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attitude, implicit The world is a complicated place. To live in it successfully, humans need ways to simplify it. One ability that comes in handy is forming preferences-is this thing good or bad)-and having a

mechanism for storing them. That way, instead of entering every new situation as a blank slate, preferences developed from previous experience can used to guide behaviour. An efficient system would accomplish these operations *automatically, without requiring deliberate effort or even conscious thought, serving as a quick and intuitive guide for responding. Deliberate, conscious thinking could then be reserved for situations when such automatic preferences are not available. Or, if prior experience does not apply, conscious deliberation could override, adjust, or regulate the expression of automatically generated preferences. Such mental operations provide tools for comprehending the situation, evaluating the relevant concepts, and motivating behaviour without having to think about it much, sometimes without really thinking at all.

An *attitude* is an association between a concept and an evaluation-an assessment of whether something is good or bad, positive or negative, pleasant or unpleasant. A familiar way to assess an attitude is to ask, 'Do I like this?' Positive and negative evaluations of this kind require introspection about one's feelings about the concept. The end result, e.g. 'I like this very much', is an *explicit attitude.* Explicit attitudes are deliberate, intentional, and available to conscious awareness. They are often obtained using language to reveal an internal state.

The notion of an implicit attitude is less familiar. Implicit attitudes were defined by psychologists Anthony Greenwald and Mahzarin Banaji (1995) as 'introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable or unfavorable feeling, thought, or action toward a social object [concept]'. This is quite different from the conception of explicit attitudes. Implicit attitudes are not accessed by *introspection, and may exist outside conscious awareness. Implicit attitudes are thought to derive from the basic mental operations of seeing relationships between concepts and evaluations in everyday experience and accumulating those associations into summary assessments. Such associations can influence how humans see, think, and react to the world, even without the individual having awareness of their existence, activity, or influence.

Having two types of attitude-one implicit and one explicit-introduces the possibility that they can conflict. Explicit attitudes reflect values, beliefs, and deliberate assessments of the world. Implicit attitudes reflect positive and negative associations accumulated through experience. There are a variety of circumstances that might lead these evaluations to differ. For example, somebody who prizes the quality of being egalitarian may hold equally positive explicit attitudes toward members of all ethnicities (e.g. toward Arabs and

white Europeans). But such a person also possesses implicit attitudes that have also been obtained from experience in a given culture. The implicit version of attitude may not reveal the even-handedness of the explicit attitude; it may in fact show more positivity toward Europeans than Arabs. It is interesting that a single individual can hold both types of attitudes in one mind. Such differences between explicit and implicit attitude are referred to as *dissociations*. Dissociations do not suggest that either one or the other attitude is the real or true attitude. Both provide information about the individual, and both can guide behaviour. When an individual is tired, preoccupied, or under pressure, it may be more difficult to retrieve the explicit response and regulate behaviour accordingly. In these circumstances, action may be influenced more by the implicit attitude. On the other hand, when an individual is alert, motivated, and aware of the situation, explicit attitudes can be recruited and these may be a stronger influence on behaviour. Dissociations of this form illustrate that humans possess multiple ways of expressing their likes and dislikes and social circumstances and the person's state will determine which one is likely to dominate.

It is easy to imagine how to measure an explicit attitude-ask respondents how they feel. An implicit attitude, however, is not measured by introspection. The varieties of methods used for implicit attitude measurement do not depend on the respondent's ability to self-report their attitude. One such implicit attitude measure is the Implicit Association Test (IAT). Imagine sorting a deck of playing cards as fast as possible into two piles. Instead of four suits this deck has four other categories: items with pleasant meaning (e.g. joyful), items with unpleasant meaning (e.g. terrible), items representing England (e.g. Tower Bridge), and items representing the USA (e.g. Statue of Liberty). You sort these cards twice, each time with different sorting rules. For the first sorting, all of the pleasant words and English images go in one pile, and unpleasant words and American images go in the other. For the second sorting, all of the pleasant words and American images go in one pile, and unpleasant words and English images go in the other. The speed of sorting is an indication of the association strengths between the national concepts and evaluation. In this example, it is likely that Americans would sort the cards faster in the second task and English people would sort faster in the first task, because nationals are likely to have more positive associations with their home country than with the other. You can try the IAT yourself by visiting https://implicit.harvard.edu/.

This approach to measuring attitudes is fundamentally different from asking for a self-report of one's feelings. The only task is to sort cards into groups as quickly as possible; respondents do not consider how they feel about the concepts. Despite this unusual approach, the IAT and related measures have been applied successfully to many topics including social groups, political candidates, food, consumer products, health, and pop culture.

Current research on implicit attitudes is investigating a variety of questions including: (r) How do implicit attitudes form? (2) When will implicit attitudes be similar to and different from explicit attitudes? (3) How stable are implicit attitudes? (4) How do implicit attitudes change? (s) When do implicit attitudes influence behaviour more or less than explicit attitudes? (6) What psychological processes influence performance on implicit attitude measures? These are lively research areas, and the emerging evidence suggests that multiple factors influence the relationship between implicit and explicit attitudes-such as the desire not to express unpopular ideas (social desirability) and the amount of practice or time thinking about the topic (elaboration). Also, wile implicit attitudes show some stability over time, they show flexibility in expression based on the immediate social circumstances. And, finally, both implicit and explicit attitudes are related to behaviour, sometimes independently.

Research on implicit attitudes tells us that much of our mental work happens outside conscious awareness, conscious control, without intention, and without requiring self-reflection. Implicit attitudes facilitate heuristic, rapid assessment of the social context. Simultaneously, getting evidence of our implicit attitudes can sometimes surprise us because they do not fit with the way in which we view ourselves. Such situations can provoke and challenge us to think about how we might understand our attitudes and align our implicit and explicit attitudes, goals, and intentions.

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