attitudes (IA) become more and more important in modern times. Researchers have more findings on the social and cultural dimensions of IA. However, a study that combines the social and cultural dimensions is rare. This study review combined six IA studies that separately focused on cultural and social dimensions to discuss their relationships. All the used studies are experimental research. All studies used questionnaires to measure explicit attitudes and the IAT test to collect IA. For children's participants, researchers use oral questions and SI-IAT. Cultural backgrounds influence people's IA. Diverse cultures lead people to prefer different behaviors or personalities in their IA. However, the influence of cultural background is not stable. Complex social environments cover the influence of culture on IA. Local social norms in closed social environments changed people's IA from broad cultural backgrounds. Social distance (SD) acts differently with culture or social norms. There is a range of SD. Below or beyond it, both influence people's IA toward diverse social groups. Self-awareness of IA is theoretically based on people's self-appraisals of cultural and social backgrounds. However, there is evidence that people predict IA with simple mental associations. This provides new perspectives on future studies about social and cultural dimensions of IA.

Keywords: Implicit attitudes, social norms, cultural differences.

1. Introduction

The relationship among culture, social relationships, and implicit attitudes (IA) is always one of the most exciting questions in human history. At the macro level, the Sons of Genghis Khan and warriors in the mountains of Wallachia have entirely different attitudes to other cultures and religions. It indirectly influences how the blood flows in the brutal history of wars. On the micro level, the implicit attitude drives people to say hi to their good catholic neighbor while remaining cold-faced to Latino people in a poor street. Like other most important factors around the human species, the implicit acted like a central nervous system, which connected and impacted every second of human history and life. The research on implicit attitude is also correlated with many important social welfare. For example, people need to know how IA function well to prevent potential stereotypes that harm specific social groups. For this popular topic, there is a lot of research on the relationship between IA and cultural differences or social norms. However, the study about discussing culture, society, and IA together is still missing compared to discussing them separately. Many researchers separately study the effects of cultural differences or social factors on people's IA. They did not connect the social and cultural dimensions in the formation and evolvement of IA. Cultural study typically ignored the influence of local social environments [1-3]. Studies about social relationships commonly ignore the local cultural differences of participants [2]. People's IA always face multiple effects from cultural and social dimensions. This is why studying and analyzing these two factors is significant. In this study review, cultural and social dimensions will be separately and also combined to talk from the perspective of IA.

2. Research Target

The main research target in this article is the implicit attitude and how it influences people's lives from social and cultural perspectives. The implicit attitude is the unconscious appraisal of specific

targets, including social groups and related identities. Social factors refer to the relationships and identities within diverse social groups and their influence on individuals. Cultural factors refer to shared values and beliefs that shape a social group or society. In this study review, social influence is the micro-level factor, while cultural influence is the macro-level factor.

Another critical point is that culture and society are not two independent variables. They influence and shape each other. From the reviewed research, people can find a clue about how IA play a role in this process. According to Deng, cultural background influences how people perceive outer stimuli [1]. After culture influences a person's implicit and explicit attitude (EA), their emotional response will be changed. Emotions can play a huge role in social relationships. Social factors like social relationships will then give back the influence of IA. Researchers can see that implicit attitude is not an isolated variable from the relationship between society, culture, emotion, and implicit attitude. It influences and is influenced by many things at the same time.

3. Impact of Cultural Factors

3.1. Cultural Differences and IA Toward Emotional Regulation

The first clue that connects cultural backgrounds and IA is emotion. Like IA, emotion is a complex concept with enormous bidirectional relationships with other confounders. This paragraph will only discuss the relationship among culture, emotion, and IA. In emotional research, implicit and EAs are essential in measuring emotion regulation (Deng, 2019). In this research, researchers explored how cultural differences influence people's emotional regulation. The experiment samples are university students from two universities, separately from the United States and China. To reduce the influence of uncorrelated cultural influences, all US students have Caucasian heritage. Based on previous research, emotional control as a way to regulate emotion is preferred by traditional Chinese culture [4, 5]. Researchers want to measure participants' explicit and IA to get their appraisals of different emotion regulation methods. Methods that test EAs, like questionnaires, will be inevitably influenced by social ethics and linguistic habits.

As a result, the measurement of implicit attitude (IAT) provides better predictions about the differences between diverse cultures. Compared to European Americans, Chinese people prefer emotional control rather than emotional expression. Although participants in both cultures believe emotional control is more favorable than expression, Chinese participants value emotional control compared to emotion expressed in their implicit attitude. Adjusting personal emotions or success to maintain social harmony might contribute to this difference. This habit is a unique cultural tradition that rarely happens in Western culture [6]. Diverse cultural backgrounds change people's IA toward emotion regulation. This influence will be expanded in social relationships and lead to further implicit attitude change. Culture acted like the underlying code of implicit attitude that will influence everything above. The conclusion of this article provided an important horizon about how different cultures influence people's IA.

3.2. Cultural Differences and Implicit Racial Attitudes

Compared to the last research, Dunham makes a more profound discussion of the relationship between cultures and social relationships and their influence on IA [2]. According to Vaughan, humans, as social animals, naturally prefer inner groups to outer groups [7]. When their implicit attitude of an outer social group overcasts a person's own character, they are under stereotypical influence. Cultural backgrounds mentioned in the last paragraph also influence a person's preferences for diverse outer groups. For the purpose of ruling out the influence of American social norms about ethnicity, researchers adopted 6- and 10-year-old children and young adults from both the US and Japanese countryside as the participants of this study. All Japanese participants were volunteers from Kashima Prefecture, with few foreign people. There are no Asian American participants in the US group in order to avoid the influence of their unique cultural background. In this experiment, researchers used both explicit and implicit attitude tests. The IAT test is also necessary for children

because there is evidence that children also conduct self-ethical reviews, which reduce the accuracy of EAs tests [8]. The test results showed that even 6-year-old children expressed an unconscious preference for white people or Japanese people (in the Japanese group) compared to black people. This phenomenon means the formation of early stereotypes does not depend on exposure to that social group. The EA of Japanese children is more negative to low-status social groups (black people) in this experiment. That might be explained by US children having more exposure to black people in their growing environment. Higher frequency of interaction and exposure might reduce the negative stereotypes of US children to black people. The implicit stereotype toward low-status social groups already exists in 10-year-old children, like adults. This observation contradicts the traditional theory that stereotypes are formed in long-term learning [9]. Moreover, a recent study showed that new IA can be formed quickly in adults [10]. Combined with the result of this study, researchers assume that the change in the current implicit attitude toward the outer group depends on the proportion of positive and negative information perceived. People's implicit attitude stays the same if the proportion remains the same.

3.3. Changing Culture and IA

Besides the preference of outer racial groups and emotional regulation, cultural differences also influence people's preference in personality within social interaction. The preference over personality determines the initial implicit attitude of people toward others. In this study, the researchers studied how the cultural differences (between China and Canada) led to a difference in IA toward shyness [3]. The shyness represents people's high alertness and trepidation in social communications. The significance of this research is that most studies about shyness focused on EAs, which many confounding factors will influence. Another reason implicit attitude is essential in this research is the unique cultural background of China. Previous research has shown that shyness is vital in the traditional Chinese cultural background [11]. Shyness was seen as a valuable trait in social interaction because it represents emotional control and inhibition in traditional Chinese culture. However, China faces multiple revolutions, and its culture also faces a lot of changes in this process. People's attitudes toward shyness might also change in this period. The implicit attitude test will show whether or not Chinese participants are still under the influence of traditional Chinese culture. The participants are college students from Canada (650 people, 99 males) and China (290 people, 32 males) who have taken psychology introduction courses. Most of the participants are females. Previous research shows that shyness is more acceptable in females' EAs than in males [12]. This discovery might be correlated with traditional gender roles, which are a vital component in social relationships. However, the result of this research showed that the gender difference is only significant in the EA. Both males and females hold negative IA toward shyness.

In another perspective, the experiment did not achieve the predicted result that Chinese culture prefers shyness. Chinese participants showed even more negative implicit views about shyness compared to Canadian participants. The unique position of student groups might contribute to that result. Much previous research found that shyness was discouraged in the daily life of Chinese students [13]. The diverse social relationships among college students in big cities have changed the traditional cultural influence on them. This phenomenon might also contribute to the conclusion that implicit attitude is plastic in a changed social environment.

4. Impact of Social Factors

4.1. Social Distance and IA

In addition to cultural factors, IA will be influenced by many social factors. Compared to culture, society has higher levels of connection with IA because IA influence social relationships from all perspectives. In Wilson's study, the researchers explore how IA play a role in the daily recognition of vulnerable groups with intellectual disabilities [14]. In the research about vulnerable groups, IA tests like IAT are vital. The stigmatization of some specific social groups (people with intellectual

disabilities or mental disorders) leads to a broad stereotype toward them in society. According to Dunham, the percentage of information exposed in the public's eyes is the core reason for the stigmatization and biased implicit attitude [2].

On the other hand, exposure is far from the only factor influencing people's implicit views. As a result, researchers want to explore its relationship with other factors like EAs, SD, emotions, and exposure. The participants in this experiment are all British civilians over 18 years old. They all receive the SI-IAT test to measure their implicit attitude toward intellectual disability. The SI-IAT test is a derivative IAT that is designed for non-binary concepts, which means it does not have an opposite concept like intellectual disability. Researchers use multiple scales to measure the other four dependent variables (EAs, SD, emotions, and contact). The result is surprising in some relationships among those variables.

Emotional response does not correlate with implicit attitude, while it moderately correlates with SD and EA. Gender and education level do not impact IA, but they do impact EAs. The most exciting finding is the relationship between the level of exposure and implicit attitude. Initially, the implicit attitude will become more positive with the increase of time exposure. However, when the frequency of contact reaches one per day, people's implicit attitude toward intellectually disabled people becomes even more damaging. Researchers believe participants might face pressure and difficulties in taking care of intellectually disabled people. The implicit attitude reflects the stress, which requires more time for connection. Therefore, people who contact intellectually disabled people beyond the frequency threshold will have a more negative attitude toward them. Based on this study, the frequency of social interaction will influence IA in social dimensions while factors like gender and educational level does not. This showed that people need to be careful in studying how social factors influence implicit attitude. Unlike the culture dimension, people cannot broadly study how two cultures led to different variables. There are many differences, even in one social group.

4.2. Social Norms, Self-presentation, and IA

While social norms and exposure influence adults' IA, researchers are also curious about how children perceive those social norms. Theoretically, children are less likely to be influenced by social norms and ethical reviews. In Cate's study, researchers study how social norms and children's ethical review in self-presentation are correlated with their implicit and EAs [15]. Social norms are standard and also diverse in daily life. In Western society, the social norms about not expressing opinions about stereotypical ideas and racial problems are widely spread across all age stages through public media, education, and national laws [16]. Those social norms will definitely influence all children in Western society, but the problem is to what extent. At the same time, the difference between IA and EAs can reveal how social norms build up a person's social portrait. Previous research showed that the inhibition of bias was caused by external pressure from social norms and internal motivation from personal values. Children have an immature nature from both perspectives. As a result, a study on children will reveal how age, self-representation and internalization of social norms influence their IA. The main participants of this study are children from middle-class families in rural areas around the southwest of England. There are much more girls (98) compared to boys (57) in the study. To testify how self-presentation influences different aged children's performance. The researchers informed the children in the high self-presentation group that there was a camera recording their performance, and that video would be reviewed. Unlike previous research that used questionnaires to test EAs, Multi-response Racial Attitude (MRA) was used in this test to measure the EAs of children. The result showed that children with low internalized social norms tend to inhibit their bias in the high self-presentation condition. With the increase in age, children tend to show lower explicit negative views of racial problems while the negative implicit attitude remains.

4.3. Self-awareness of IA

After discussing how some factors in social relationships influence IA, self-awareness will be the next fundamental topic to understand how implicit attitude plays a role in society. In Azad's study,

researchers want to explore whether the participants realize or predict their own IA [17]. If people are aware of their IA, they can adjust their behavior based on their will. In this study, researchers want to use gender stereotypes as the implicit attitude measured in the IAT test. Gender stereotypes are common and exist in most societies around the world. At the same time, mainstream culture does not encourage those stereotypes. As a result, people will review their choice in EA test (Hawthorne effect) self-presentation situations. To prevent strong emotional responses, the researchers avoid the stereotypes that contain strong emotions, like males tend to do more crime or are more intelligent than females [17]. The participants of this experiment are college students at the University of Cologne. All participants are informed about the IAT test and the content they will be tested about. Unlike other implicit attitude research, participants need to predict their grades in this study. The difference between predicted grades and actual grades will present to what extent people can recognize their implicit views. There is also a limitation in the sampling. The fact that most of the participants are girls (73%) might influence the result. The result of this study is pretty interesting. The participants will significantly adjust their prediction about their implicit attitude after taking the IAT test, which leads to higher consistency between their implicit and EAs. The relationship between implicit appraisals and stereotypes is also found. People who prefer women over men also prefer emotion over ration, which reflects traditional gender stereotypes. However, most participants lived in a homogenized environment (university). Most of them do not have a gender preference but still represent and predict their implicit stereotype. The researchers assume that fluency between words and images in IAT is the core of this result. Participants will have a positive feeling when they get a fluency correlation between words and images [18], which allows them to predict their implicit attitude.

5. General Discussion

By combining all the research above, people can fully see how cultural and social factors play a role in explicit & IA. Both cultural diversity and social norms influence people's IA, but on a different level. Culture macroscopically influences all people's implicit views of it, and these influences are relatively weak compared to social factors. Social factors can have highly varied impacts on people in different social groups. Unlike cultural factors, the influence of social factors highly depends on how people perceive and understand them. For example, Azad proved that people can partially predict their IA in social relationships [17]. This means that people have a chance to face or adjust their implicit attitude that they do not want. The self-awareness of implicit is typically built on self-appraisals based on personal experience and cultural and social backgrounds. Azad speculated that simple mental associations can make people predict their IA [17]. This hypothesis provided an interesting topic for future researchers. How have social and cultural factors changed the target of those mental associations? Will participants still correctly predict their implicit stereotypes if they are not provided with specific social targets? According to Wilson, people can reduce their implicit stereotypes by increasing the frequency of interaction with specific groups [14]. However, this does not apply to stereotypes like gender. People communicate and are exposed to different genders every day.

Based on the research results of Wilson, a high frequency of interaction and exposure (more than once per day) might result in more negative IA and stereotypes [14]. Besides the interaction, self-presentation is another variable that influences people's behavior in social interaction. This seems to correlate more with EA. However, the existence of self-presentation also depends on people's implicit attitude toward the observers and social norms. Cate showed that children in high presentation conditions enhanced their explicit stereotypes about nationality [15]. In that study, even children with low internal motivation to reduce stereotypes will reduce racial stereotypes when informed about the observation. As a result, social norms influence how people present themselves when they know it is not morally correct. In the cultural dimension, diverse cultures will not produce substantial EAs. However, it influences people's IA toward many basic behaviors in social life. For example, Deng

revealed that Chinese people preferred emotional control, while Western people prefer emotional expression as the way to regulate emotion [1]. Although both groups express a favorable opinion of emotional control through EA, people who grow up in Western backgrounds unconsciously believe that emotional expression is positive. From another perspective, culture has a more profound and secretive impact on IA than social factors. From Dunham, people can find that the formation of stereotypes does not depend on SD or exposure [2]. Even children in a Japanese town who never interact with black people show negative stereotypes of black people. This result reveals how local culture influences people. Dunham believed these stereotypes were shaped based on the percentage of information perceived by local people. According to Deng, how local culture perceives information is an essential factor influencing people's IA [1]. The culture also changes over time and will be changed by local social environments. In Xiao's study, researchers found that Chinese people's implicit attitude toward shyness changed and gradually deviated from traditional Chinese culture [3]. The growing environment of Chinese young people might also contribute to this process. As a result, the influence of culture on IA is not as stable as many people believe.

From another perspective, people can find that many studies about social or cultural dimensions of implicit attitude do not discuss the influence of each other. Some hypotheses are too generalized or ideal when selecting the participants. Although cultural and social backgrounds are similar confounding variables like gender and age, they are rarely mentioned in correlated implicit attitude studies. For example, researchers assume students come from the same university and have similar cultural backgrounds, so they do not talk about culture as a factor that might influence them [17]. In future studies, it will be better if researchers can notice and avoid potential confounding factors from social or cultural dimensions in the implicit attitude test.

6. Conclusion

This study review used several studies about cultural and social influences on IA. This study tried combining cultural and social dimensions to analyze IA. In the cultural dimension, cultural differences definitely changed people's IA toward many things. However, there is evidence that culture is unstable in people's IA. Traditional cultural values might be changed easily because of changes in social environments or time. In the social dimension, the mechanism of how social factors influence IA is diverse for each specific factor. Social norms shape people's IA and are hard to change. This conclusion was also proved by Dunham's study. Social distance is a unique variable that changes in different contexts. In some conditions, more connections will even boost the negative implicit attitude. The study about self-awareness of personal IA provides a possibility to regulate people's IA. Overall, implicit attitude is influenced by social and cultural factors. The mechanism of influence is complex. This study review provides a new horizon for discussing the relationship between cultural and social dimensions and IA. Also, it discussed the potential limitations of current studies in the social and cultural dimensions of IA.

References

- [1] Deng, Xinmei, Sieun An, and Chen Cheng. 2019. "Cultural Differences in the Implicit and Explicit Attitudes Toward Emotion Regulation." *Personality and Individual Differences* 149 (October): 220–22. <https://doi.org/10.1016/j.paid.2019.05.057>.
- [2] Dunham, Yarrow, Andrew Scott Baron, and Mahzarin R. Banaji. 2006. "From American City to Japanese Village: A Cross-Cultural Investigation of Implicit Race Attitudes." *Child Development* 77 (5): 1268–81. <https://doi.org/10.1111/j.1467-8624.2006.00933.x>.
- [3] Xiao, Bowen, and Robert J. Coplan. 2021. "A Cross-cultural Examination of Implicit Attitudes Toward Shyness in Canada and China." *Journal of Research in Personality* 93 (August): 104119. <https://doi.org/10.1016/j.jrp.2021.104119>.
- [4] Soto, José A., Christopher R. Perez, Young-Hoon Kim, Elizabeth A. Lee, and Mark R. Minnick. 2011. "Is Expressive Suppression Always Associated With Poorer Psychological Functioning? A Cross-cultural

- Comparison Between European Americans and Hong Kong Chinese.” *Emotion* 11 (6): 1450–55. <https://doi.org/10.1037/a0023340>.
- [5] Deng, Xinmei, Biao Sang, and Ziyang Luan. 2013. “Up- And Down-Regulation of Daily Emotion: An Experience Sampling Study of Chinese Adolescents’ Regulatory Tendency and Effects.” *Psychological Reports* 113 (2): 552–65. <https://doi.org/10.2466/09.10.pr0.113x22z4>.
- [6] Boiger, Michael, Batja Mesquita, Annie Y. Tsai, and Hazel Markus. 2012. “Influencing and Adjusting in Daily Emotional Situations: A Comparison of European and Asian American Action Styles.” *Cognition & Emotion* 26 (2): 332–40. <https://doi.org/10.1080/02699931.2011.572422>.
- [7] Vaughan, Graham M., Henri Tajfel, and Jennifer Williams. 1981. “Bias in Reward Allocation in an Intergroup and an Interpersonal Context.” *Social Psychology Quarterly* 44 (1): 37. <https://doi.org/10.2307/3033861>.
- [8] Rutland, Adam, Lindsey Cameron, Alan Milne, and Peter McGeorge. 2005. “Social Norms and Self-Presentation: Children’s Implicit and Explicit Intergroup Attitudes.” *Child Development* 76 (2): 451–66. <https://doi.org/10.1111/j.1467-8624.2005.00856.x>.
- [9] Smith, Eliot R., and Jamie DeCoster. 2000. “Dual-Process Models in Social and Cognitive Psychology: Conceptual Integration and Links to Underlying Memory Systems.” *Personality and Social Psychology Review* 4 (2): 108–31. https://doi.org/10.1207/s15327957pspr0402_01.
- [10] Greenwald, Anthony G, Jacqueline E Pickrell, and Shelly D Farnham. 2002. “Implicit Partisanship: Taking Sides for No Reason.” *Journal of Personality and Social Psychology* 83 (2): 367–79. <https://doi.org/10.1037/0022-3514.83.2.367>.
- [11] Chen, Xinyin, Guozhen Cen, Dan Li, and Yunfeng He. 2005. “Social Functioning and Adjustment in Chinese Children: The Imprint of Historical Time.” *Child Development* 76 (1): 182–95. <https://doi.org/10.1111/j.1467-8624.2005.00838.x>.
- [12] Rubin, Kenneth H, and Matthew G Barstead. 2014. “Gender Differences in Child and Adolescent Social Withdrawal: A Commentary.” *Sex Roles* 70 (7–8): 274–84. <https://doi.org/10.1007/s11199-014-0357-9>.
- [13] Liu, Junsheng, Bowen Xiao, Robert J. Coplan, Xinyin Chen, and Dan Li. 2018. “Cross-Lagged Panel Analyses of Child Shyness, Maternal and Paternal Authoritarian Parenting, and Teacher-Child Relationships in Mainland China.” *Journal of Child and Family Studies* 27 (12): 4116–25. <https://doi.org/10.1007/s10826-018-1229-7>.
- [14] Wilson MC, Scior K (2015) Implicit Attitudes towards People with Intellectual Disabilities: Their Relationship with Explicit Attitudes, Social Distance, Emotions and Contact. *PLoS ONE* 10(9): e0137902. <https://doi.org/10.1371/journal.pone.0137902>.
- [15] Cate, Ineke M Pit-ten, and Sabine Glock. 2019. “Teachers’ Implicit Attitudes Toward Students From Different Social Groups: A Meta-Analysis.” *SYSTEMATIC REVIEW* 10 (December). <https://doi.org/10.3389/fpsyg.2019.02832>.
- [16] Dovidio, J. F., & Gaertner, S. L. (1991). Changes in the expression and assessment of racial prejudice. In H. J. Knopke, R. J. Norrell, & R. W. Rogers (Eds.), *Opening doors: Perspectives on race relations in contemporary America* (pp. 119–148). The University of Alabama Press.
- [17] Azad, Z. R., Goedderz, A., & Hahn, A. (2022). Self-Awareness and Stereotypes: Accurate Prediction of implicit gender Stereotyping. *Personality and Social Psychology Bulletin*, 49(12), 1695–1708. <https://doi.org/10.1177/01461672221120703>.
- [18] Wänke, Michaela, and Jochim Hansen. 2015. “Relative Processing Fluency.” *Current Directions in Psychological Science* 24 (3): 195–99. <https://doi.org/10.1177/0963721414561766>.