Manfred Jahn
Communication:
Models, Speech Acts, Pragmatics

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Abstract. This video explores the ins and outs of communication. It kicks off by discussing two early models (Shannon/Weaver 1949 and Meyer-Eppler 1959), then attempts to refine these models by adding features from linguistics (Jackendoff 2002), speech act theory (Austin 1962, Searle 1969, Bach/Harnish 1979), and pragmatics (Grice 1989 [1975], Sperber/Wilson 1996 [1986]). The results are presented in the form of increasingly detailed mindmaps.

1. Four questions

This video explores the ins and outs of communication. Basically, it wants to find answers to four questions:

1. What is communication? (– here I will discuss two classical models that define the basic elements and processes);
2. When does communication succeed?...
3. When does it fail?
4. What are the "unknowns"? (– meaning, the things that remain insufficiently explained at the end of the day. Short answer: there are many.)

My name is Manfred Jahn. I am a retired research assistant from the English Department of the University of Cologne.[1]

2. A typical instance

Slide 2 of 18! We have a picture that shows a situation which is familiar to everyone: two people going through a standard ritual of greeting each other. And what do people say after they say Hello?[2] The possibilities are endless: the participants or "communicants" – I'll list this as my first technical term – may go on to exchange news, discuss a problem, tell each other some gossip, etc. I guess we are all more or less proficient in this sort of "conversational communication", yet to explain what we are doing and how we are doing it is a challenge – mainly because it turns out that it touches on complex areas of linguistics, social conventions, and context-sensitive pragmatics.[3]

3. The references (covers)

Nine texts and their covers are flown in here, showing my main references [Models:

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[1] For the record, I have no professional schooling in either communication theory, linguistics, or pragmatics, so I am addressing this topic as an outsider. My actual area of expertise is narratology, the theory of storytelling (homepage www.uni-koeln.de/~ame02/). Graphics credits: Art-Y (iStock-ID 164475357); icon graphics from www.flaticon.com.

[2] Eric Berne, *What Do You Say After You Say Hello?* "This childlike question, so apparently artless and free of the profundity expected of scientific inquiry, really contains within itself all the basic questions of human living and all the fundamental problems of the social sciences" (1972, 3).

[3] Why explain something that one knows how to do already? Of course, from a scientific point of view, it is done for science's sake. On a more practical level, theoretical knowledge can be helpful if one wants to teach communication to someone who is not wholly proficient in it, say a small child, or if one wants to improve communication when it is flawed (as it often is).

Shannon/Weaver 1949, Meyer-Eppler 1959, Jackendoff 2002, Speech acts: Austin (1962), Searle (1969), Bach/Harnish (1979), Pragmatics: Grice (1989), Sperber/Wilson (1996)]. I'll skip all further detail at this point because the full references are also listed in the transcript PDF. By the way, the transcript also contains footnotes and occasional annotations.

4. The classical models
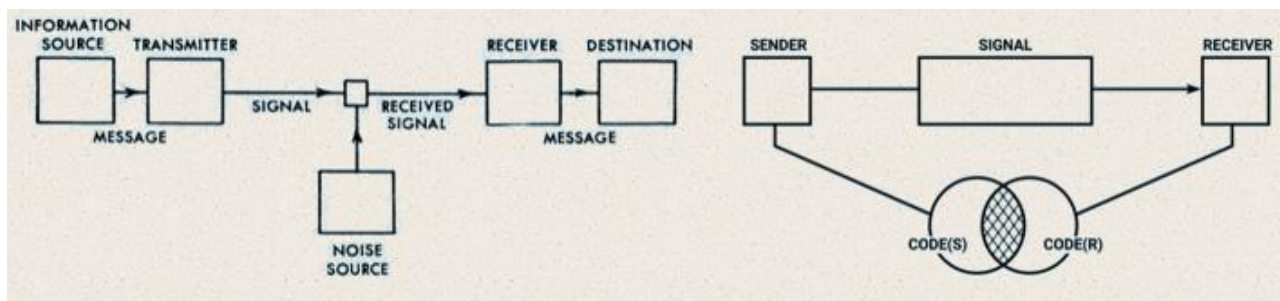
Here is the classical model by Shannon and Weaver, dating from 1949. Claude Shannon was an employee of the Bell Telephone Company, and he was mainly interested in the technical aspects of communication. His co-author Warren Weaver, however, was ready to highlight the broader implications.

> Claude Shannon's Mathematical Theory of Communication, With an Expository Summary and Some Heuristic Suggestions for Generalizing the Theory to the Broad Problem of Social Communication, by Warren Weaver.

Zooming in on the model, we see that it depicts a chain of processes that work from left to right. On the left we have an Information Source and a Transmitter, both of which are concerned with a Message. Over on the right, there is a Receiver and a Destination, both of which are somehow busy *getting* the Message. In the middle Shannon/Weaver have a "Noise Source", which is something that that may distort the Signal. Because of the possible presence of noise, Shannon and Weaver are careful to distinguish between the signal "as sent" and the signal "as received". Note well, it's easily overlooked: there are two Messages and two Signals.

Model #2 is Meyer-Eppler's, which dates from 1959.[4] It's similar to Shannon and Weaver's, but drastically declutters it. Now there is just a Sender on the left and a Receiver on the right. The Noise Source is gone, leaving just a unique Signal, and the Messages are gone as well. However, we do get an added element in what is called the "Code". Basically, a code is a set or inventory of signs, but this is just a temporary definition. For instance, words are signs, and because Senders and Receivers usually have slightly (or even widely) different vocabularies the diagram shows them as intersecting sets, Code(S) and Code(R), respectively. And it seems logical to say that, for communication to work, the Signal must consist of signs that are shared by Senders and Receivers.[5]

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[4] I am showing a slightly modified version. See Appendix A for the original diagram.

[5] Maybe the only instance where Code(S) and code(R) might be identical is auto- or self-communication. Memory being what it is, you can easily forget words, as Krapp does forget the meaning of *viduity* in *Krapp's Last Tape*.

5. Mindmap #1: basic elements
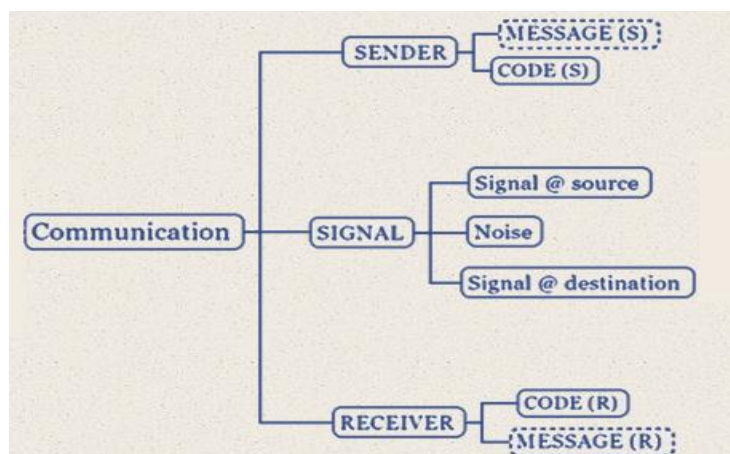
This is our first mindmap and in it I am trying to merge the features of the two classical models. Instead of moving left to right the processes now work from top to bottom and basically represents the question *Who sends what signal to whom*. It also has separate nodes for two Messages, two Codes, and two Signals.

Note that the mindmap posits that Messages are different from Signals. Whereas the Signal is a *physically* perceptible thing, or pattern, we will take a Message to be a *mental construct*, something that only exists in the communicants' minds,[6] and therefore we have a Message(S) at the Sender's end and a Message(R) at the Receiver's end, the dotted outline indicating that they are "only" mental constructs. And, just like the two Signals, the two Messages may differ, for maybe interesting reasons. Obviously, if they do differ, communication fails, and if they are identical communication succeeds. Seems simple enough – but there is a catch. While it is easy enough to compare two Signals, there is no way of comparing two mental constructs, and that makes it difficult to determine whether the two Messages are identical or different, which in turn makes it difficult to establish whether communication succeeds or fails. On the other hand, what may save the day is the fact that there is a close relationship between Messages and *Codes*, and thankfully codes are public and tangible.

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[6] Obviously, this stipulative definition deviates from the ordinary meaning of the word *message*. Most theorists seem to agree that only signals can be transmitted, not messages. Furthermore, signals do not "carry" or "contain" messages, which is now generally disparaged as a "container fallacy". Sperber/Wilson (1996, 1): "These [metaphors] make it sound as if verbal communication were a matter of packing a *content* (yet another metaphor) into words and sending it off, to be unpacked by the recipient at the other end". Not to mention the fact that one Signal might be related to two Messages (example: "John is a robot"), or two Signals to one (example: "John is a philatelist" + "John is a stamp collector").

6. Mindmap #2: general parameters
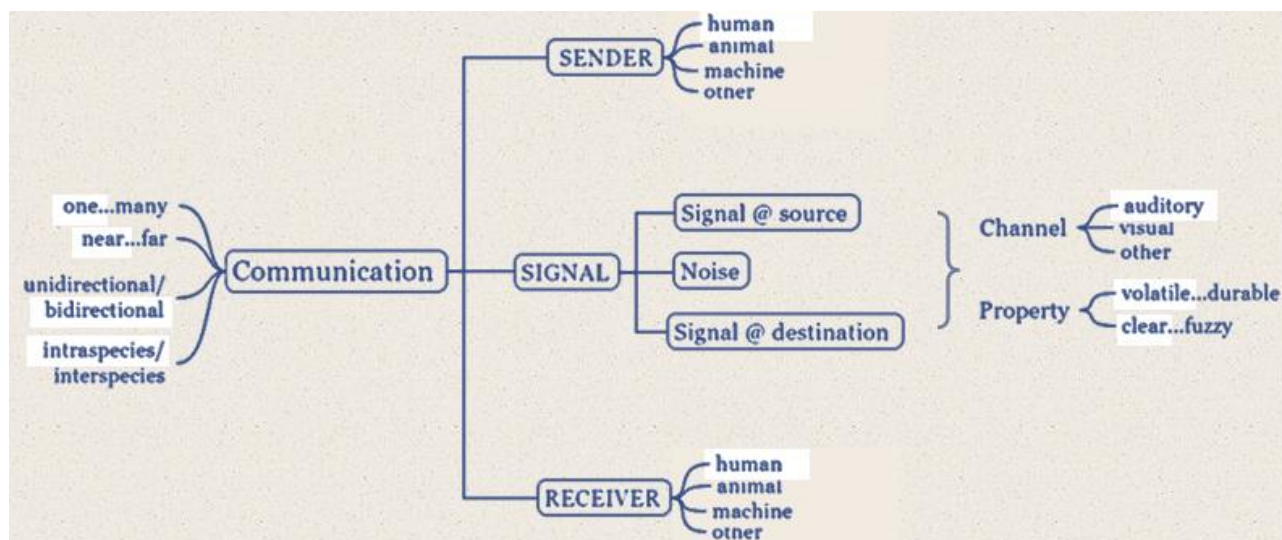
One of the major advantages of mindmaps is that they can be reduced for close focus or expanded for wider scope, just as needed. Mindmap number 2 here temporarily excludes Messages and Codes, but adds some very general parameters.

- Both Senders and Receivers can be different agents such as humans, animals, and "others", machines and even plants not excluded.[7]

- Signals pass through a "Channel", which can be auditory or visual, plus, again, "other", depending on the Signal's physical shape and the Receiver's perceptive organs.

- The Signal can be characterized by its degree of permanence, its quality, and its resolution.

- And added here on the left, on an even more general level, forms of communication can be distinguished by the number of communicants, the distance between Senders and Receivers, and the directionality of the process. Also, communication does not always involve members of the same species so that we get *intraspecies* and *interspecies* forms.

Among the many forms suggested here, everyday conversational communication is based on just the features highlighted. Eventually, this will be our focus, too. Nevertheless, in view of the wider picture sketched here, it may be a good idea to take a look at two communication scenarios that are remarkably different.

7. The rattlesnake

Rattlesnakes are famous for sending a signal to potential aggressors or threats – say, bears, porcupines (?),[8] roadrunners, and indeed humans.[9] Evidently, it is a type of interspecies communication.

> *(AI voice)* There are more than 24 rattlesnake species and all of them have that most-famous feature: the rattle. The rattle is found at the tip of the rattlesnake's tail. The snake uses the rattle to warn potential aggressors to back off [or to distract prey].[10]

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[7] Check Wikipedia entry "Plant Communication".

[8] I have been told that porcupines are vegetarians, but would the rattler know this?

[9] A glitch, please ignore.

[10] Interestingly, the comment's addition of "or to distract prey" may suggest that the snake can categorize Receivers and use the Signal context-sensitively.

As you can see, I am verbalizing the message even though the Sender is incapable of speech. Is it legitimate to do that? Many theorists doubt it, and frankly, I do, too. However, for the time being let us accept it as at least an approximation to whatever might be the real thing. To indicate the provisional nature of verbalizing Messages I will enclose them in double brackets – actually, to be on the safe side I will use the same notation even when paraphrasing human Messages. You can say it is a trick, but it is a trick that does the trick, in a way. – Because now we can say that successful communication is achieved if the target Receiver recognizes the rattle sound as a meaningful sign and manages to work out the Message. Interestingly, both "Back off" and its opposite "Come visit me" are Messages that come up frequently among many types of communicants, including, of course, us humans. Let us also note the fact that Messages can be phrased as *sentences*.

8. Traffic signs
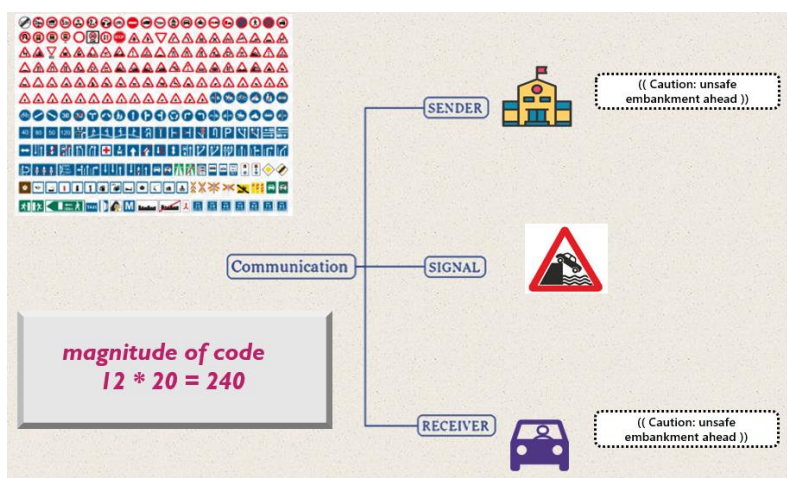
Traffic signs are nonverbal and permanent Signals. The Sender is an institution like the Highway Authority and the Receiver is any motorist coming across it. This particular sign is part of the code of European traffic signs. Its Message is defined in the official booklet as "((Caution: unsafe embankment))". Note that the sign has two components: one is the red triangle, which signals a general warning, and he second is the stylized picture, which dramatizes a possible accident. Overall, the code table has 12 rows of 20 items each, so its "magnitude" is 240. Question: Is there a comparable magnitude number for the Code of conversational verbal communication?

9. Dictionaries and lexicons

As is common in linguistics, let us use the term "lexicon" for a person's vocabulary, and the term "dictionary" for a list of the words available in a language as a whole. So what is the size of an average native speaker's lexicon? The common estimate is 20,000. Of course, non-ordinary people and experts have a much larger vocabulary. For instance, Shakespeare had a vocabulary in excess of 28,000 – we know that because we can simply count the number of words in his plays. The English language as a whole has many more words, even though the exact number depends on which dictionary one is looking at. The ones I have sitting on my bookshelf include *The Oxford*

English Dictionary, which lists 273,000 words.[11] Next to it are the two main Webster Dictionaries; the Third edition of 1961 has 476,000 words, and the Second Edition of 1934 has 600,000, claiming to be (quote) "the largest dictionary in the history of the English language" [Merriam-Webster website]. Well, better take all of this with a pinch of salt because the definition of what is "a word" can be quite flexible. And anyway, in our brave new digital world we no longer depend on such bulky print editions. The current freely accessible English *Wiktionary*, claims to have 756,000 words and 1.4 million definitions. – But these are just numbers; the true power of the verbal code lies elsewhere, and for this we must consider it in the broader context of linguistics.

10. Linguistics (Jackendoff)
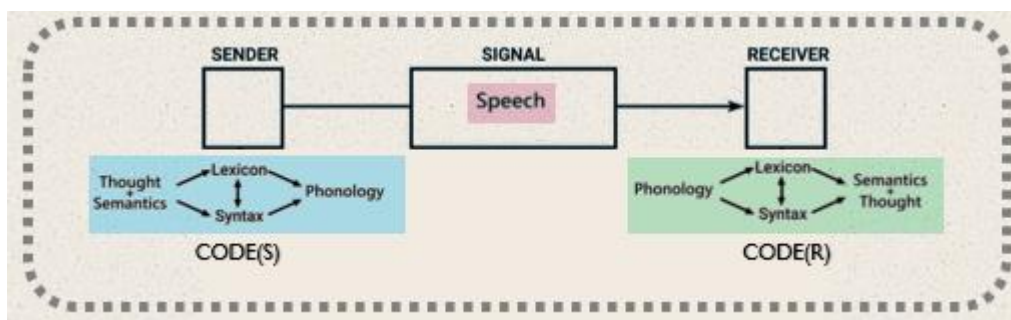
This is Ray Jackendoff's (2002, 197 (Fig. 7.1)) model of language production and language perception. In this model, the lexicon is understood to be part of a person's Grammar, and the various arrows that we see in the colored boxes suggest that there is a multi-way interaction with other Grammar components, especially *semantics* (the domain of meaning), *syntax* (the domain of sentence structure), and *phonology* (the domain of Speech articulation). Now, while Jackendoff himself does not use any Communication terms, the correspondences are obvious. If we call up Meyer-Eppler's model for comparison we see that Jackendoff's Speech corresponds to the Signal; language production is the process of generating the Signal, language perception is the process of construing the Message, and Semantics accounts for the meaning of the Message at both ends. As for the Codes, it now appears that they are more than just the communicants' lexicons. We do not normally communicate by using solitary words, but by uttering sentences.[12] We also noted that Messages can be phrased as sentences. I will therefore assume that it is the whole bundle of grammar that makes up Code(S) and Code(R), respectively. As a result, we can update Meyer-Eppler as shown, and naturally our mindmap version will have to be modified similarly.

11, Syntax and semantics
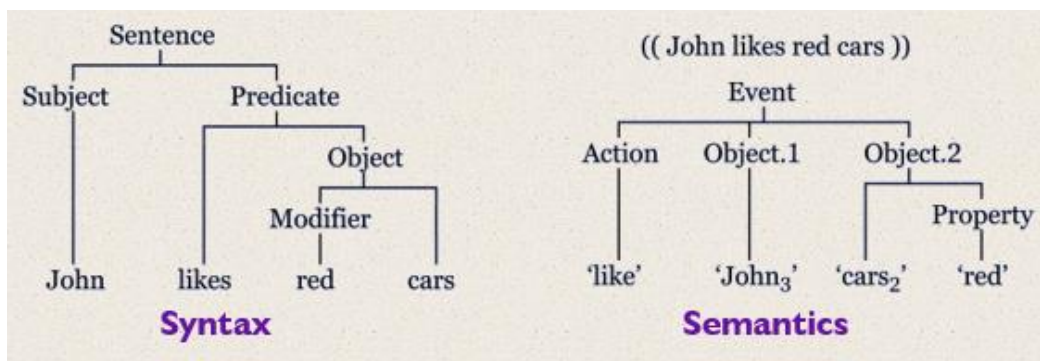
Syntax and Semantics are the Grammar components that are responsible for sentence formation and meaning assignment. Let me use a simple example sentence such as "John likes red cars" – silly as it is – for illustration. The formal linguistic notation for representing syntax is a tree

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[11] This is the small-print edition of the twelve-volume original. It comes with a magnifying glass (the box on top).

[12] Sentences are different from words because (i) we do not select them from an inventory and (ii) the number of possible sentences is infinite.

diagram, which lays bare the structural relationship between Subjects, Predicates, Objects, and so on. As for representing the meaning of a Message my (rather simplistic) proposal was to use an ordinary-language paraphrase. The notation preferred by linguists is a different tree diagram, this time involving relations between Events, Actions, Objects, and Properties. In addition, semantic analysis must identify the real-world references of the lexical items, so in this instance it must specify which "John" and which type of "car" the Sender is referring to. This is commonly done by indexing the terms in question, such as in this case "$John_3$" and "$cars_2$". One important consequence of reference assignment is that it is now possible to determine whether the Message is true or false.

12. Mindmap #3: linguistic coding
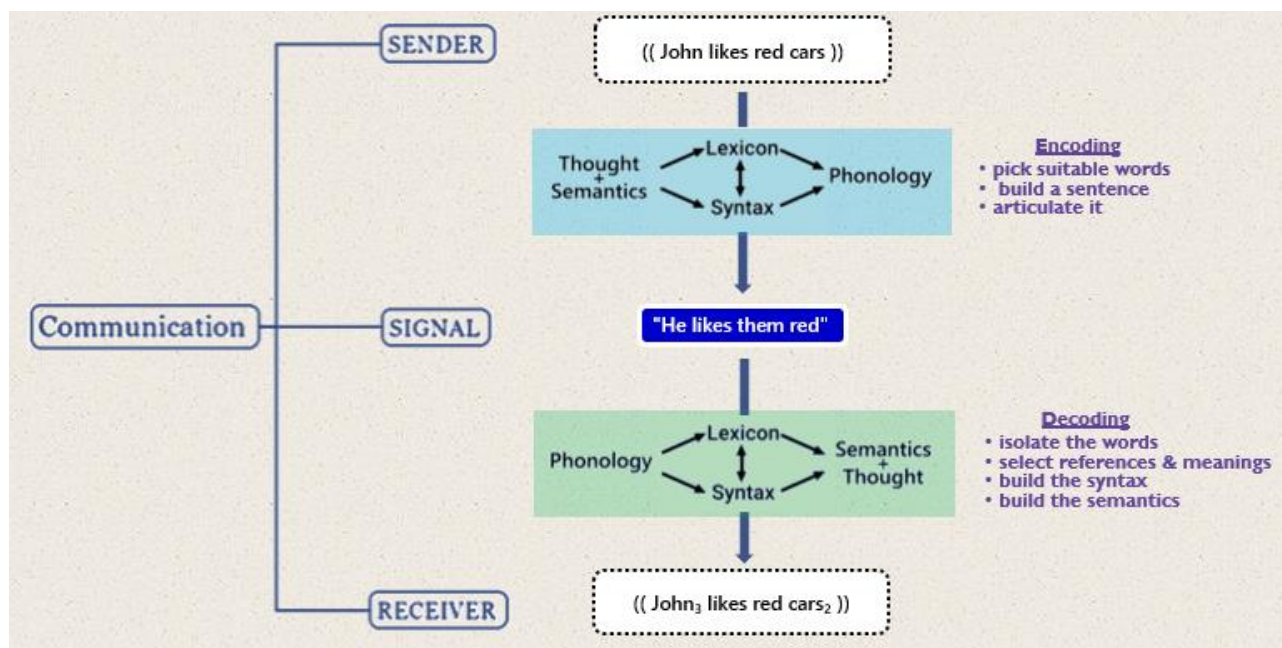
As promised, Mindmap #3 incorporates the elements of language production and perception. In order to "encode" the Message, the Sender selects appropriate words from the lexicon, arranges them in a sentence, and produces an utterance. For the sake of the argument, let us now assume that the Sender takes certain aspects of context for granted and that he decides to replace both "John" and "cars" by pronouns, and so the actual utterance becomes "He likes them red", while the Message remains exactly as is.

In language perception, the process is one of "decoding". Here the Receiver uses phonology to isolate whichever words are perceived in the utterance's sound wave stream, then uses the lexicon to gather word meanings, then syntax to determine the subject and predicate structure, and finally semantics to build Message(R), which hopefully is identical to Message(S). The Grammar is the same at both ends, but the internal processes and strategies are slightly different. Specifically, meanings and references that are taken for granted by the Sender may require some effort to get worked out by the Receiver.[13]

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[13] For this reason, "John" and "cars" have not been indexed in Message(S).

13. Pragmatics I: speech acts

Declaratives	**S's utterance establishes a fact** christenings, verdicts, rulings, declarations of war, appointments, promotions, terminations, resignations ...	"I name this ship the Queen Elizabeth." "You are fired." "This country is at war with Germany." "The defendant is guilty as charged." "Foot fault!"
Constatives	**S informs R of something** statements, descriptions, reports, predictions, answers, denials ...	"The bank is closed." "It's hot in here." "Philatelists are stamp collectors."
Directives	**S directs R to do something** commands, requests, offers, suggestions, instructions, invitations, questions ...	"Back off"; "Come visit me." "Drive carefully." "What are your opening hours?" "Are we there yet?"
Commissives	**S expresses a commitment** promises, offers, pledges, bids, vows, guarantees, threats ...	"I promise to pay you back tomorrow."
Acknowledgments	**S's utterance satisfies a social expectation** greetings, thanks, apologies, congratulations, condolences ...	"How are you doing today?" "Hello"; "Goodbye" "Sorry."

It is now time to explore the *pragmatics* of speech acts. John Austin was a philosopher from Oxford who offered the major insight that saying something often amounts to doing something. For instance, if you say "I name this ship Queen Elizabeth" then you are performing a "declarative" speech act – always supposing the occasion is right and you have proper authority to execute the act. Austin went on to define several other types of speech acts, here listed as Constatives, Directives, Commissives, and Acknowledgments[14] – along with a selection of subtypes and typical examples. The main contention of speech act theory is that Meanings and Messages depend on contexts, intentions, and appropriateness conditions, also known as "felicity" conditions, a term used by Austin. Clearly, not everybody can legitimately name a ship, or declare war, or call out a foot fault. From here on, things get complicated quickly. For example, consider how Bach and Harnish spell out the essential conditions of the speech act of *promising* [the paradigm example analyzed at length in Searle (1969, ch3)].

> In uttering X, Sender promises Receiver to do A if Sender expresses (i) the belief that his utterance obligates him to do A, (ii) the intention to do A, and (iii) the intention that Receiver believe that Sender's utterance obligates Sender to do A and that Sender intends to do A. (Bach/Harnish 1979, 50) [The original text uses abbreviations: S for Sender, H for Receiver, and A for 'do A'.]

You will be happy to learn that Bach/Harnish call this definition a "self-explanatory" one. Personally, I find it remarkable how much here depends on "intentions", which are mentioned no less than three times in this quotation. And indeed, most pragmatics-oriented approaches hold that recognizing and communicating a speech act depends on the Receiver's ability to "recover" or "read" the Sender's intentions (Sperber/Wilson 1996, 18, 50, 52).

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[14] Austin's original categories were *verdictives, exercitives, commissives, behabitives,* and *expositives.* He also distinguished between *locutionary, illocutionary,* and *perlocutionary* acts (Austin 1962, 101; roughly, utterance act, speech act, speech-act consequence). The terms shown in the table are the ones proposed by Searle and they are now in general use. Oddly, Bach/Harnish (1979, 40 and ch VI) classify Declaratives as "conventional" and the four other types as "communicative" speech acts.

14. Indirect speech acts

Speech Acts	
Declaratives	S's utterance establishes a fact christenings, verdicts, rulings, declarations of war, appointments, promotions, terminations, resignations ...
Constatives	S informs R of something statements, descriptions, reports, predictions, answers, denials ...
Directives	S directs R to do something commands, questions, requests, offers, suggestions, instructions, invitations, ...
Commissives	S expresses a commitment promises, pledges, bids, vows, guarantees, threats ...
Acknowledgments	S expresses a social obligation greetings, thanks, apologies, congratulations, condolences ...

(1) A. You are standing on my foot.
   B. (moving off) Oops, I'm sorry.
   — Constative → Directive

(2) A. I am not your servant anymore!
   — Constative → Declarative

(3) A. I'll never desert you.
   — Constative → Commissive

(4) A. Can you pass/reach the salt?
   — Directive-1 (question) → Directive-2 (request)

(5) A. Is that your car in my driveway?
   B. Sorry, I'll move it.
   — Directive-1 (question) → Directive-2 (request)

(6) A. Do you know the way to the Palace Hotel?
   B. It's 3 miles down that road.
   — Constative-1 (statement) → Constative-2 (answer)

(7) A. Let's go to the movies tonight.
   B. I have to study for an exam.
   — Constative-1 (statement) → Constative-2 (answer)

Speech Act A (direct speech act) — Speech Act B (indirect speech act)

Let's retain a copy of the speech act table as a reference and move on to indirect speech acts. An Indirect speech act occurs when an utterance has a literal meaning as well as a non-literal meaning. Putting it symbolically, we have a literal and direct Speech Act "A" arrow pointing in one direction, and a nonliteral and implicit Speech Act "B" pointing in another. Generally, if plausible in the context given, the indirect Speech Act contains the more salient message.

In this list of typical examples (most of them discussed in Searle 1979, ch2), item no. 1 quotes a dialogue between communicants A and B. Literally, A's uttterance is a constative statement; however, the implicit and more salient message is a Directive, namely a request, and this is how it is understood by speaker B, who replies and acts as expected. – (2) and (3) also look like Constatives at first sight, but item 2 might be understood to be a Declarative, terminating an employment, and item 3 could be a Commissive promise. Analyzing these examples we can always presume "normal circumstances", while at the same time it is also a good idea to consider more unusual contexts for alternative interpretations. So item 3 may have been meant as the prediction that it literally is, not as the commissive that might be implied.

I will skip discussion of the other items, leaving them to you as an exercise with some pointers given in the script. Our next question is what a Sender can do to reasonably expect that his or her indirect Speech Act is recognizable to the Receiver.

Comment. (4) As Searle points out, given a proper context, the utterance can also be understood (and answered) as a yes/no question. Cf Searle (1979, 42): "Thus, 'Can you reach the salt?' can be uttered as a simple question about your abilities (say, by an orthopedist wishing to know the medical progress of your arm injury)." (5) is from Leech (1987, 12); as in item (1), speaker B acts on interpreting A's utterance as an indirect request. (6) Speaker A's utterance is literally a Directive yes/no question, but plausibly understood by Speaker B as a *request* for giving directions. On (7) cf Searle (1979, 33-36): "Let us begin by considering a typical case of the general phenomenon of indirection . . . The utterance [7A] constitutes a proposal in virtue of its meaning, in particular because of the meaning of "Let's". . . . The utterance of [7B] . . . would normally constitute a rejection of the proposal."

15. Pragmatics II: cooperative communication (Grice)

The Cooperative Principle (Grice 1975)		
Sender	Quantity	Make your contribution as informative as is required.
	Quality	Try to make your contribution one that is true.
	Relation	Be relevant.
	Manner	Avoid obscurity of expression. Avoid ambiguity. Be brief and orderly.
	(Politeness)	Be polite.

Receiver	1. If the maxims are observed try a literal interpretation of the utterance.
	2. If a violation can be justified by a clash of maxims, a literal interpretation may still be possible.
	3. Otherwise, with one or more maxims being violated, 3,1 try to interpret as an implicature; 3.2 try to interpret as a figure of speech.

(1) A. I have run out of petrol.
B. There is a garage round the corner.

(2) *(A letter of recommendation)*
Dear Sir, Mr. Blank's command of English is excellent, and his attendance at tutorials has been regular. Yours etc.

(3) a. Robert is a fine friend.
b. Otto is a robot.
c. Die to live.
d. Boys will be boys.
e. His sins were scarlet but his books were read.

(4) a. The book fills a much-needed gap.
b. The horse raced past the barn fell

Another great British philosopher, by the name of Herbert Paul Grice, came up with the idea that communication ought to be seen as a *cooperative* exercise. The "cooperative principle" states that when creating an utterance, the Sender is guided by a set of *maxims* that roughly fall into four classes: Quantity, Quality, Relation, and Manner; another maxim of Politeness was added parenthetically.[15] As normative rules, the maxims are quite useful in their own right – think of the do's and don'ts of writing an essay, or drafting a speech, or even creating a video script! However, Grice's main aim is to *describe* how our knowledge of the maxims can be used not only for creating but also for interpreting a Signal. It is striking, for instance, that Receivers try to make the most of an utterance even if it requires the tacit editing of a misused word, a typo, or some other error. In practice, the maxims may clash or be ignored for perfectly sensible reasons. For instance, it is quite common for Manner to trump Quantity or for Politeness to trump Quality. When *interpreting* the Signal, the Receiver can go through a range of options depending on whether an utterance observes or violates the maxims.[16] Usually, if no maxim is violated, the Sender's utterance can be interpreted literally. The cases Grice is most interested in are the ones listed as options 3.1 and 3.2 on the Receiver's side. In 3.1 a maxim violation requires the Receiver to work out a non-literal, or *implicated*, message, also called an *implicature;* in 3.2 a violation of Quality or Manner may need to be resolved as a figure of speech such as irony, paradox, metaphor, or pun.[17] – I am listing some of Grice's examples. Again, to analyze them it is best to consider common as well as less common contexts and responses. Some annotations can be found in the script.

Comment. On (1) cf Grice (1989, 32): "B would be infringing the maxim 'Be relevant' unless he thinks, or thinks it possible, that the garage is open, and has petrol to sell; so he implicates that the garage is, or at least may be open, etc".[18] In (2) "A is writing a testimonial about a pupil who is a candidate for a philosophy job . . . A cannot be opting out, since if he wished to be uncooperative, why write at all? He cannot be unable, through ignorance, to say more, since the man is his pupil; moreover, he knows that more information than this is wanted. He must, therefore, be wishing to impart information that he is reluctant to write down. This supposition is tenable only if he thinks Mr. [Blank] is no good at philosophy. This, then, is what he is implicating" (Grice 1989, 33). (3) lists instances of figures of speech – (3a) is irony, (3b) a metaphor (except in the film *WALL-E*, Otto literally is a robot), (3c) a paradox (*Much Ado About Nothing* 4.1.253), (3d) a tautology, and (3e) a pun (Hillaire Belloc). (4a) illustrates the Receiver's fear of meaninglessness, preferring to read that it is the book (not the gap) that is "much-needed". Similarly, (4b) is a famous "garden-path sentence" that the Receiver will tacitly edit to become grammatical and meaningful – even though it is perfectly grammatical and meaningful already (if "raced" is construed as a past participle) (Jahn 1999).

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[15] See Brown/Levinson (1987) for the pragmatics of politeness.

[16] I am presenting the Receiver's strategies as a "preference rule system", following Jackendoff (1983, ch8).

[17] Puns clearly require special ambiguity-handling strategies; see Solska (2023) for a relevance-oriented account.

[18] In British English, "petrol" is used to refer to gasoline and a British "garage" can have a petrol pump.

16. Pragmatics III: Relevance (Sperber and Wilson)

The Principle of Relevance	
Sender	Maxim: Be relevant. Create an utterance that produces maximal <mark>cognitive effect</mark> while requiring least processing effort.
Receiver	1. Accept any literal interpretation that produces a <mark>cognitive effect.</mark> 2. Alternatively, if the maxim of relevance is violated, try to find an implicature that produces a <mark>cognitive effect.</mark>

Ⓣ *Context* (Sperber/Wilson)

The sets of assumptions currently held by Sender and Receiver.

Ⓣ *Cognitive effect*

The addition, strengthening, or revision of the Reveiver's current set of assumptions. For example, cognitive effect may answer a question, raise or settle a doubt, suggest a hypothesis or a course of action, confirm or disconfirm a suspicion, or correct a mistake.

(1) **Peter.** Would you like some coffee?
    Mary. Coffee would keep me awake.

(2) Their friendship blossomed.

(3) *(Peter has just tripped over his own feet)*
    Mary. Peter's just like Rudolf Nureyev.

(4) a. I have no brothers or sisters.
    b. I have no siblings.

(5) **Peter.** What are you doing right now?
    Mary. I'm on the phone with you.

Sperber and Wilson's account is a continuation of Grice's line of thought. Like Grice, they use a model of Sender-Receiver cooperation, but the number of maxims is reduced to just one – "be relevant". Relevance is the condition that Receivers use to decide whether a Signal can be read literally or as an implicature. "Context", in Sperber/Wilson's special definition, is the communicants' current "set of assumptions", including their knowledge, their wishes, and their beliefs.[19] Communication, then, is about a Sender's wish to change the Receiver's context, and equally about Receivers expecting to have their context changed. This is what Sperber/Wilson call "the Cognitive Effect".

> Cognitive effect is the addition, strengthening, or revision of the Receiver's current set of assumptions. For example, cognitive effect may answer a question, raise or settle a doubt, suggest a hypothesis or a course of action, confirm or disconfirm a suspicion, or correct a mistake (Sperber/Wilson 2012 102).

Here, again, is a selection of example communications, and again I leave it to you to weigh "contexts" (in Sperber/Wilson's sense) and assess possible "cognitive effects".

Comments. (1b) suggests an indirect speech act very much like the item qtd in 14.7. "In [1b], Mary implicates that she doesn't want coffee (or, in some circumstances, that she does) and that her reason for not wanting it is that it would keep her awake" (Sperber/Wilson 1996, 56). (2) and (3) are possible cases of metaphor and irony, respectively. (4a) and (4b) exhibit differing degrees of "accessibility" (ease of recalling an assumption): "A more accessible assumption is one that is easier to recall" (1996, 77). "By virtually any measure of brevity, [4b] is briefer than [4a]; however, most English speakers would prefer [4a] to [4b], despite its extra length. In a relevance-based framework, Grice's notion of brevity is replaced by the notion of processing effort, which as we have seen, is affected by the relative frequency of words" (1994, 105). In (5), speaker B's reply is superficially irrelevant and does not produce any cognitive effect directly. However, A can still plausibly construe an implicature expressing B's dissatisfaction with A's vacuous question.

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[19] Sperber/Wilson (1996, 15): "It is these assumptions [...] that affect the interpretation of an utterance. A context in this sense is not limited to information about the immediate physical environment or the immediately preceding utterances: expectations about the future, scientific hypotheses or religious beliefs, anecdotal memories, general cultural assumptions, beliefs about the mental state of the speaker, may all play a, role in interpretation". According to the authors' guesstimate, the number of assumptions held in memory (of ordinary human beings, presumably) is to the order of "hundreds of thousands" (1996, 106).

17. Mindmap #4: the pragmalinguistic basis
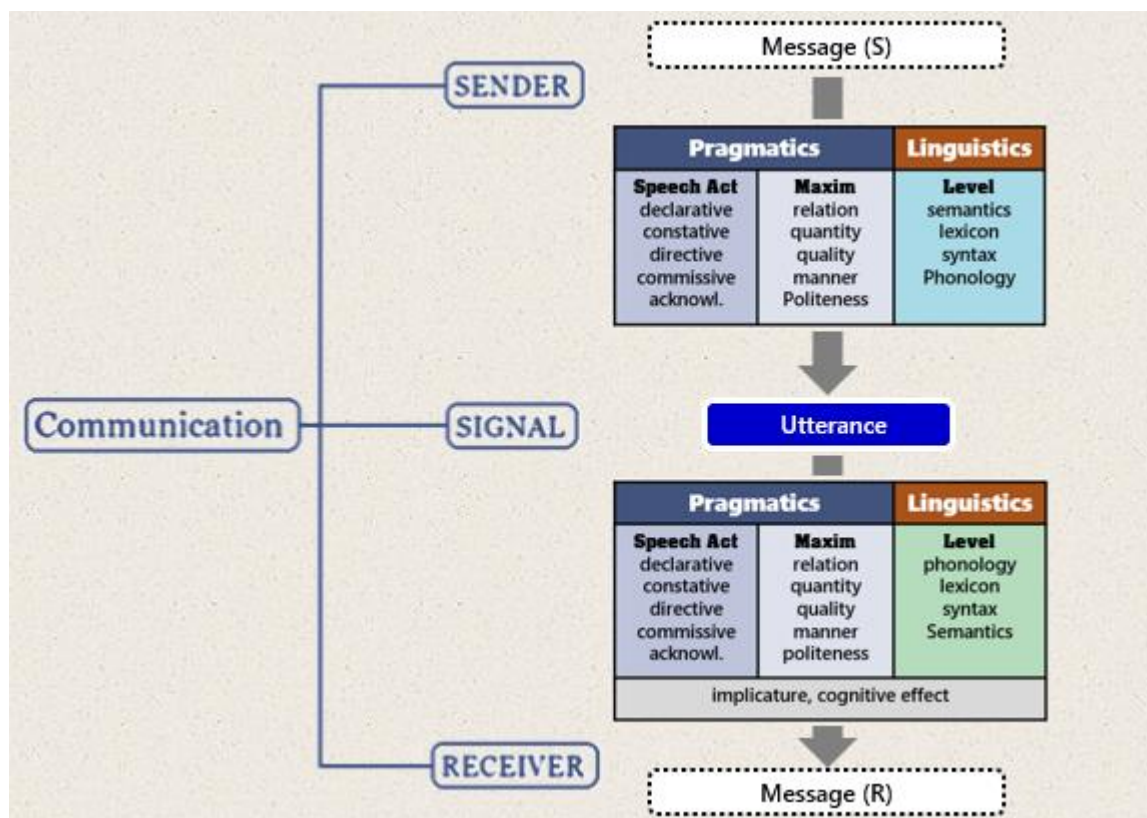
And so we are getting on to the final refinement of our communication Mindmap. Starting out from our default configuration, communication is seen as a two-step process. The first step is creating a speech act guided by cooperative maxims. The Message is converted into an utterance by using the linguistic choices available to the Sender. The second step is the analysis of the Utterance by the Receiver. This is performed by assessing the Sender's compliance with the cooperative maxims, specifically looking out for implicatures and cognitive effects. Simultaneously, the linguistic structure of the utterance is determined by applying the Receiver's Grammar of language perception, and in the end the process bottoms out with a sensible Message, hopefully the same one as the one that was envisaged by the Sender.

18. Summary

To round it all off we might as well return to the four questions we started out with.

1. *What is communication?*
Communication, we said, is a process chain linking a Sender, a Signal, and a Receiver. The Sender, uses pragmatic maxims and linguistic processes to encode a Message into a Signal. The Receiver decodes the Signal, using linguistic and pragmatic reception strategies.

2. *When does communication succeed?*
The simple answer is: chances are it will succeed if the communicants have a sufficient degree of linguistic and pragmatic competence.

3. *When does it fail?*
It can fail for several reasons: the Signal may be distorted by noise; the Sender's and the Receiver's codes may not agree; the participants may not act cooperatively.

4. *What are the "unknowns"?* – We have come across several weak spots as far as I can tell.

- *Scope.* At one point [Mindmap #2] we listed a comprehensive range of communicative forms, but for some reason, most researchers focus on conversational communication exclusively.

- *Culture*. The accounts discussed prioritize the pragmatics of Anglo-Saxon or at any rate Western communicative culture. Other cultures may handle them differently. What are the true universals, if any?

- *Messages*. Our grip on this essential feature was decidedly tenuous.

- Intentions. Most pragmatists are intentionalists. Yet arguably our grip on intentions is even weaker than our grip on Messages.[20]

- *Symmetry*. Language production and perception were drawn up is symmetrical processes. However, at some point they may just be different.

- *Awareness*. Detecting Indirect speech acts and implicatures were seen as conscious reasoning processes, but this may ignore the part played by non-reflective processes, of which we know very little.

That's all there is for now. Thanks for watching.

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[20] Cf Sperber/Wilson (2012, 332): "communication depends on the ability of humans to attribute mental states to others: that is, it depends on their 'naive psychology', or 'theory of mind'". The possible infinite regress of attributing assumptions – I know you know I know etc – is generally accepted as unavoidable but non-critical (Sperber Wilson (1996, 18), Brown(Levinson (1987, 8)). I tend to think that the problem may boil down to the question of whether there is any difference between "meaning X" and "intending to mean X".

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Appendix

Meyer-Eppler's (1959) original model of verbal communication comes up as Fig. 3 on p.2.
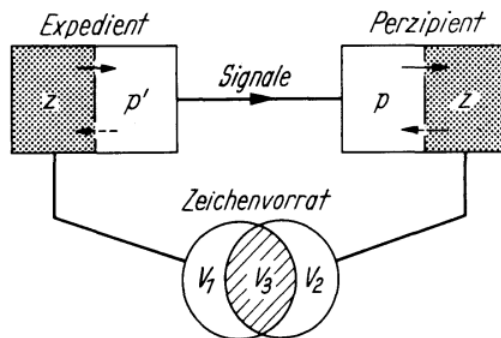

Abb. 3. Modell der einfachsten sprachlichen Kommunikationskette. V_1 aktiver Zeichenvorrat des Expedienten, V_2 passiver Zeichenvorrat des Perzipienten, V_3 gemeinsamer Zeichenvorrat

In the diagram, Sender and Receiver are identified as "Expedient" ('dispatcher') and Percipient; z denotes the central processing organ ([z*entrales Organ*] ie, brain), p is the Receiver's peripheral reception organ [*peripheres Rezeptionsorgan*], p' is the Sender's peripheral action organ ([*peripheres Aktionsorgan*] articulatory transmitter), and V_{1-3} are the inventories of signs (codes) at the Sender's and Receiver's disposal.