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*immediacy* behaviors that communicate intimacy, liking, and social support (→ Teacher Immediacy). However, proxemic immediacy only leads to liking if the receiver is comfortable with increased physical closeness.

Proxemic cues also communicate dominance and regulate interaction. Leaning in close to someone can be intimidating, as can towering over someone rather than communicating on the same physical plane. Powerful people also have more control of space; they have larger and more private territories, display more territorial markers, and have gatekeepers such as secretaries who prevent intrusion into their private quarters. In terms of regulating interaction, people lean forward when they want a speaking turn, lean back when they wish to relinquish their turn, and step away when trying to end a conversation. As these examples illustrate, proxemics play a subtle yet powerful role in people's everyday interactions.

SEE ALSO: ▶ Expectancy Violation ▶ Interpersonal Attraction ▶ Nonverbal Communication and Culture ▶ Power, Dominance, and Social Interaction ▶ Teacher Immediacy

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# Psychology in Communication Processes

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Psychology is generally concerned with studying the mind, the brain, and human behavior. While popular media often focus on clinical psychology (the study and

treatment of mental illness), there are many other forms of psychology, ranging from neuropsychology to cultural psychology to sports psychology. This entry largely focuses on experimental psychology, an overarching branch that includes all areas of psychology in which researchers manipulate variables in order to perform empirical tests of how people think and behave (→ Experimental Design). Examples of experimental psychology areas include cognitive, cultural, developmental, perceptual, and social psychology, all of which hold implications for communication research (→ Cognitive Science).

## HUMAN COGNITIVE ARCHITECTURE

The framework of human cognitive architecture is helpful in discussing how different types of thought, as well as the corresponding areas of psychology, relate to each other along a continuum, and how this continuum, in turn, relates to communication processes. Alan Newell (1990), in his landmark text *Unified theories of cognition*, established a hierarchical structure that is based on the processing time which goes into organizing different types of human behaviors. At the very bottom level, taking fractions of seconds, are biological events, such as neurons firing. These biological events combine into *cognitive actions*, such as retrieving a memory, which typically take between 10 milliseconds and 10 seconds. Cognitive actions, next, are joined in rational actions, such as solving a math problem, which may take from minutes to hours. All of these behaviors enter into social actions, such as forming an identity, which takes months or years, and further mold historical actions such as the forming of a racial stereotype within a culture, which takes decades. Finally, at the evolutionary level, over millennia, the mind, body, and behavior of a species will change. A crucial aspect of Newell's framework is that "lower level" processes, such as neurological and perceptual events, combine and emerge as "higher level" processes, such as making decisions, forming social impressions, and communicating.

There are, of course, a number of non-experimental sub-fields within psychology that do not employ a "bottom-up" methodology. For example, one of the earliest and perhaps most controversial theories is *psychodynamics*, which posits that significant parts of our emotional or motivational forces operate at a subconscious level, and are strongly influenced by early childhood experiences and development. These latent traumas or motivations may remain in the mind and emerge on a conscious level as neuroses or psychoses. The role of psychoanalytic therapists is to identify the underlying subconscious reasons for the surface problems. The two scholars most associated with this tradition are Sigmund Freud and Carl Jung, who utilized clinical interviews with patients as the basis for formulating their theories.

## COMMUNICATION PROCESSES

The relationship between psychology and communication research can be specified with reference to *three key types of communication processes* in the context of the human cognitive architecture framework introduced above. The three processes are face-to face interpersonal interaction, mediated interpersonal interaction, and communication via mass media. This framing is not intended as a historical account of these different

communicative practices, nor as an exhaustive description of communication, but serves to highlight some general similarities and differences between the two fields of inquiry.

## Face-to-Face Interpersonal Interaction

Consider an everyday conversation between two people sitting in a restaurant. As these people interact, they exchange information via both verbal and nonverbal cues (→ Interaction; Interpersonal Communication; Nonverbal Communication and Culture). Understanding what processes govern such social interaction, and how verbal and nonverbal cues interact in providing meaning and structure to social interaction, has been one of the cornerstones of communication research since the field took shape in the 1950s.

An early theoretical framework by Adam Kendon (1970) discussed the notion of *interactional synchrony*, i.e., the idea that verbal and nonverbal behaviors are intricately tied to one another, both within a person (i.e., person A's verbal behaviors match her nonverbal behaviors) and across several individuals (i.e., person A's verbal behaviors match person B's nonverbal behaviors). By rigorously observing people as they interacted with one another in experimental settings, Kendon uncovered a number of fundamental aspects of how social interaction proceeds, establishing just how closely tied verbal and nonverbal behaviors are in what he metaphorically termed a "complex dance." Since Kendon's groundbreaking work, other researchers have elaborated theoretical frameworks covering various relationships between verbal and nonverbal behaviors.

Burgoon's → expectancy violations theory addressed how people's expectations of one another guide the ways in which they exchange verbal and nonverbal information (Burgoon 1978). When individuals violate each other's expectations in terms of how the interaction should proceed, either verbally or nonverbally, they can be seen to follow specific patterns of social interaction. For example, if a person violates a social norm, such as touching a stranger, then the stranger will react to that violation of his or her expectations, based on an assessment of the potential subsequent outcomes of his or her reaction to the unexpected touch.

Patterson (1983) expanded these previous theoretical frameworks concerning face-to-face interaction through a sequential functional model of nonverbal exchange. It allowed for more specific predictions of verbal and nonverbal behavior with reference to different parameters and relational structures of social interaction. In particular, the model incorporated long-term personal history as an antecedent to a given exchange, short-term contextual information that conditions the interaction at its outset, as well as various types of processes that occur during the exchange itself. In the scenario described above in which a person touches a stranger, the approach would consider the arousal levels or psychological states of both individuals before the event occurred, their personal characteristics such as degree of extroversion and introversion, and historical circumstances, including events that may have occurred during previous and perhaps similar meetings.

In sum, psychological frameworks and models have allowed communication researchers to produce detailed descriptions and to form specific predictions of how people exchange both verbal and nonverbal information with one another. When similar exchanges of information occur through some mediating technology, it becomes relevant to examine additional psychological processes.

## Mediated Interpersonal Interaction

When small groups of people interact with one another in real time, using different types of media (e.g., telephones, computers, and video conferencing), the processes that unfold during face-to-face interaction are combined with and complicated by various factors that are unique to mediation (→ Mediated Social Interaction). One prominent example of research on this topic examines the kind of *computer-mediated communication* (CMC) in which two individuals rely on computer-based technology to conduct an interaction (→ Personal Communication by CMC).

The literature on face-to-face interactions provided the foundation for studying CMC, in which different qualities of face-to-face interaction appeared to be degraded or missing altogether. For example, in an online message board, users interact asynchronously via typed messages in a pseudonymous setting. How might the lack of visual cues or synchronicity affect such interactions? Early research in CMC hypothesized and found that the lack of social cues in CMC led to less personal forms of interaction than in face-to-face contexts (Sproull & Kiesler 1986).

But as online communities emerged, it became clear that CMC could support relationship formation and even intimate interactions (Parks & Floyd 1996; → Virtual Communities). In an attempt to reconcile experimental findings concerning the poorness of CMC with his own field observations, Walther proposed the social information processing theory, arguing that the more limited bandwidth or sensory richness of CMC, relative to face-to-face communication, meant that it would take longer for individuals to exchange information (Walther et al. 1994). Over time, however, the two types of social interaction may achieve comparable interpersonal effects and intimacy levels. One methodological lesson was that even if CMC may appear less personal in short-term experimental settings, CMC compares to other types of interaction that are typically deemed more intimate when it comes to naturalistic settings, as examined in observational studies.

Later work by Walther suggested that certain unique features of CMC enable interactions that actually can be more personal or intimate than comparable situations in face-to-face settings (Walther 1996). According to Walther, CMC creates a feedback loop of positive impression management, idealization, and reciprocity that leads to more intense interactions, which he referred to as hyperpersonal interactions. Furthermore, studies by Bailenson et al. (2005) extended the notion of hyperpersonal CMC by simulating unique communication processes that could not occur in real-life face-to-face interaction. For example, a specially designed CMC system that allowed a speaker to make eye contact with several audience members simultaneously, provided the participants with "conversational superpowers." In CMC, a speaker thus may transform his or her actions strategically to maximize intimacy or social influence.

One of the most renowned lines of research within CMC has explored how people interact with *media interfaces*. Reeves and Nass (1996) showed via a series of experiments that people have a tendency to treat media interfaces (e.g., televisions and computers) as if they were social actors (→ Media Equation Theory). For example, people become polite to computers under certain conditions in order to conform to a social norm. In one study, participants performed a learning task on a computer. They then filled out an evaluation of the event, either on the same computer or a different computer. Participants

gave more positive ratings if they filled out the evaluation on the same computer that had administered the learning task than if they were assigned to a different computer. Reeves and Nass concluded that this pattern is analogous to the social norm of being polite to individuals asking for an evaluation of themselves.

To sum up, when people use media to conduct interpersonal interactions, they are combining processes that occur within face-to-face interpersonal interactions with new processes that are unique to utilizing various kinds of technology. Thus, the additive model of psychological processing, outlined in the introduction, can work as a framework for understanding mediated forms of interpersonal communication. In a further, metaphorical, sense, mass communication can be viewed as combining processes of face-to-face as well as mediated group interaction with additional processes that are inherent to the large-scale dissemination of information, even if historically, the use of mass media predates CMC.

### Mass Communication

Mass communication has typically been understood as organizations (e.g., newspapers, film production companies, or television studios) using some media technology to distribute information to large audiences (→ Media Effects). With the rise of digital technology, the contrast between large organizations and large audiences has been blurred, as it is now possible for any individual to send an email to websites and listservs, which, in turn, send this message to thousands of other people (→ Media Effects, History of). As John Durham Peters has noted (1999), mass communication technologies have changed how we think about communication in general – as dialogue, dissemination, and combinations of the two. From the perspective of psychological processes, one way to approach mass communication is as a combination of face-to-face and mediated interpersonal interactions.

In the 1970s and 1980s, → George Gerbner provided some compelling evidence for his → *cultivation theory*, which is a macroscopic theory of how interpersonal interaction and mass media use may be shown to combine in predictable ways. The basic argument is that, after much exposure to various forms of mass media, people will change their patterns of interpersonal behavior because they have acquired an altered mental representation or worldview. For example, people who watched large amounts of television, which often features violence, were more likely to begin avoiding going out late at night. The theory illustrates the combinatorial aspect of the psychological processes entering into communication. In order to create a model of how a worldview is cultivated, it is necessary to understand how people perceive and attend to stimuli (e.g., watch television), how they interact with mediated versions of people, and how, as a consequence, their interpersonal interaction with actual people changes. While some of the methods employed by Gerbner and colleagues have been called into question, his approach suggested the importance of examining the connections between interpersonal communication and mass communication.

### CROSS-CULTURAL RESEARCH AS A COMMON GROUND

One area which is common to psychology and communication is the study of *cultural influences* on identity formation and social interaction. Psychology has a well-respected tradition of examining cultural differences in how the mind functions. For example, work

by Hazel Markus and her colleagues has demonstrated that culture is rooted so deeply within the mind that the way in which people construe the self – how we relate to other people, how interdependent social relationships are, and how cognition, emotion, and motivations are formed – vary drastically between eastern and western cultures (Markus & Kitayama 1991).

These differences are so pervasive that they extend down to the "low level" cognitive actions discussed above. For example, work by Douglas Medin and colleagues has examined biological concepts among various groups: from Petan, Guatemala, and from Native American, Amish, and majority culture groups in Wisconsin, USA. The data from these different cultures exhibit systematic differences regarding very basic and supposedly "universal" aspects of cognition – how people form categories about objects, as well as how people draw inferences based on what category an object belongs to. A methodological lesson is that when data is collected from American undergraduates, as is common practice, the findings, models, and theories may not generalize to the world at large. Even at the level of how people perceive physical objects visually ($\rightarrow$ Visuals, Cognitive Processing of), there are differences across cultures (Kitayama et al. 2003).

Also, communication scholars have argued that message production and social interaction should be studied outside the laboratory and with regard to the cultures in which those processes are entrenched ($\rightarrow$ Intercultural and Intergroup Communication). In a wider sense, James Carey (1989) has argued that communication is not simply a transmission of information, but a *ritualistic process* that creates and sustains social reality. In a ritualistic view, reading a newspaper is not so much a way of gaining new information as a communal affirmation of a shared worldview. All types of human expression – from architecture to dance to news broadcasts – confirm and propagate a symbolic order that governs social processes. In sum, psychologists have focused on how culture shapes thought by directly comparing people from different cultures. Communication scholars, in turn, have theorized and examined the very acts of expression and interaction as inherently cultural processes.

## A CONTINUING INTERDISCIPLINARY RELATIONSHIP

The fields of psychology and communication are closely related, to the extent that the line differentiating the two is often quite blurry. In terms of historical roots, some of the studies that are considered landmarks in the field of communication originally were carried out in psychology departments, and/or published in psychological journals; for example, work by $\rightarrow$ Bandura, $\rightarrow$ Hovland, $\rightarrow$ Lasswell, and Lewin.

Even now, there is continuing cross-over between the two fields in terms of publication venues, collaborations among scholars, and even migration across departments for faculty and students trained in either of the two disciplines. Given the historical development of the two areas of inquiry, psychology is more of an established discipline than communication, so communication may benefit from the relatively consolidated approaches of psychology. In the future, the fields will be entering into shifting configurations as each develops further. The relationship between psychology and communication has been productive in the past, and communication scholars will continue to both learn from and inform psychologists.

SEE ALSO: ▶ Bandura, Albert ▶ Cognition ▶ Cognitive Science ▶ Cultivation Theory ▶ Expectancy Violation ▶ Experimental Design ▶ Gerbner, George ▶ Hovland, Carl I. ▶ Information Processing ▶ Interaction ▶ Intercultural and Intergroup Communication ▶ Interpersonal Communication ▶ Lasswell, Harold D. ▶ Media Effects ▶ Media Effects, History of ▶ Media Equation Theory ▶ Mediated Social Interaction ▶ Nonverbal Communication and Culture ▶ Objectivity in Science ▶ Paradigm ▶ Personal Communication by CMC ▶ Virtual Communities ▶ Visuals, Cognitive Processing of

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