

Fig. 1 What is unique about language?

	language*	non language
type of R emitted? No.	could be any striped muscle response	could be any striped muscle response
type of S that evokes the R? No.	could be visual, auditory, tactile	could be visual, auditory, tactile, and all others
type of Rfmt for the response? No.	could be any type of unconditioned or conditioned reinforcement	could be any type of unconditioned or conditioned reinforcement
how the R achieves its Rfmt	indirectly , only through someone else's behavior	directly , through mechanical action

*Here *language* is being used as a common sense term.

Figure 1—Supplement

Remember: Mentalists and others who take or allow a mystical approach to behavior, including language / verbal behavior, assume that behaviors are caused by inner, innate, uncaused agents, such as the mind, psyche, or self, that tell the behaving body what to do (i.e., tell the body what behaviors to exhibit). Thus, language (among other things) is supposed to come from the mind as its psychic processes intervene between stimuli and responses. So people are assumed to be born with at least the rudiments of their language which then develops from their own private experience.

However: Starting with *what makes language unique*, we, on the other hand, will consider language from the strictly naturalistic, non-mystical perspective of the natural sciences (and later, from the same natural science perspective, we will also explore the importance and roles of private events with respect to language).

Fig 2 A Special Term

Now that we see what is unique about language, we need a special term for any behavior that achieves its reinforcement only through the behavior of another person.

How about *speech*? No good.

How about *language* or *linguistic behavior*? No good.

"The term *verbal behavior* has much to recommend it. Its etymological sanction is not too powerful, but it emphasizes the individual speaker and, whether recognized by the user or not, specifies behavior shaped and maintained by mediated consequences. It also has the advantage of being relatively unfamiliar in traditional modes of explanation." (*VB* p. 2)

Verbal behavior: asking for something, answering a question, writing a note, using sign language to ask another signer for something, or to inform another signer about something.

Non verbal behavior: walking in order to get somewhere, looking around to find something of immediate interest, picking something up to see it better, coughing because of a discomfort in the throat.

Figure 2—Summary

So, the subject matter is roughly what others deal with under the heading of “language,” and more specifically, the behavior called *verbal behavior*, which is any behavior that achieves its reinforcement indirectly through the mediation of another verbal organism’s behavior (...) regardless of whether the verbal behavior is vocal, writing, gesturing, signing, or whatever.

All of those are verbal behaviors because they have their effect on the environment (i.e., they achieve their reinforcement) **indirectly**, through someone else’s behavior.

And behavior is called non–verbal behavior if it has its effect on the environment (i.e., it achieves its reinforcement) through **direct** mechanical interaction with the environment.

And now, about “signing”...

Figure 2—Signing

A signer is someone who signs, someone who uses sign language. For example, American Sign Language (ASL), which is the official, and often native, language used by the Deaf community in America, is acknowledged as a language just as English and Chinese and French are acknowledged as languages.

Signing is *NOT* just a translation of English words into gestures (as opposed to “finger spelling”...), just as Chinese is *not* just a translation of English sound into other sounds. (Translation actually comes under one of the elementary verbal operants, as we shall see.)

Fig 3 *Verbal versus Vocal, A Possible Confusion.*

For Skinner, verbal behavior is **any** behavior reinforced through another person's behavior; so gesturing, writing, signing are all verbal behavior for Skinner.

However, in some contexts "verbal" is a synonym for "vocal" (making sounds with the vocal musculature). Writing, informal gesturing, using sign language (Amer. Sign Language) would thus be considered **non** verbal behavior, but for Skinner these would all be verbal behavior because of their indirect reinforcement.

	vocal	non vocal
verbal	making sounds with vocal apparatus as a way of affecting the behavior of someone else, i.e. talking or speaking	writing, gesturing (holding hand up in "stop" gesture, pointing at something), signing (using Amer. Sign Language)
non verbal	coughing, yawning, making "meaningless" sounds with vocal musculature	walking, looking around, picking something up, putting a key in a lock, opening a door

Fig 4 Verbal Versus Vocal: Another Arrangement

vocal verbal behavior:	making sounds with vocal apparatus as a way of affecting the behavior of someone else, i.e. talking or speaking
vocal non verbal behavior:	coughing, yawning, making "meaningless" sounds with the vocal musculature
non vocal verbal behavior:	writing, gesturing (holding hand up in "stop" gesture, pointing at something), signing (using Amer. Sign Language)
non vocal non verbal behavior:	walking, looking around, picking something up, putting a key in a lock, opening a door

Another source of confusion: mixing stimulus and response words (*vocal* stimulus, *visual* response, *auditory* response) is quite common, even among behavior analysts when they start talking about verbal behavior, but this will make it difficult to think clearly about Skinner's approach to language. Should be *auditory* stimulus, *writing* response, *vocal* response.

Fig 5 Three Additional Aspects of Skinner's Approach

- 1. No new principles** are used for verbal behavior. He uses the same principles that are relevant to all behavior of humans and non humans. These involve mainly operant functional relations, but also unlearned behavior and respondent functional relations.
- 2. Elementary relations are first identified**, then combined for dealing with more complex behavior (e.g. vb under the control of private stimuli, multiple control, secondary vb and many others).
- 3. Selection-based vb also.** Most of his analysis concerns vb like speaking, writing, signing for which the responses differ from one another in the topography (form of the response). Saying "cat" is a different response than saying "dog." This is **topography-based vb**. Vb can also consist in pointing at or selecting verbal stimuli--printed words, symbols, or pictures. This is **selection-based vb**. Responses do not differ much in topography (form), but rather in terms of the stimulus that is pointed at. **His analysis applies just as well** to this kind of vb as with topography-based vb--the same elementary forms can be identified (mand, tact, etc.)

Fig 6 Criticism by Some Behaviorists: Neglect of the Listener

As **speakers, writers, or signers**, a person's vb results in stimuli (auditory, visual, tactile) that alter the behavior of others (as when they make requests, give commands, provide information)

Traditionally this has been called *expressive language*.

As **listeners, readers, or viewers** (of signs) a person is affected by the stimuli resulting from the vb of others (as when they comply with a request or command, or behave appropriately to the information provided). Traditionally these effects have been called *receptive language*.

Skinner clearly emphasizes the behavior of the speaker, writer, or signer; so called expressive language. Why? Two reasons.

1. Much behavior evoked by verbal stimuli does not differ much from behavior evoked by non verbal stimuli. Stopping when someone says "stop" is much like stopping when a change in some aspect of the physical environment necessitates stopping.
2. And when a verbal S produces behavior that does **not** seem like behavior evoked by non verbal Ss it may be due to the listener's repertoire as a speaker playing an important role.