

Perception and Culture

Traditionally, it has been assumed that the main role of psychological research is to investigate universal aspects of human psychological processes. Theories of perception are often developed based on this assumption, and some theoretical strands advocate the universality of perception far more radically, regarding perception as the fundamental process that is least affected by cultural influences. This entry reviews theories about whether and how culture influences perception.

For example, Zenon Pylyshyn's theory published in 1999 favored the universal view and asserted that the perceptual system is encapsulated as an independent architecture, with no room for even basic cognitive processes to penetrate the system. The phenomenon of the Müller-Lyer illusion—in which a horizontal line segment ending in inward-pointing arrows is perceived to be longer than a horizontal line segment of identical length but ending in outward-pointing arrows—is referred to as an ideal example of such impenetrability, because the illusion is experienced even by people who consciously recognize that it is an illusion.

Such an assertion of impenetrability strongly resonates with the “modularity theory of mind” advocated by Jerry Fodor as well as with evolutionary theories. Researchers who hold these views investigate mainly the bottom-up information processing of perception: how a unit of information is processed through the built-in perceptual architecture and how information processing is a universal and innate biological architecture shared by the human species.

However, another strand of theories, called “New Look” psychology, argues that people's experience, and their subjective and intersubjective interpretation of phenomena such as values, needs, and expectations, are major factors that influence perception. For example, one finding suggested that people's perception of playing cards is strongly influenced by their experience with them.

That is, there are clear differences in reaction speed and accuracy of card recognition when the color and suit of the cards are presented in normal combinations (e.g., red hearts) rather than when they are presented in incongruent combinations (e.g., red spades). The results also indicated that as exposure to incongruent cards increases, recognition speed improves. The New Look theorists claimed that if experience with the combination of color and suit does not matter, such differences in reaction time and accuracy would not be observed.

Similarly, they demonstrated that when compared with children from higher economic-status households, children from lower socioeconomic-status households overestimated the size of disks corresponding to American coins (pennies, nickels, dimes, quarters, and half-dollars). According to the New Look interpretation, the children's relative values and needs produced the different patterns of judgment across groups. Because of the sociocultural aspects of these theories, researchers who advocate them investigate mainly the top-down information processing of perception—that is, how factors external to human perception (e.g., society, culture, emotion, motivation, and cognition) influence one's perceptual system.

Cross-Cultural Perspectives

Research on culture and perception was initiated by anthropologists in the early 20th century. The early cross-cultural investigations corresponded to Jerome Bruner's theoretical assertion that one's experience influences perception. There are two strands of theories about where these cultural variations in perception derive from: The ecological approach and the semantic approach.

The *ecological approach* attempts to explain cultural variations in perception by referring to the habitat—the natural and social environments as well as the economy and associated livelihood—of a given culture. For example, early anthropological and psychological reports indicated that compared with

Westerners, Murray Islanders in Melanesia and members of the Toda tribe in India showed significantly smaller errors in judging the relative lengths of the lines in the Müller-Lyer illusion.

Furthermore, studies of African agricultural and hunter-gatherer cultures, an Australian Aboriginal foraging culture, a group of horticulturalists in the Philippines, and Midwesterners in the United States showed that the degree of illusion was much stronger among North Americans and that children in some cultures (e.g., hunter-gatherers in the Kalahari Desert) were completely immune to the Müller-Lyer illusion. Cross-cultural psychological research in the 1970s and 1980s also supported this approach—for example, under the rubric of field dependence versus field independence. These early works challenged the modularity view of perceptual architecture and indicated that even the magnitude of perceptual illusion varied across cultures.

The *semiotic approach* is advocated by cultural anthropologists and also by cultural psychologists whose target of investigation is the process of mutual constitution between culture and psyche. These theorists maintain that people perceive the world not by accessing the raw reality but by referring to the meaning system that has been historically maintained and intersubjectively shared by members of a given culture, thus creating a sociocultural reality. Theorists who support this approach argue that the initial ecology and economy, as distal factors, contribute to the emergence of the metaphysics and epistemology of a given culture, which, in turn, becomes an “ignition trigger” of a civilization.

However, once a civilization emerges, its metaphysics and epistemology may become self-propelling vehicles independent from the original ecology and economy (sometimes even traveling across continents and settling in new environments) and, as direct factors, influence perception. For example, some theorists contend that the analytic pattern of perception—the pattern produced by selectively attending to focal events, focal objects, and focal people while detaching them from their surrounding context—is dominantly observed in Western societies (e.g., Western Europe, New Zealand, Australia, Canada, and the United States).

Moreover, the origin of this pattern can be traced to ancient Greek civilization where the metaphysics and the epistemology, especially those of Aristotle, emphasized the mutual independence of phenomena. By contrast, the holistic pattern of perception—the pattern produced by allocating attention to the entire field of a given event and to the relationships and the context among objects—is dominantly observed in East Asian societies (e.g., China, Korea, and Japan). The origin of this pattern of attention can be traced to ancient Chinese civilization, where the metaphysics and epistemology observable in Taoism, Confucianism, and East Asian Buddhism emphasized the complexities and interwoven nature of phenomena.

Many other theories have been developed under the rubrics of the independent versus interdependent view of self, high context versus low context cultures, and individualism versus collectivism. The theoretical bases of some of these theories, which emphasize the effect of social structure on perception and cognition, are similar to the ecological approach. Other theories focus on the intersubjective interpretation of the self and others, and their bases are similar to the semiotic approach. In general, both kinds of theories assert that people internalize a specific perception through the lens of their experiences of living in a given cultural environment. This assertion is different from the one that is dominant in mainstream psychology.

However, these approaches do not have to be mutually exclusive. Rather, other studies have attempted to integrate the ecological and semiotic approaches to perception. For example, researchers have demonstrated that beyond the similarities in the shared meaning systems of a given culture, there are substantial within-culture differences in patterns of attention, and these differences can be explained in terms of recent and past livelihood styles in that culture.

Implications

Advances in theories of culture and perception have several implications. First, the cross-cultural examination of human perception elucidates mechanisms that are universally shared by humans, mechanisms that are socioculturally shaped through experience and can differ substantially across cultures,

and the extent to which perception is flexibly structured and influenced by systems associated with experience. Future investigations will be able to avoid the pitfalls of the dichotomous view of nature versus nurture and scrutinize human perception with a more balanced view.

Second, findings in neuroscience have demonstrated that culture can influence even the neural activity of higher and lower cognitive processes. The evidence suggests the possibility of cultural malleability in perception and its underlying brain functions and neural substrates. Further research on culture and perception has the potential to answer the question, “How deeply does culture influence perception?” Finally, although social and cultural psychologists have identified cultural variations in social cognition—such as causal attribution, self-perception, judgment, inference, and categorization—a theoretical framework for comprehensively explaining the relationship between social cognition and perception has not been fully established. Advances in cross-cultural theories will allow researchers to scrutinize these underlying relationships as well.

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See also Culture and Cognition; Perceptual Contrast; Perceptual Development; Perceptual Illusions; Visual Perception

Further Readings

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