

10. SPEAKING

10.1 SPEAKING

In sociolinguistics, **SPEAKING** or the **SPEAKING** model, is a model sociolinguistic study (represented as a mnemonic) developed by Dell Hymes. It is a tool to assist the identification and labeling of components of linguistic interaction that was driven by his view that, in order to speak a language correctly, one needs not only to learn its vocabulary and grammar, but also the context in which words are used.

To facilitate the application of his representation, Hymes constructed the acronym, **S-P-E-A-K-I-N-G** (for setting and scene, participants, ends, acts sequence, key, instrumentalities, norms, & genre) under which he grouped the sixteen components within eight divisions.

The model had sixteen components that can be applied to many sorts of discourse: message form; message content; setting; scene; speaker/sender; addressor; hearer/receiver/audience; addressee; purposes (outcomes); purposes (goals); key; channels; forms of speech; norms of interaction; norms of interpretation; and genres.

10.1.1 Divisions

Setting and Scene

"Setting refers to the time and place of a speech act and, in general, to the physical circumstances". The living room in the grandparents' home might be a setting for a family story. Scene is the "psychological setting" or "cultural definition" of a scene, including characteristics such as range of formality and sense of play or seriousness. The family story may be told at a reunion celebrating the grandparents' anniversary. At times, the family would be festive and playful; at other times, serious and commemorative.

Participants

Speaker and audience. Linguists will make distinctions within these categories; for example, the audience can be distinguished as addressees and other hearers. At the family reunion, an aunt might tell a story to the young female relatives, but males, although not addressed, might also hear the narrative.

Ends

Purposes, goals, and outcomes. The aunt may tell a story about the grandmother to entertain the audience, teach the young women, and honor the grandmother.

Act Sequence

Form an order of the event. The aunt's story might begin as a response to a toast to the grandmother. The story's plot and development would have a sequence structured by the aunt. Possibly there would be a collaborative interruption during the telling. Finally, the group might applaud the tale and move onto another subject or activity.

Key

Clues that establish the "tone, manner, or spirit" of the speech act. The aunt might imitate the grandmother's voice and gestures in a playful way, or she might address the group in a serious voice emphasizing the sincerity and respect of the praise the story expresses.

Instrumentalities

Forms and styles of speech. The aunt might speak in a casual register with many dialect features or might use a more formal register and careful grammatically "standard" forms.

Norms

Social rules governing the event and the participants' actions and reactions. In a playful story by the aunt, the norms might allow many audience interruptions and collaboration, or possibly those interruptions might be limited to participation by older females. A serious, formal story by the aunt might call for attention to her and no interruptions as norms.

Genre

The kind of speech act or event; for the example used here, the kind of story. The aunt might tell a character anecdote about the grandmother for entertainment, or an exemplum as moral instruction. Different disciplines develop terms for kinds of speech acts, and speech communities sometimes have their own terms for types.

10.2 Telepathy

Telepathy (from the Ancient Greek *τῆλε*, tele meaning "distant" and *πάθος*, pathos or -patheia meaning "feeling, perception, passion, affliction, experience") is the transmission of information from one person to another without using any of our known sensory channels or physical interaction. The term was coined in 1882 by the classical scholar Frederic W. H. Myers, a founder of the Society for Psychical Research, and has remained more popular than the earlier expression thought transference.

There is no scientific evidence that telepathy is a real phenomenon. Many studies seeking to detect, understand, and utilize telepathy have been done, but no replicable results from well-controlled experiments exist.

Telepathy is a common theme in modern fiction and science fiction, with many extraterrestrials, superheroes and supervillains having the telepathic ability.

10.2.1 Origins of the concept

According to Roger Luckhurst, the origin of the concept of telepathy (not telepathy itself) in the Western civilization can be tracked to the late 19th century. In his view, science did not frequently concern itself with "the mind" prior to this. As the physical sciences made significant advances, scientific concepts were applied to mental phenomena (e.g., animal magnetism), with the hope that this would help understand paranormal phenomena. The modern concept of telepathy emerged in this context.

The notion of telepathy is not dissimilar to two psychological concepts: delusions of thought insertion/removal and psychological symbiosis. This similarity might explain how some people have come up with the idea of telepathy. Thought insertion/removal is a symptom of psychosis, particularly of schizophrenia or schizoaffective disorder. Psychiatric patients who experience this symptom falsely believe that some of their thoughts are not their own and that others (e.g., other people, aliens, demons or fallen angels, or conspiring intelligence agencies) are putting thoughts into their minds (thought insertion). Some patients feel as if thoughts are being taken out of their minds or deleted (thought removal). Along with other symptoms of psychosis, delusions of thought insertion may be reduced by antipsychotic medication.

Psychological symbiosis is a less well established concept. It is an idea found in the writings of early psychoanalysts, such as Melanie Klein. It entails the belief that in the early psychological experience of the child (during earliest infancy), the child is unable to tell the difference between his or her own mind, on one hand, and his or her experience of the mother/parent, on the other hand. This state of mind is called psychological symbiosis; with development, it ends, but, purportedly, aspects of it can still be detected in the psychological functioning of the adult. Putatively, the experience of either thought insertion/removal or unconscious memories of psychological symbiosis may have led to the invention of "telepathy" as a notion and the belief that telepathy exists. Psychiatrists and clinical psychologists believe and empirical findings support the idea that people with schizotypal personality disorder are particularly likely to believe in telepathy.

10.2.2 Case studies

In the late 19th century the Creery Sisters (Mary, Alice, Maud, Kathleen, and Emily) were tested by the Society for Psychical Research and believed them to have genuine psychic ability however, during a later experiment they were caught utilizing signal codes and they confessed to fraud. George Albert Smith and Douglas Blackburn were claimed to be genuine psychics by the Society for Psychical Research but Blackburn confessed to fraud:

“ For nearly thirty years the telepathic experiments conducted by Mr. G. A. Smith and myself have been accepted and cited as the basic evidence of the truth of thought transference...

...the whole of those alleged experiments were bogus, and originated in the honest desire of two youths to show how easily men of scientific mind and training could be deceived when seeking for evidence in support of a theory they were wishful to establish.”

Arthur Conan Doyle and W. T. Stead were duped into believing Julius and Agnes Zancig had genuine psychic powers. Both Doyle and Stead wrote the Zancigs performed telepathy. In 1924 Julius and Agnes Zancig confessed that their mind reading act was a trick and published the secret code and all the details of the trick method they had used under the title of *Our Secrets!!* in a London Newspaper.

A famous experiment in telepathy was recorded by the American author Upton Sinclair in his book *Mental Radio* which documents Sinclair's test of psychic abilities of Mary Craig Sinclair, his second wife. She attempted to duplicate 290 pictures

which were drawn by her husband. Sinclair claimed Mary successfully duplicated 65 of them, with 155 "partial successes" and 70 failures. However, these experiments were not conducted in a controlled scientific laboratory environment. Martin Gardner wrote the possibility of sensory leakage during the experiment had not been ruled out:

In the first place, an intuitive wife, who knows her husband intimately, may be able to guess with a fair degree of accuracy what he is likely to draw—particularly if the picture is related to some freshly recalled event the two experienced in common. At first, simple pictures like chairs and tables would likely predominate, but as these are exhausted, the field of choice narrows and pictures are more likely to be suggested by recent experiences. It is also possible that Sinclair may have given conversational hints during some of the tests—hints which in his strong will to believe, he would promptly forget about. Also, one must not rule out the possibility that in many tests, made across the width of a room, Mrs. Sinclair may have seen the wiggling of the top of a pencil, or arm movements, which would convey to her unconscious a rough notion of the drawing.

The Turner-Owenby long distance telepathy experiment was discovered to contain flaws. Frances May Turner positioned herself in the Duke Parapsychology Laboratory whilst Sarah Owenby claimed to receive transmissions 250 miles away. For the experiment Turner would think of a symbol and write it down whilst Owenby would write her guesses. The scores were highly successful and both records were supposed to be sent to J. B. Rhine, however, Owenby sent them to Turner. Critics pointed out this invalidated the results as she could have simply written her own record to agree with the other. When the experiment was repeated and the records were sent to Rhine the scores dropped to average.

Another example is the experiment carried out by the author Harold Sherman with the explorer Hubert Wilkins who carried out their own experiment in telepathy for five and a half months starting in October 1937. This took place when Sherman was in New York and Wilkins was in the Arctic. The experiment consisted of Sherman and Wilkins at the end of each day to relax and visualise a mental image or "thought impression" of the events or thoughts they had experienced in the day and then to record those images and thoughts on paper in a diary. The results at the end when comparing Sherman's diary to Wilkins was claimed to be more than 60 per cent.

The full results of the experiments were published in 1942 in a book by Sherman and Wilkins titled *Thoughts Through Space*. In the book both Sherman and Wilkins had written they believed they had demonstrated that it was possible to send and receive thought impressions from the mind of one person to another. The magician John Booth wrote the experiment was not an example of telepathy as a high percentage of misses had occurred. Booth wrote it was more likely that the "hits" were the result of "coincidence, law of averages, subconscious expectancy, logical inference or a plain lucky guess."

In a series of experiments Samuel Soal and his assistant K. M. Goldney examined 160 subjects over 128, 000 trials and obtained no evidence for the existence of telepathy. Soal tested Basil Shackleton and Gloria Stewart between 1941 and 1943 in over five hundred sittings and over twenty thousand guesses. Shackleton scored 2890 compared to a chance expectation of 2308 and Gloria scored 9410 compared to a chance level of 7420. It was later discovered the results had been tampered with. Gretl Albert who was present during many of the experiments said she had witnessed Soal altering the records during the sessions. Betty Marwick discovered Soal had not used the method of random selection of numbers as he had claimed. Marwick showed that there had been manipulation of the score sheets "all the experiments reported by Soal had thereby been discredited."

In 1979 the physicists John Taylor and Eduardo Balanovski wrote the only scientifically feasible explanation for telepathy could be electromagnetism (EM) involving EM fields. In a series of experiments the EM levels were many orders of magnitude lower than calculated and no paranormal effects were observed. Both Taylor and Balanovski wrote their results were a strong argument against the validity of telepathy. Research in anomalistic psychology has discovered that in some cases telepathy can be explained by a covariation bias. In an experiment (Schienle et al. 1996) 22 believers and 20 skeptics were asked to judge the covariation between transmitted symbols and the corresponding feedback given by a receiver. According to the results the believers overestimated the number of successful transmissions whilst the skeptics made accurate hit judgments. The results from another telepathy experiment involving 48 undergraduate college students (Rudski, 2002) were explained by hindsight and confirmation biases.

10.2.3 In parapsychology

Within the field of parapsychology, telepathy is considered to be a form of extrasensory perception (ESP) or anomalous cognition in which information is transferred through Psi. It is often categorized similarly to precognition and clairvoyance. Experiments have been used to test for telepathic abilities. Among the most well known are the use of Zener cards and the Ganzfeld experiment.

Zener Cards

Zener cards are marked with five distinctive symbols. When using them, one individual is designated the "sender" and another the "receiver". The sender selects a random card and visualize the symbol on it, while the receiver attempts to determine that symbol using Psi. Statistically, the receiver has a 20% chance of randomly guessing the correct symbol, so to demonstrate telepathy, they must repeatedly score a success rate that is significantly higher than 20%. If not conducted properly, this method can be vulnerable to sensory leakage and card counting.

J. B. Rhine's experiments with Zener cards were discredited due to the discovery that sensory leakage or cheating could account for all his results such as the subject being able to read the symbols from the back of the cards and being able to see and hear the experimenter to note subtle clues.[30] Once Rhine took precautions in response to criticisms of his methods, he was unable to find any high-scoring subjects. Due to the methodological problems, parapsychologists no longer utilize card-guessing studies.

Ganzfeld experiment

When using the Ganzfeld experiment to test for telepathy, one individual is designated the receiver and is placed inside a controlled environment where they are deprived of sensory input, and another is designated the sender and is placed in a separate location. The receiver is then required to receive information from the sender. The nature of the information may vary between experiments.

The ganzfeld experiment studies that were examined by Ray Hyman and Charles Honorton had methodological problems that were well documented. Honorton reported only 36% of the studies used duplicate target sets of pictures to avoid handling cues. Hyman discovered flaws in all of the 42 ganzfeld experiments and to access each experiment, he devised a set of 12 categories of flaws. Six of these concerned statistical defects, the other six covered procedural flaws such as inadequate documentation, randomization and security as well as possibilities of

sensory leakage. Over half of the studies failed to safeguard against sensory leakage and all of the studies contained at least one of the 12 flaws. Because of the flaws, Honorton agreed with Hyman the 42 ganzfeld studies could not support the claim for the existence of psi.

Possibilities of sensory leakage in the ganzfeld experiments included the receivers hearing what was going on in the sender's room next door as the rooms were not soundproof and the sender's fingerprints to be visible on the target object for the receiver to see.

Hyman also reviewed the autoganzfeld experiments and discovered a pattern in the data that implied a visual cue may have taken place:

The most suspicious pattern was the fact that the hit rate for a given target increased with the frequency of occurrence of that target in the experiment. The hit rate for the targets that occurred only once was right at the chance expectation of 25%. For targets that appeared twice the hit rate crept up to 28%. For those that occurred three times it was 38%, and for those targets that occurred six or more times, the hit rate was 52%. Each time a videotape is played its quality can degrade. It is plausible then, that when a frequently used clip is the target for a given session, it may be physically distinguishable from the other three decoy clips that are presented to the subject for judging. Surprisingly, the parapsychological community has not taken this finding seriously. They still include the autoganzfeld series in their meta-analyses and treat it as convincing evidence for the reality of psi.

Hyman wrote the autoganzfeld experiments were flawed because they did not preclude the possibility of sensory leakage. In 2010, Lance Storm, Patrizio Tressoldi, and Lorenzo Di Risio analyzed 29 ganzfeld studies from 1997 to 2008. Of the 1,498 trials, 483 produced hits, corresponding to a hit rate of 32.2%. This hit rate is statistically significant with $p < .001$. Participants selected for personality traits and personal characteristics thought to be psi-conducive were found to perform significantly better than unselected participants in the ganzfeld condition. Hyman (2010) published a rebuttal to Storm et al. According to Hyman "reliance on meta-analysis as the sole basis for justifying the claim that an anomaly exists and that the evidence for it is consistent and replicable is fallacious. It distorts what scientists mean by confirmatory evidence." Hyman wrote the ganzfeld studies have not been independently replicated and have failed to produce evidence for telepathy. Storm et al. published a response to Hyman claiming the ganzfeld experimental design has proved to be consistent and reliable but parapsychology is a struggling discipline

that has not received much attention so further research on the subject is necessary. Rouder et al. 2013 wrote that critical evaluation of Storm et al.'s meta-analysis reveals no evidence for telepathy, no plausible mechanism and omitted replication failures.

Types

Parapsychology describes several forms of telepathy:

Latent telepathy, formerly known as "deferred telepathy", is described as the transfer of information, through Psi, with an observable time-lag between transmission and reception.

Retrocognitive, precognitive, and intuitive telepathy is described as being the transfer of information, through Psi, about the past, future or present state of an individual's mind to another individual.

Emotive telepathy, also known as remote influence or emotional transfer, is the process of transferring kinesthetic sensations through altered states.

Superconscious telepathy involves tapping into the superconscious to access the collective wisdom of the human species for knowledge.

10.2.3 Scientific reception

A variety of tests have been performed to demonstrate telepathy, but there is no scientific evidence that the power exists. A panel commissioned by the United States National Research Council to study paranormal claims concluded that "despite a 130-year record of scientific research on such matters, our committee could find no scientific justification for the existence of phenomena such as extrasensory perception, mental telepathy or 'mind over matter' exercises... Evaluation of a large body of the best available evidence simply does not support the contention that these phenomena exist." The scientific community considers parapsychology a pseudoscience. There is no known mechanism for telepathy. Mario Bunge has written telepathy would contradict laws of science and the claim that "signals can be transmitted across space without fading with distance is inconsistent with physics".

The physicist John Taylor has written the experiments that have been claimed by parapsychologists to support evidence for the existence of telepathy are based on the use of shaky statistical analysis, poor design and attempts to duplicate such experiments by the scientific community have failed. Taylor also wrote the arguments used by parapsychologists for the feasibility of such phenomena are based

on distortions of theoretical physics as well as "complete ignorance" of relevant areas of physics.

Outside of parapsychology, telepathy is generally explained as the result of fraud, self-delusion and/or self-deception and not as a paranormal power. Psychological research has also revealed other explanations such as confirmation bias, expectancy bias, sensory leakage, subjective validation and wishful thinking.[54] Virtually all of the instances of more popular psychic phenomena, such as mediumship, can be attributed to non-paranormal techniques such as cold reading.[55][56] Magicians such as Ian Rowland and Derren Brown have demonstrated techniques and results similar to those of popular psychics, without paranormal means. They have identified, described, and developed psychological techniques of cold reading and hot reading.

10.2.4 In popular culture

Telepathy is commonly used in fiction, with a number of superheroes and supervillains, as well as figures in many science fiction novels, etc., use telepathy. The mechanics of telepathy in fiction vary widely. Some fictional telepaths are limited to receiving only thoughts that are deliberately sent by other telepaths, or even to receiving thoughts from a specific other person. For example, in Robert A. Heinlein's 1956 novel *Time for the Stars*, certain pairs of twins are able to send telepathic messages to each other. In A. E. van Vogt's science fiction novel *Slan*, the mutant hero Jommy Cross can read the minds of ordinary humans.

Some telepaths can read the thoughts only of those they touch, such as Vulcans in the *Star Trek* media franchise. *Star Trek* science consultant and writer André Bormanis has revealed that telepathy within the *Star Trek* universe works via the "psionic field". According to Bormanis, a psionic field is the "medium" through which unspoken thoughts and feelings are communicated through space.[57] Some humanoids can tap into this field through a kind of sense organ located in the brain; in the same manner that human eyes can sense portions of the electromagnetic field, telepaths can sense portions of the psionic field. Additionally, both the Jedi knights and Lords of the Sith in the George Lucas' *Star Wars* film franchise exhibit telepathic and telekinetic abilities utilizing a psionic energy field called 'the force'.

Multiple books by Anne McCaffery feature the use of mental communication. Most notably would be her *Talent* series and *The Dragonriders of Pern* series. In her *Pern* novels all dragons and their riders share a telepathic bond in which they mutually transmit both language and images. On *Pern* any Dragon is able to use telepathy to

communicate with any human, while only a very few individuals are capable of initiating telepathic contact with a dragon that is not bonded to them. In the book *Eragon*, Eragon can communicate mentally with his dragon Saphira, and it is possible to block people from one's mind with a barrier. In the Harry Potter series by J. K. Rowling, telepathy is a magical skill known as Legilimency. In the John Wyndham novel *The Chrysalids*, the main character and narrator David Storm is one of a group of nine telepaths. In Anthony Horowitz's *Power of Five* series twins Jamie and Scott Tyler were born with telepathic powers that enable them to read people's minds and, ultimately, control them. They always know each other's thoughts, which earns them money doing tricks at a circus in Reno, Nevada, USA.

Some writers view telepathy as the evolutionary destiny of humanity. In Tony Vigorito's novel, *Just a Couple of Days*, telepathy emerges across the entire human species as a result of the Pied Piper Virus, which inadvertently eliminates humanity's symbolic capacity. In this instance, telepathy is seen as a latent ability that emerges only when the distractions of language are bypassed.

Some fictional telepaths possess mind control abilities, which can include "pushing" thoughts, feelings, or hallucinatory visions into the mind of another person, causing pain, paralysis, or unconsciousness, altering or erasing memories, or completely taking over another person's mind and body (similar to spiritual possession). Examples of this type of telepath include Professor Xavier, Psylocke, Jean Grey, Emma Frost, and numerous other characters in the Marvel Universe, along with Matt Parkman from the television series *Heroes*.

The radio crimefighter *The Shadow* had "the power to cloud men's minds," which he used to mask his presence from others.

The film *Scanners* concerns people born with telepathy and those with telekinetic abilities.

The Urdu novel *Devta* is based on the character of Farhad Ali Taimur, a telepath involved in the fight of good and evil.

Television show *The Listener* centers around a telepathic paramedic.

Telepaths play a huge role in the science-fiction show *Babylon 5*, with several of the main characters being telepaths as well as a drug known as "Dust" that can artificially induce telepathic abilities in someone.

10.3 Understanding

Understanding (also called intellection) is a psychological process related to an abstract or physical object, such as a person, situation, or message whereby one is able to think about it and use concepts to deal adequately with that object. Understanding is a relation between the knower and an object of understanding. Understanding implies abilities and dispositions with respect to an object of knowledge sufficient to support intelligent behavior.

An understanding is the limit of a conceptualization. To understand something is to have conceptualized it to a given measure.

10.3.1 Examples

1. One understands the weather if one is able to predict and to give an explanation of some of its features, etc.

2. A psychiatrist understands another person's anxieties if he/she knows that person's anxieties, their causes, and can give useful advice on how to cope with the anxiety.

3. A person understands a command if he/she knows who gave it, what is expected by the issuer, and whether the command is legitimate, and whether one understands the speaker .

4. One understands a reasoning, an argument, or a language if one can consciously reproduce the information content conveyed by the message.

5. One understands a mathematical concept if one can solve problems using it, especially problems that are not similar to what one has seen before.

10.3.2 Understanding as a model

Gregory Chaitin, a noted computer scientist, propounds a view that comprehension is a kind of data compression. In his essay "The Limits of Reason", he argues that understanding something means being able to figure out a simple set of rules that explains it. For example, we understand why day and night exist because we have a simple model—the rotation of the earth—that explains a tremendous amount of data—changes in brightness, temperature, and atmospheric composition of the earth. We have compressed a large amount of information by using a simple model that predicts it. Similarly, we understand the number 0.33333... by thinking of it as one-third. The first way of representing the number requires an infinite amount of memory; but the second way can produce all the data of the first representation, but

uses much less information. Chaitin argues that comprehension is this ability to compress data.

10.3.3 Components of understanding

Cognition and affect

Cognition is the process by which sensory inputs are transformed. Affect refers to the experience of feelings or emotions. Cognition and affect constitute understanding.