

Implicit stereotype

From Wikipedia, the free encyclopedia

For a broader coverage related to this topic, see [Stereotype](#).

An **implicit stereotype** is the unconscious attribution of particular qualities to a member of a certain social group.^[1] Implicit stereotypes are influenced by experience, and are based on learned associations between various qualities and social categories, including race or gender. Individuals' perceptions and behaviors can be affected by implicit stereotypes, even without the individuals' intention or awareness. Implicit stereotypes are an aspect of implicit social cognition, the phenomenon that perceptions, attitudes, and stereotypes operate without conscious intention. The existence of implicit stereotypes is supported by a variety of scientific articles in psychological literature. Implicit stereotype were first defined by psychologists [Anthony Greenwald](#) and [Mahzarin Banaji](#) in 1995.

Explicit stereotypes are the result of intentional, conscious, and controllable thoughts and beliefs.^[2] Explicit stereotypes usually are directed toward a group of people based on what is being perceived. An example of an explicit stereotype would be that all adolescent girls like to play with dolls and makeup.

Implicit stereotypes are associations learned through past experiences. Implicit stereotypes can be activated by the environment, and operate outside of intentional conscious cognition.^[1] For example, we can unconsciously stereotype all pit bulls as being dangerous. This stereotype may be associated with one event that we may have seen in the past, but the source of these associations may be misidentified, or even unknown by the individual who holds them, and can persist even when an individual rejects the stereotype explicitly.^[1]

Contents

- [1 Stereotype versus attitude and prejudice](#)
- [2 Methods for investigation](#)
 - [2.1 Implicit-association test](#)
 - [2.2 Go/no-go association task \(GNAT\)](#)
 - [2.3 Semantic priming and lexical decision task](#)
 - [2.4 Sentence completion](#)
- [3 Differences between measures](#)
- [4 Findings](#)
 - [4.1 Gender stereotypes](#)
 - [4.2 Race stereotypes](#)

- 4.3 Other stereotypes
- 4.4 Activation of implicit stereotypes
- 4.5 Malleability of implicit stereotypes
- 5 Positive aspects of stereotypes
- 6 Summary
- 7 See also
- 8 References
- 9 External links

Stereotype versus attitude and prejudice

Our feelings and experiences can dictate how we look at the world. These can also become beneficial to us in the future because if we know what to avoid and how that made us feel, we can run or fight if we need to. An [attitude](#), [stereotypes](#), and [prejudices](#) are all things that can influence our behavior and feelings toward an individual or group.

An [attitude](#) is an evaluative judgment of an object, a person, or a social group.^[3] We can form an attitude toward soccer players. We can have many different types of attitudes toward soccer players that can either be positive or negative.

A [stereotype](#) is the association of a person or a social group with a consistent set of traits. This may include both positive and negative traits, such as African Americans are great at sports or African Americans are more violent than any other race in the United States. There are many types of stereotypes that exists: racial, cultural, gender, group (i.e. college students), all being very explicit in the lives of many people.

[Prejudice](#) is defined as unfair negative attitude toward a social group or a member of that group.^[4] Prejudices can stem from many of the things that people observe in a different social group that include, but are not limited to, gender, sex, race/ethnicity, or religion. This is pertinent to stereotypes because a stereotype can influence the way people feel toward another group, hence prejudice.

Methods for investigation

Implicit stereotypes cannot be revealed by asking individuals direct questions. This is because individuals may be unaware they hold an implicit stereotype, they may not endorse the stereotype, or they may be unwilling to reveal they endorse the stereotype. Thus, implicit measures are necessary to tap implicit stereotypes.

Implicit-association test

The [implicit-association test](#) (IAT) measures differential associations of two target concepts.^[5] Subjects are instructed to press a button when they see an item (an image or word) that represents a particular concept, and a different button for items that represent another concept. For instance, a subject may press button A for words related to weakness and button B for words related to strength. Then subjects may be instructed to press button A for male words (*he, boy*) and button B for female words (*she, girl*). To test differential association between these two concepts (in this example, strength/weakness and gender), these two tasks would be combined. First, subjects would press button A for strength or male, and button B for weakness and female; then they would press button A for strength and female, and button B for weakness and male. Differential reaction time to each task may reveal implicit endorsement of that stereotype. For example, if a subject's reaction time is faster when male is paired with science and female is paired with arts, this suggests the subject more strongly associates males with science than females.

Go/no-go association task (GNAT)

The GNAT is similar to the implicit-association test. Although the IAT reveals differential associations of two target concepts (e.g. male-female and weak-strong), the GNAT reveals associations within one concept (for example, whether female is associated more strongly with weak or strong).^[6] Participants are presented with word pairs among distractors. Participants are instructed to indicate "go" if the words are target pairs, or "no-go" if they not. For example, participants may be instructed to indicate "go" if the word pairs are female names and words that are related to strength. Then, participants instructed to indicate "go" if the word pairs are female names and words that are related to weakness. This method relies on signal detection theory; participants' accuracy rates reveal endorsement of the implicit stereotype. For example, if participants are more accurate for female-weak pairs than for female-strong pairs, this suggests the subject more strongly associates weakness with females than strength.

Semantic priming and lexical decision task

[Semantic priming](#) measures the association between two concepts.^[6] In a [lexical decision task](#), subjects are presented with pair of words, and asked to indicate whether the pair are words (for example, "butter") or non-words (for example, "tubter"). The theory behind semantic priming is that subjects are quicker to respond to a word if preceded by a word related to it in meaning (e.g. bread-butter vs. bread-dog).^[6] In other words, the word "bread" primes other words related in meaning, including butter. Psychologists utilize semantic priming to reveal implicit associations between stereotypic-congruent words. For instance, participants may be asked to indicate whether pronouns are male or female. These pronouns are either preceded by professions that are predominantly female ("secretary, nurse"), or male ("mechanic, doctor"). Reaction times reveal strength of association between professions and gender. ^[9]

Sentence completion

In a sentence completion task, subjects may be presented with sentences that contain stereotypic black and white names (*Jerome, Adam*), positive and negative stereotypic black behaviors (*easily made the team, blasted loud music in his car*) and counter-stereotypic behaviors (*got a job at Microsoft, refused to dance*). Subjects are asked to add to the end of a sentence in any way that is grammatical, e.g. "Jerome got an A on his test..." could be completed with "because it was easy" (stereotypic-congruent) or "because he studied for months" (stereotypic-incongruent) or "and then he went out to celebrate" (non-explanatory). This task is used to measure stereotypic explanatory bias (SEB): participants have a larger SEB if they give more explanations for stereotype-congruent sentences than stereotype-incongruent sentences, and if they give more stereotypic-congruent explanations.

Differences between measures

There is a difference between these measurements which involves measures of activation vs. measures of association. Measures of association are involved with the Implicit Association Task and Semantic priming. This is a measure of association because they are normally given choices and they are measured based on the association between them and the choices in the task. What they choose is associated to their previous experience because they are usually choosing between a pair; or more choices. However measures of activation which includes word completion and unprimed lexical decision tasks are both associated with activating the implicit stereotype. This means that although the person that is being involved in the research may not be aware what they are being measured on, they are measured based on the activation of a stereotype at that time. This can also be associated with previous experiences but can change previous thoughts based on the activation of potentially new implicit stereotypes.

Findings

Gender stereotypes

See also: [Sexism § Gender stereotypes](#) and [Gender role § Gender stereotypes](#)

[Implicit Association Tests](#) reveal an implicit association for male with science and math, and females with arts and language.^[11] Girls as young as nine years old have been found to hold an implicit male-math stereotype and an implicit preference for language over math.^[12] Women have stronger negative associations with math than men do, and the stronger females associate with a female gender identity, the more implicit negativity they have towards math.^[11] For both men and women, the strength of these implicit stereotypes predicts both implicit and explicit math attitudes, belief in one's math ability, and SAT performance.^[11] The strength of these implicit stereotypes in

elementary-aged girls predicts academic self-concepts, academic achievement, and enrollment preferences, even more than do explicit measures.^[12] Women with a stronger implicit gender-math stereotype were less likely to pursue a math-related career, regardless of their actual math ability or explicit gender-math stereotypes.^[13] This may be because women with stronger implicit gender-math stereotypes are more at risk for stereotype threat. Thus, women with strong implicit stereotypes perform much worse on a math test when primed with gender than women who have weak implicit stereotypes.^[14] These implicit gender stereotypes are robust; in a study of more than 500,000 respondents from 34 nations, more than 70% of individuals held this implicit stereotype.^[15] The national strength of the implicit stereotype is related to national sex differences among 8th graders on the International [TIMSS](#), a worldwide math & science standardized achievement exam. This effect is present even after statistically controlling for gender inequality in general.^[15] Additionally, for women across cultures, individual differences in strength of this implicit stereotype is associated with interest, participation and performance in sciences.^[15]

The category of male has been found to be associated with traits of strength and achievement. Both male and female subjects associate male category members more strongly than female category members with words like *bold*, *mighty*, and *power*.^[16] The strength of this association is not predicted by explicit beliefs, such as responses on a gender stereotype questionnaire (for example, one question asked if subjects endorsed the word *feminist*).^[1] In a test to reveal the [false fame](#) effect, non famous male names are more likely to be falsely identified as famous than non famous female names; this is evidence for an implicit stereotype of male achievement.^[17] Females are more associated with weakness. This is true for both male and female subjects, but female subjects only show this association when the weak words are positive, such as *fine*, *flower* and *gentle*; female subjects do not show this pattern when the weak words are negative, such as *feeble*, *frail*, and *scrawny*.^[16]

Particular professions are implicitly associated with genders. Elementary school teachers are implicitly stereotyped to be female, and engineers are stereotyped to be male.^[18]

Race stereotypes

In [lexical decision tasks](#), after subjects are subliminally primed with the word *BLACK*, they are quicker to react to words consistent with black stereotypes, such as *athletic*, *musical*, *poor* and *promiscuous*. When subjects are subliminally primed with *WHITE*, they are quicker to react to white stereotypes, such as *intelligent*, *ambitious*, *uptight* and *greedy*.^[19] These tendencies are sometimes, but not always, associated with explicit stereotypes.

People may also hold an implicit stereotype that associates black category members as violent. People primed with words like *ghetto*, *slavery* and *jazz* were more likely to interpret a character in a vignette as hostile.^[21] However, this finding is controversial; because the character's race was not specified, it is suggested that the procedure primed the race-unspecified concept of hostility, and

did not necessarily represent stereotypes.^[19] An implicit stereotype of violent black men may associate black men with weapons. In a video game where subjects were supposed to shoot men with weapons and not shoot men with ordinary objects, subjects were more likely to shoot a black man with an ordinary object than a white man with an ordinary object. This tendency was related to subjects' implicit attitudes toward black people. Similar results were found in a priming task; subjects who saw a black face immediately before either a weapon or an ordinary object more quickly and accurately identified the image as a weapon than when it was preceded by a white face.

Implicit race stereotypes affect behaviors and perceptions. When choosing between pairs of questions to ask a black interviewee, one of which is congruent with racial stereotype, people with a high stereotypic explanatory bias ([SEB](#)) are more likely to ask the racially-congruent stereotype question. In a related study, subjects with a high SEB rated a black individual more negatively in an unstructured laboratory interaction

Other stereotypes

Research in implicit stereotypes is focused on gender and race stereotypes, but some other topics have been investigated. [IATs](#) have revealed implicit stereotypes reflecting explicit stereotypes about adolescents. Adolescents are more associated with words like *trendy* and *defiant* than adults.^[22] Similarly, IATs have revealed implicit stereotypes of obese individuals and low work performance. Words like *lazy* and *incompetent* are more associated with images of obese individuals than images of thin ones.^[23] This association is stronger for thin subjects than overweight ones.^[24] The democratic party is associated with feminine words including *librarian*, *nurse*, and *skirt*, while the republican party is associated with masculine words including *janitor*, *trousers*, and *razors*, regardless of subjects' political affiliation or gender.^[25] Like explicit stereotypes, implicit stereotypes may contain both positive and negative traits. People hold implicit stereotypes that preschool teachers are both warm and incompetent, while lawyers are both cold and competent.

Activation of implicit stereotypes

Stereotypes may be activated by environmental and situational factors. In the laboratory, implicit stereotypes can be activated by priming. When subjects are primed with dependence by unscrambling words such as dependent, cooperative, and passive, they judge a target female as more dependent. When subjects are primed with aggression with words like aggressive, confident, argumentative, they judge a target male as more aggressive.^[27] These kinds of differences in implicit activation that vary by the gender of the target suggest an implicit gender stereotype. Stereotypes can also be activated by a [subliminal](#) prime. White subjects exposed to subliminal words consistent with a black stereotype (*ghetto*, *slavery*, *jazz*) interpret a target male as more

hostile, consistent with the implicit stereotype of hostile black man. However, this finding is controversial; because the character's race was not specified, it is suggested that the procedure primed the race-unspecified concept of hostility, and did not necessarily represent stereotypes.^[19]

Malleability of implicit stereotypes

Implicit stereotypes can, at least temporarily, be reduced or increased. Methods for altering implicit stereotypes fall under the following five categories.

Self and social motives

The activation of implicit stereotypes may be decreased when the individual is motivated to promote a positive self-image, either to oneself or to others in a social setting. Positive feedback from a black person decreases stereotypic sentence completion, while negative feedback from a black person increases it.^[29] Subjects also reveal lesser strength of race stereotypes when they feel others disagree with the stereotypes.^[30]

Promote counter stereotypes

Implicit stereotypes can be reduced by exposure to counter stereotypes. Reading biographies of females in leadership roles (such as [Meg Whitman](#), the CEO of eBay) increases females' associations between female names and words like *leader*, *determined*, and *ambitious* in a gender stereotype IAT.^[31] Attending a women's college (where students are presumably more often exposed to women in leadership positions) reduces associations between leadership and males after one year of schooling.^[31] Merely imagining a strong woman reduces implicit association between females and weakness, and imagining storybook princesses increases the implicit association between females and weakness.^[7]

Focus of attention

Diverting a participant's focus of attention can reduce implicit stereotypes. Generally, female primes facilitate reaction time to stereotypical female traits when participants are instructed to indicate whether the prime is animate. When participants instead are instructed to indicate whether a white dot is present on the prime, this diverts their focus of attention from the primes' feminine features. This successfully weakens the strength of the prime and thus weakening the strength of gender stereotypes.^[32]

Configuration of stimulus cues

Whether stereotypes are activated depends on the context. When presented with an image of a Chinese woman, Chinese stereotypes were stronger after seeing her use chopsticks, and female stereotypes were stronger after seeing her put on makeup

Characteristics of individual category members

Stereotype activation may be stronger for some category members than for others. People express weaker gender stereotypes with unfamiliar than familiar names.

Positive aspects of stereotypes

Stereotypes provide many positive functions as well. Stereotypes ease the burden of information processing, also providing a functional aspect to social perseveres. Stereotypes can serve a data reduction function by providing expectancies that filter experience, directing attention, and other processing resources to expectancy- relevant information. Also they function by economizing cognition by enriching the information available about a stereotyped target. Lastly they enable us to go beyond the information given in social encounters and fill in any gaps in our extant knowledge base.

Summary

Unconscious [bias](#) or usually known as [implicit](#) bias is a “positive or negative mental attitude towards a person, thing, or group that a person holds at an [subconscious](#) level”.^[36] Based on a [Stanford](#) medical website, [unconscious](#) bias is believed to be established from our own interaction with other people in our [society](#), as well as exposure from the [media](#). Constant exposure to it will eventually develop as some kind of habit that we naturally perceive. Likewise, researchers [Greenwald](#) and [Banaji](#) in 1995 noted that someone’s [social learning](#) experiences such as [observing](#) parents, friends, or others could trigger this type of [bias](#). Many studies have found that [culture](#) is, in fact, able to [stimulate](#) biases as well, both in a negative and positive way regardless someone’s personal experience with other cultures.^[37] As far as many people are concerned, implicit bias knows no age restriction and it can happen to anyone regardless of age. As a matter of fact, unconscious bias can be found in a six years-old child.^[38] Even though unconscious bias might be hard to notice, especially compared to [explicit](#) bias, it can still be measured through several procedures such as sequential priming, response competition, EDA, EMG, fMRI, ERP and ITA. Thus, once a person knows his or her level of bias, further action can be taken. Hence, the existence of implicit stereotypes is supported by a variety of articles in psychological literature. Adults and even children may hold implicit stereotypes of social categories in which they belong. Without intention, or even awareness, implicit stereotypes affect human behavior and judgments. This has wide-ranging implications for society, from discrimination, to personal career choices, and understanding others in everyday social interactions