

---NOT THE FINAL VERSION---

## **Implicit Social Cognition**

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## **Glossary**

**Implicit Social Cognition** – Mental operations, related to the self or other people, that happen automatically and can occur without awareness.

**Implicit Attitudes** – Automatic associations between concepts and valence (e.g., good, pleasant).

**Implicit Stereotypes** – Automatic associations between social groups and attributes (e.g., athletic, intelligent).

**Implicit Self-Concept** – Automatic associations between the self and attributes.

**Behavior Priming** – The automatic activation of a behavior as a result of perceiving a stimulus related to that behavior.

**Goal Priming** – Automatically activated pursuit of a goal as a result of perceiving a stimulus related to that goal.

## **Introduction**

During a periodical health check-up, medical doctors ask patients questions about their health and conduct physical examinations such as listening to lungs and examining the ear canal. After hearing the patients' report of their health, why does the doctor bother with time consuming physical exams? Is it reasonable to think that patients can report about their own bodies well enough to make the doctor's exam irrelevant? Of course not. People do not have complete self-knowledge about the health of their own bodies. A doctor's exam provides a way to assess health without relying on patients' self-report

because patients do not know everything about their health, and because their reports are not always reliable.

While it is easy to understand that people do not have perfect self-knowledge about their physical state, it is less obvious that people do not have perfect self-knowledge about their thoughts and feelings toward themselves and others. People often believe that they know their own feelings and thoughts quite well. However, some thoughts and feelings are explicit in that they are reportable by the person, but others are implicit in that they are not reported. They are not reported either because people are unaware of having them, or because people are aware of them but do not consider them to be their “true” thoughts or feelings.

Implicit cognition is closely related to the concept of automaticity – thoughts or actions that occur spontaneously or uncontrollably. Thoughts and actions that occur automatically may occur without attention or awareness. For example, after traveling the route between home and the office many times – a driver might be able to travel the route automatically. The driver’s attention can drift away to think about other things. On occasion, attention may suddenly leap back into driving awareness with recognition that the mind was “somewhere else.” Did I stop at the stop sign back there? Why am I heading home when I wanted to stop by the store first? In this way, the same behavior – driving – can occur with or without awareness because the relevant thoughts and skills have been automatized.

This example emphasizes how automatic thoughts and actions can occur without awareness, and are efficient in that they can happen while thinking about something else. Automatic thoughts and actions can also be difficult to control. For example, some

automatic thoughts and actions can be difficult to prevent from starting. A person with spider phobia may not be able to prevent the thought that there might be spiders in his shoes every time that he goes to put them on. Automatic thoughts and actions can also be difficult to stop once they have started. Now that the thought of a spider being in the shoe has come to mind, it may be difficult for the person to avoid checking the shoe even if he knows that the thought is irrational. These features are important for implicit cognition because thoughts that happen efficiently, without control or without awareness, can be quite different than what the person explicitly wants to think or do.

### **Implicit Social Constructs**

When people are asked “Do you like Canadians?”, “Do you believe that Muslims are dangerous?”, “Are you a good person?”, or “Do you want to help me solve this problem?” they can thoughtfully consider the question and generate a response. This is explicit social cognition – the self-assessment of one’s own feelings or thoughts about the self or other people.

Implicit social cognition focuses on automatic processes that relate to these same concepts such as attitudes (feelings about whether something is good or bad), stereotypes (beliefs about what people are like), self-concept (feelings or beliefs about oneself), and goals (the ends toward which one directs effort).

### **Implicit attitudes**

Implicit attitudes are associations between concepts such as “Asians,” “seafood,” or “freedom” and valence such as good or bad, like or dislike, pleasant or unpleasant. When a concept comes to mind, an associated valence can be activated automatically, and may

influence how people think about and act on the concept. Valence can even be activated and influence behavior without the person being aware that it happened.

Implicit and explicit attitudes toward the same concept can be quite different. For example, more people show implicit negativity toward Blacks compared to Whites than are willing to report or endorse such feelings explicitly. Despite their distinctiveness, both the implicit and explicit reactions might predict behavior. One study, for example, found that implicit reactions were predictive of people's non-verbal behaviors in an interaction with a Black experimenter – such as their apparent comfort with the interaction – but not what the person said. The researchers surmised that non-verbal behaviors are harder to control, so implicit attitudes may be more likely to influence them, whereas explicit attitudes may be more influential when the behaviors are easier to control.

In other cases, implicit and explicit attitudes can be similar. For example, self-reported and implicit liking of political parties and candidates tend to be highly related. People who say that they like liberals also tend to show implicit favorability for liberals, and likewise for conservatives. Even so, the strong correspondence between implicit and explicit attitudes does not mean that they are totally redundant for predicting behavior, even in political domains. Studies have shown that the implicit attitudes of explicitly undecided voters predict who they will eventually vote for.

Implicit attitudes are not more correct than explicit attitudes, and the explicit attitudes are not just lies that people use to cover their implicit attitudes. Both implicit and explicit responses can be “true,” even when in conflict. Behavior is a product of our both intentions and explicit attitudes, and our automatic reactions and implicit attitudes.

## **Implicit stereotypes**

Implicit stereotypes are associations between a social group and an attribute – such as an association between women and nurturing, or between men and aggressiveness. Like attitudes, such associations can exist in memory even if they are not believed. Deciding whether an association is true or false is a deliberate decision. As a consequence, if a stereotype exists in memory, and is automatically activated, it could influence perception, judgment, or action related to the stereotype even against one's intentions. For example, studies find that both men and women on average associate math with male and liberal arts with female implicitly – an implicit academic stereotype. Women who have a strong math=male association report participating less in math activities, like math less, and perform more poorly than women that have a weak math=male association. This illustrates that implicit stereotypes about groups (math is for men) might even affect thoughts and feelings about oneself (I am not cut out for a math career).

## **Implicit self-concept**

An association between attributes and the self is an implicit self-concept. Perhaps the most important implicit self-concept is implicit self-esteem – associations between self and valence. People usually hold stronger positive than negative associations between themselves – a positive implicit self-esteem. Because most people have positive associations with the self, a reliable way to increase a person's liking for something is to get them to associate it with themselves. For example, people tend to like fictional characters in books and films share their name, people are slightly more likely to marry others with the same first initial as theirs, and people are even slightly more likely to select an occupation that is similar to their own name (e.g., Dennis is slightly more likely

to become a dentist than Larry; Larry is slightly more likely to become a lawyer than is Dennis). Amazing, but true!

### **Automatic social behavior and goal pursuit**

Associations may also link perception to actions. For instance, when we see a red traffic light (perception), we tend to stop our car (action). According to the psychologist John Bargh, the perception of stimuli may automatically elicit behavior related to the stimuli, even without awareness of the stimulus or of its relation to the behavior. For instance, in one study, participants did a word task that included some words related to old-age such as “grey,” “wise,” and “Florida.” Afterwards, the researchers discreetly timed how quickly the participants walked down a hallway compared to another group that did not see the old-age related words beforehand. The “old-age” primed participants tended to walk more slowly down the hall suggesting that the “old” words made them behave in line with a behavior related to aging. The age words are called “primes” because they make accessible the observed behavior. When asked afterward if their walking speed was influenced by reading the age-related words, the participants thought the researchers were crazy and insisted that such priming surely did not affect them. The participants were unaware of the influence of the primes on their behavior.

Similar studies show that priming methods can activate goals implicitly. For example, researchers primed the goal of helping by putting words such as “nurse” and “firefighter” in a word search puzzle. This made participants more likely to pursue helping-related goals, compared to participants that were not primed, such as helping the experimenter pick up a dropped tissue. Priming can make people behave as if they had a goal, such as be helpful, even if they do not report it or know why they had it.



According to one perspective, a social function of automatic behavior and goal pursuit is to improve social interaction. For instance, people tend to unconsciously imitate the body gestures and the language use of their conversation partners. When one person puts her hands on her hips, the other is more likely to adopt a similar posture. This imitation promotes feelings of shared understanding and companionship. However, if people become aware that they are being imitated, then it can feel creepy and disingenuous, the complete opposite result. Lack of awareness of mimicking and being mimicked appears to be necessary for it to improve social relations. This illustrates that there can be advantages for having parts of social thinking and behaving occurring implicitly.

### **Formation and Change of Implicit Constructs**

Implicit constructs are thought to reflect the summary of a person's social experience. Associations form from exposure to pairings of concepts and attributes. The mind is prepared to form associations because learning "what goes with what" can be very helpful for planning new behaviors. Forming associations between rotten milk and illness or between a hot stove and danger will help to avoid those things in the future. If those associations did not form, then people would not learn from past mistakes, and would find themselves having sore tummies and hands on a regular basis.

Every moment of the day offers opportunities to create associations that might assist with planning and understanding the future. Even so, we might not agree with every association that we observe. However, because forming associations is so important, the mind does not ask permission to create them. As a consequence, people can possess associations that they would rather not have. For instance, if a certain social

group is persistently portrayed as negative in news and entertainment media, then that association may form, even in the minds of people that belong to that social group.

Because implicit constructs are based on experience, new information can change them. And, even though implicit constructs occur automatically, they are surprisingly sensitive to the immediate social environment. For example, thinking about a strong woman for a few minutes can temporarily reduce automatic gender stereotypes of women as weaker than men. Also, trying to get along with a Black person can reduce automatic negativity toward Black compared to White people.

Repeated exposures to associations that differ from what already exists in mind can have a longer lasting effect on implicit constructs. In one study, students in women's college showed reduced automatic stereotyping of men as leaders and women as supporters because they had numerous women as their instructors. Also, treating people with spider phobia with a technique that has lots of safe exposures to spiders is effective at reducing automatic negative responses toward spiders.

These examples suggest that while implicit constructs can have an unintended influence on behavior, the undesirable ones can be altered by making deliberate changes to the associations that are accumulated in one's mind – perhaps by changing what is experienced in everyday life.

### **Measurement of implicit constructs**

Measurement of explicit attitudes, stereotypes, self-concepts, and goals has a long history and is easy to comprehend. If you want to know how a person feels about bananas, ask them something like “How do you feel about bananas?” and provide response options such as “I love them” and “I hate them.”

A key feature of implicit constructs is that it may not be sufficient to ask for direct responses because people may be unaware of or unwilling to report all of their relevant thoughts and feelings. How then can implicit constructs be measured? Early attempts at implicit measurement date back to Sigmund Freud. Freud developed methods such as free association and dream analysis to circumvent the limitations of self-report for revealing implicit thoughts and feelings. While tremendously innovative, Freud's approaches are not popular in modern experimental psychology because of their unreliability and questionable validity.

Modern methods assess implicit thoughts and feelings indirectly by having participants do a task and inferring their implicit reactions from their performance on the task. For example, to measure implicit attitudes, a method called evaluative priming presents words or pictures on a computer screen in rapid succession. Two items are presented in a row and respondents' judge whether the second item (e.g., the words "horrible" and "wonderful") is good or bad. The speed with which a person can decide whether the second item is good or bad is influenced by the item that was presented right before it. Someone with negative implicit feelings about Black people, for example, might be faster to rate a bad word and slower to rate a good word if a black face is presented right beforehand. Seeing the black face activates negative feelings automatically, and those feelings influence the judgment of the items that are presented next. The difference in time required to judge good words and bad words following the presentation of black faces (or other social groups and concepts) is the indirect assessment of the participants' implicit feelings about Black people.

Another popular measure called the Implicit Association Test (IAT) is based on similar principles. Using a computer, items representing four different categories (e.g., black faces, white faces, good words, bad words) are presented on the screen one at a time and the items are categorized into groups with two keys on the keyboard. There are two important conditions in the IAT. In one condition, every time a black face or a good word appears, the respondent hits one key, and every time a white face or a bad word appears, the respondent hits the other key. In the other condition, the rules change. White faces and good words are categorized with one key, and black faces and bad words are categorized with the other. The main idea is that it should be easier to categorize the items when the concepts on the same response key are associated in memory. So, if the respondent is faster categorizing white faces with good words compared to black faces with good words, it indicates an implicit preference for Whites compared to Blacks. But, if the respondent is faster when categorizing black faces with good words compared to white faces with good words, then it indicates an implicit preference for Blacks compared to Whites.

The IAT is very adaptable to measure a variety of associations. This example is for measuring an implicit attitude – associations between racial groups and valence. If the “good” and “bad” concepts were changed to “academic” and “athletic” then it would be a measure of implicit stereotyping – associations between racial groups and attributes. If those concepts were then changed to “self” and “other” it would be a measure of implicit self-concept – associations between the self and attributes, in this case how much the respondent automatically associates the self with Blacks versus Whites.

## **Conclusions**

Behaviors and thoughts often do not involve conscious awareness or conscious control. They can affect thought, action and feeling without people's knowledge, and are often detected only by using subtle experimental manipulations such as priming and implicit measures that do not rely on self-report. Implicit processes affect the way we perceive, evaluate and behave toward others and ourselves. Because these effects often happen without awareness or control, the social psychologist Timothy Wilson suggests that we can be "strangers to ourselves." Conscious experience and deliberate actions are an important part of one's identity, but there is a sea of activity happening behind the scenes that also shapes who we are and how we behave.

### **Further Reading**

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