

RECEIVER

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Primary Disciplinary Field(s): Communication Studies, Cognitive Psychology, Signal Processing, Parapsychology

1. Core Definition and Function

The concept of the **Receiver** fundamentally describes any entity, whether a biological organism, a mechanical device, or an abstract system, dedicated to translating an external signal into an internal, intelligible message. This process is crucial across various disciplines, ranging from engineering and physics, where it involves the detection and amplification of electromagnetic waves, to psychology and communication theory, where it involves the complex perceptual and cognitive processing performed by sentient beings. The defining feature of a receiver is its capacity for **decoding**, taking raw energy or structured input (the signal) and transforming it into meaningful data that can subsequently influence behavior, decision-making, or further system processes. Without an effective receiver, transmission--the act of sending information--remains futile, as the information fails to bridge the gap between source and destination in a usable format.

In the realm of psychology, the human being is frequently conceptualized as a highly sophisticated receiver, analogous in some ways to a complex electronic device such as a radio or radar installation. This analogy highlights the sequential steps involved: the detection of stimuli via specialized sensory organs (eyes, ears, skin), the filtering of extraneous noise, and the subsequent neural translation of these physical stimuli into conscious experience and understandable information. This translation requires the active involvement of higher-order cognitive functions, including attention, memory retrieval, and contextual mapping, ensuring that the perceived signal aligns with existing knowledge structures or schemas. Thus, the psychological receiver is not a passive sponge, but an active interpreter, constantly shaping the input based on internal states and environmental expectations.

The necessity of transformation underscores the critical distinction between a **signal** and a **message**. A signal is merely the physical carrier of information (e.g., sound waves, light photons, electrical impulses); the message is the meaning derived from that carrier. The receiver's function is the conversion mechanism--the semantic bridge. If a message is encoded by the sender into linguistic form, the receiver must possess the necessary linguistic competence and cultural context to decode it accurately. Failures in reception often arise not from signal loss, but from a breakdown in this interpretive step, leading to miscommunication, misunderstanding, or the complete rejection of the input as meaningless noise. Therefore, studying the receiver involves scrutinizing both the physiological limitations inherent in sensory apparatus and the psychological biases inherent in cognitive interpretation.

2. The Receiver in Communication Theory

Within formal communication models, such as the seminal framework proposed by Shannon and Weaver, the receiver occupies the final stage of the linear transmission process, tasked specifically with reversing the encoding performed by the source. This model posits that a source selects a message, which is then encoded into a signal suitable for transmission across a channel. The **Receiver** must then decode this signal back into the original message form. This framework, while essential for understanding basic information transfer, often treats the receiver mechanistically, overlooking the complexities introduced by human factors. In these classical models, the goal of the receiver is solely achieving high fidelity--the accurate reconstruction of the transmitted message.

More advanced, transactional models of communication integrate the receiver as an active participant whose interpretation is colored by personal history, psychological state, and environmental context. In these models, the designation of "sender" and "receiver" often becomes fluid, as effective communication necessitates that the receiver also provides **feedback**, thereby momentarily becoming a sender and influencing the original source. This shift recognizes that reception is not the end point of communication but rather a critical juncture that determines the continuation and effectiveness of the exchange. The receiver's ability to correctly assess the intent and context of the sender directly impacts the quality of the interaction and the subsequent flow of information.

A significant challenge addressed in communication theory concerning the receiver is the mitigating influence of **noise**. Noise refers to any interference or disturbance that disrupts the transmission or accurate decoding of the signal. While noise can be external (e.g., static on a radio, loud background chatter), it is often internal in psychological contexts (e.g., distractions, preconceived notions, semantic differences, or cognitive overload). The effectiveness of the receiver is measured by its signal-to-noise ratio--its capacity to isolate the intended signal from competing or irrelevant inputs. Human receivers employ sophisticated attentional filters and selective perception mechanisms to manage this noise, a process which, while necessary, can sometimes lead to the accidental exclusion of relevant, low-priority information.

3. Psychological Mechanisms of Human Reception

The human capacity for receiving information is intricately linked to sensory psychology and cognitive processing. Reception begins with **sensory transduction**, where specialized receptor cells convert physical energy (e.g., sound waves, chemical molecules) into electrochemical neural signals. For instance, the ear acts as a receiver for auditory signals, translating vibrations into nerve impulses that the brain can process. This initial phase is purely physiological and determines the physical limitations of the organism--the absolute thresholds and just noticeable differences

required for stimulus detection.

Following initial transduction, the neural signals are routed through complex filtering and organizational centers in the central nervous system. This is where **perception** takes over, transforming raw sensory data into organized, meaningful patterns. The brain, acting as the ultimate receiver, does not simply register input; it actively constructs reality based on that input, leveraging stored memories and predictive algorithms. This constructive process explains why two individuals may physically receive the exact same sensory signal but interpret it vastly differently based on their psychological readiness, emotional state, and cultural conditioning. Key mechanisms involved include:

Selective Attention: The mechanism by which the receiver prioritizes certain signals while inhibiting others, ensuring cognitive resources are not overwhelmed.

Pattern Recognition: The automatic process of matching incoming sensory data against existing memory templates (schemas) to quickly identify and categorize stimuli.

Contextual Integration: The use of surrounding environmental or situational clues to disambiguate signals that might otherwise be vague or contradictory.

The efficiency of the psychological receiver is heavily dependent on factors like cognitive load and motivation. If the receiver is stressed, fatigued, or facing multiple competing inputs, the fidelity of reception often decreases significantly. Conversely, high motivation and focused attention can enhance sensitivity and decoding accuracy. The study of human reception therefore bridges neuroscience, detailing the wiring of sensory pathways, and cognitive science, exploring the mental frameworks that assign meaning to the received data.

4. Key Characteristics of Robust Reception

Effective reception, whether applied to human communication or technological systems, relies on several measurable and qualitative characteristics that determine success. A robust receiver must demonstrate reliability, responsiveness, and adaptability to varying conditions. These characteristics go beyond mere detection; they speak to the quality and usability of the resulting message.

Fidelity: This refers to the accuracy with which the received message matches the intended message transmitted by the source. High fidelity minimizes distortion introduced either during transmission (channel noise) or during the decoding process (semantic noise or bias). For a human receiver, fidelity often depends on shared language, mutual understanding of jargon, and absence of psychological barriers.

Sensitivity and Selectivity: **Sensitivity** is the receiver's ability to detect weak signals. A highly sensitive receiver can process low-amplitude inputs. **Selectivity** is the ability to tune in to a desired signal while rejecting adjacent or competing signals. In psychological terms, this relates to the

ability to focus on faint or subtle social cues while filtering out irrelevant background information.

Bandwidth and Capacity: In technical systems, bandwidth dictates the rate of information flow that can be processed. For human cognition, this relates to cognitive capacity--the maximum amount of information the working memory can handle simultaneously. Overloading the receiver's capacity results in information saturation and reduced decoding quality.

Furthermore, a critical characteristic of a sophisticated receiver is its capacity for **error correction**. Highly evolved systems, including the human brain, incorporate redundancy and predictive coding to fill in gaps when parts of the signal are missing or degraded. For instance, in linguistic communication, humans can easily infer missing words or correct grammatical errors based on contextual probabilities, ensuring that minor transmission flaws do not derail the entire message. This active, self-correcting capacity is what distinguishes biological receivers from simpler mechanical counterparts.

5. Reception in Parapsychology and Extrasensory Perception

The concept of the receiver takes on a highly specialized and controversial meaning within the field of parapsychology, particularly in experiments investigating telepathy or extrasensory perception (ESP). Here, the receiver is designated as the subject who attempts to acquire information or data directly from a sender (a "transmitter") without the use of conventional sensory channels. This conceptualization explicitly challenges the physiological constraints typically applied to human reception.

In telepathy protocols, the human receiver is hypothesized to possess a faculty capable of detecting thoughts, images, or intentions emitted by the sender across vast distances or through physical barriers. Researchers in this domain often analyze receiver performance using statistical methods to determine if the successful reception rate significantly exceeds chance expectation. The receiver's mental state--often required to be relaxed, focused, or in a meditative state--is believed to influence the efficacy of the reception, suggesting that psychological noise and conscious interference may hinder the purported non-sensory signal.

However, the scientific validity of non-sensory reception remains a subject of intense debate and criticism. Skeptics argue that observed success rates are attributable to experimental flaws, statistical artifacts, or cognitive biases rather than genuine reception of an unknown energy form. Despite the lack of consensus, the parapsychological use of the term **Receiver** serves to underscore the theoretical possibility that information transfer might occur through mechanisms that bypass the established sensory-neural pathways, pushing the boundaries of what defines a signal and a channel in communication.

6. Technological and Metaphorical Application

The technical understanding of the receiver heavily influences its psychological metaphor. A radar installation, for example, is a device specifically designed to receive and interpret reflected electromagnetic signals, translating them into usable spatial data (as implied in the source content: "The receiver at the radar installation was not working at the time of the attack."). This highlights the essential requirement for the receiver to be operational, aligned, and calibrated correctly to its specific input type.

Analogously, when a human is described as a poor receiver, it implies a deficiency in being "tuned in"--a lack of attentive focus, an inability to filter noise, or a psychological misalignment (e.g., emotional bias) that distorts the incoming signal. The technological analogue reinforces the idea that reception is a precise, mechanical operation requiring integrity of components and correct functional settings. This cross-disciplinary utility of the term **Receiver** demonstrates its power as a heuristic device for analyzing systemic information flow in both engineered systems and biological organisms.

7. Debates and Limitations of the Receiver Model

While the receiver concept is invaluable for dissecting communication, it faces several philosophical and practical limitations when applied strictly to human interaction. One primary criticism revolves around the potentially passive implication of the term. Labeling a person as a "receiver" sometimes obscures the active, constructive role of interpretation and the generation of meaning. Human beings do not merely receive input; they proactively seek, select, and modify information based on internal needs, a process far more dynamic than a simple input/output device.

A second limitation stems from the difficulty in isolating where reception ends and response begins in continuous interaction. In complex social settings, decoding and encoding often occur simultaneously, blurring the traditional lines separating the sender and the receiver. For example, during a live conversation, one party is constantly receiving verbal cues while simultaneously preparing a response, often adjusting the interpretation of the incoming signal based on the anticipated outgoing message. This transactional simultaneity challenges models that treat reception as a discrete, sequential step. Furthermore, the inherent subjectivity of human experience means that the "fidelity" metric--the gold standard for a technical receiver--is almost impossible to achieve perfectly, as perfect replication of the sender's intended emotional or semantic state is fundamentally unattainable.

Further Reading

[The Communication Process \(Wikipedia\)](#)

[Sensory Systems and Transduction \(Wikipedia\)](#)

[Cognitive Psychology and Information Processing \(Wikipedia\)](#)

[Radio Receiver Technology and Function \(Wikipedia\)](#)

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