



Noam Chomsky in the 1960s

Tom Ruetten looks at The Linguistic War from fifty years ago, and the situation now

A battle not the war

During the sixties and seventies, a fierce linguistic war was fought in the United States over the position of 'meaning' in the linguistic system. Names were called, voices were raised, indecent example sentences were given, and linguists assumed invective pseudonyms and affiliations. This is the story of a not-so-typical academic dispute, a linguistic dogfight that lasted for more than ten years, fought high up in the ivory towers of The University.

We start our story with Noam Chomsky shaking up the linguistic field with his revolutionary Syntactic Structures (1957) and his paradigm shifting review of BF Skinner's Verbal Behavior (1959). This arousal did not lead to The Linguistic War, which would only start about a decade later, but did bring about the **first cognitive revolution** in the study of language.

The revolution overthrew the prevailing idea in linguistics that a stimulus evokes a response, in the way that the ringing of a bell would cause Pavlov's dog to drool. Chomsky proposed a psychologically much richer and more attractive perspective on linguistic behavior. He stated that phrases can be elegantly derived from each other by means of 'transformations', and that these transformations could help us to understand meaning, i.e. what is being said.

Let's look at a few examples. First, take a simple active sentence such as *John eats a sandwich*. That sentence can be easily transformed into the equivalent passive sentence *A sandwich is eaten by John*: such

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noun *the shooting*. Now, a quick reader will have noticed that *the shooting of the hunters* could also be a transformation of *the hunters are being shot*. In that sentence, it is, quite unnervingly, somebody else who is shooting at the hunters! *The shooting of the hunters* thus has two meanings: it is ambiguous. Chomsky elegantly explained how language users can disambiguate *the shooting of the hunters* by applying different transformations that result in the unambiguous phrases *the hunters shoot* and *the hunters are being shot*.

Relating transformations with meaning was a central topic of Chomsky's 1965 book *Aspects of the Theory of Syntax*. Although it was left somewhat unclear what meaning and syntax really have to do with each other, one bold claim – the 'Katz-Postal Hypothesis' – stood out. The hypothesis states that



Behavioural psychologist BF Skinner. Chomsky's review of Verbal Behaviour caused a paradigm shift in linguistics

a conversion is called a 'Passive Transformation'.

Or take the sentence *the hunters shoot*. This short sentence can be transformed into *the shooting of the hunters*. This transformation is known as a 'Nominalization', since the verb *to shoot* becomes the

The Katz-Postal Hypothesis:
A transformation from one sentence to another does not change the meaning; all transformations of a sentence have the same meaning.

A Generative Semantic analysis of 'Matthew killed the bogies'

Syntax	Sentence				
	Noun Phrase	Verb Phrase			
	Noun	Verb			Noun Phrase
Sentence	Matthew	killed			the bogies
Semantics	Matthew	caused	to die		the bogies
	Matthew	caused	to become	dead	the bogies
	MATTHEW	CAUSE	TO BECOME	NOT	ALIVE

a transformation from one sentence to another shall not change the meaning. In other words, all transformations of a sentence must have the same meaning.

Chomsky left the Katz-Postal hypothesis as a dangling proposition during a sabbatical year at Berkeley in 1966. With Chomsky away, four devoted followers – George Lakoff, Haj Ross, Paul Postal and Jim McCawley – developed a theory of **Generative Semantics** by pushing the Katz-Postal Hypothesis to the extreme.

GENERATIVE SEMANTICS
 A field of semantics that claims that a theory about language has a central component in which meaning and syntax are tightly interwoven.

The central idea of Generative Semantics is that meaning-preserving transformations can be used to connect the construction of a sentence with unambiguous building blocks of meaning. Let me explain with an example. Take the sentence *Matthew killed the bogies*, in the middle of the table above. Most linguists would be quite happy with the syntactic analysis in the first rows of that table. Generative semanticists, however, insisted on adding more rows at the

bottom, which give a perspective on the meaning of the sentence. In this case, the verb 'to kill' is made increasingly more specific by meaning-preserving transformations. Four building blocks of meaning remain: CAUSE, TO BECOME, NOT and ALIVE.

Haj Ross wrote down the theory in a 1967 letter to Arnold Zwicky, and the ideas were disseminated to the scientific community during the 'Camelot, 1968' meeting in Urbana, Illinois. The four devoted followers also presented their theory to Chomsky upon his return to academic life. However, Chomsky was not happy at all with the progress they made. During his sabbatical, in contrast to the efforts in Generative Semantics to integrate meaning and syntax, Chomsky had developed the *opposite* idea of an autonomous syntactic theory in which meaning did not play a role.

The starting point for Chomsky's idea was a refutation of the Katz-Postal Hypothesis that transformations preserve meaning – a central assumption for Generative Semantics, and a hypothesis that Chomsky himself supported in his 1965 book. Chomsky's counterargument revolves around the undeniable fact that the 'Passive Transformation' does not necessarily preserve meaning.

Consider the sentences *Many men read few books* and *Few books are read by many men*. Although these two sentences are transformations of each other – just like *John eats a sandwich* and *A sandwich is eaten by John* – their meaning is not the same. In the first sentence, the amount of books may still be large, even when each individual man only reads a few books. In the second sentence, the amount of books is very small, and the individual men all read at least the same set of books.

In the wake of Chomsky's attack on Generative Semantics, Ray Jackendoff (and others) formulated the theory of **Interpretative Semantics**, in which meaning is studied separately from syntax. The theory was presented in Jackendoff's article *Semantic Interpretation in Generative Grammar*.

INTERPRETATIVE SEMANTICS
 A theory of semantics in which meaning only comes into play after the words are put together in a syntactic structure. As such, syntax becomes a completely autonomous discipline.

Now, these are the participants of The Linguistic War: two opposing groups of fairly young scientists,

with Chomsky supporting Interpretative Semantics and generative semanticists assuming the role of the underdog. The year is now 1968, the Vietnam War is on everybody's mind, revolution is what you do before breakfast, and hippies are becoming the mainstream. The atmosphere at The University grew grim and battle positions were assumed.

At first, the war was academically fought in publications and during conferences. One of the important battles took place during the 1969 Texas conference on Goals of Linguistic Theory. Here, Chomsky and the interpretative semanticists publicly denounced the idea that transformations preserve meaning. In contrast, Generative Semantics – from then on loudly defended by George Lakoff – turned meaning-preserving

transformations into an absolute truth, a dogma of science.

Another important issue for interpretativists was that Generative Semantics wanted to expand the kind of phenomena that could be handled by grammar. After including meaning in grammar, the door of Generative Semantics now stood open to bring in usage phenomena, such as appropriateness. Robin Lakoff – George Lakoff's wife – used the following example to defend the inclusion of usage phenomena. More importantly, it foreshadowed the adversarial tone of the later rows and fights. Sensitive readers may want to skip this.

Take the two similar sentences *Defecation is generally expedited by the use of large banana leaves* and *Making number 2 is generally expedited by the use of large banana leaves*. Lakoff claims

that a grammar should not allow for the second sentence, because the somewhat childish *making number 2* is not appropriate in combination with the formality of *is generally expedited*. These kinds of usage-related phenomena received more and more attention from Generative Semantics, which celebrated the difficulty of grasping the mysteries of actual language use, beyond constructed examples. In contrast, Chomsky tried to keep things tidy and clean by shunning pragmatics altogether.

With ever stronger academic polarization between Generative Semantics and Interpretative Semantics, and with a little help from the 1960s-1970s *Zeitgeist*, a situation emerges in which Chomsky becomes 'The Establishment' and Lakoff represents 'Counterculture'. Obviously, this simplistic image does not do justice to the truth. Whereas one expects the Counterculture to be the most productive and constructive, it is in fact The Establishment – albeit perhaps inspired and spurred on by Generative Semantics – that makes substantial headway, not in the least through the work of Ray Jackendoff.

The Generative Semanticists' ideas – although exciting and still relevant today – were presented in a defensive and antagonistic way. One type of rebellious action was to sit in Chomsky's lectures and to challenge him in front of undergraduates. Experts in this guerilla tactic were Mr. and Mrs. Lakoff. At one point, Mr. Lakoff is supposed to have accused Chomsky – at that time still one of the highest ranking professors in the field – of not being up to speed with the latest developments:



George Lakoff

“I have been saying the same thing” Lakoff remarked. “Where did you write about it?” Chomsky asked in return. “I have been lecturing about these things, and if you are interested, you should come to my class” Lakoff scoffed.

Obviously, this is not a gentlemanly approach to scientific progress. And things got even less academic from then on. Those sensitive readers that skipped the examples of Mrs. Lakoff above may also want to skip the following section.

Example sentences in publications started to express political viewpoints – *America’s claim that it was difficult to control Vietnamese aggression in Vietnam surprised no one* – and often they were just hedonistic, exclaiming about sex, drugs and rock n’ roll – *My cache of marijuana got found by Fido, the police dog.*

Key publications circulated in the 1971 bundle that carried the not so revealing title *Studies out in Left Field: Defamatory Essays*, with contributions such as ‘Up Yours’ and *Related Constructions*. Some generative semanticists published under offensive aliases. For example, McCawley used the pseudonym Quang Phuc Dong (who taught at the fictional South-Hanoi Institute of Technology, S.H.I.T., and the Free University of Central Quebec, F.U.C.Q.). Interpretative Semantics is not without blame, either. At one point, Jackendoff uses the following example: *Although the bum tried to hit me, I can’t really get too mad at George.* This is a direct slur, launched quite unveiled at George Lakoff. Even worse, Frederick Newmeyer reports that Jackendoff and Lakoff “hurled amplified obscenities at each other before 200 embarrassed onlookers” at a conference.

From 1973 onwards, the content of the dispute became methodological and conceptual. Methodologically speaking, generative semanticists loved data and produced new and mostly convincing counterexamples against the ideas of Interpretative Semantics every day. On the conceptual level, interpretative semanticists blamed Generative Semantics for not being theoretical enough.

evaporated as soon as it got the upper hand. Postal ventured out on his own to develop Relational Grammar. Lakoff moved on to publish his now famous *Metaphors We Live By* (with Mark Johnson). Haj Ross ventured out into poetics. And James McCawley stuck with Generative Semantics, but simply did not want to scream as loudly and fight as boldly as the Lakoffs did.

A timeline of The Linguistic War	
1957	Syntactic Structures (Chomsky)
1964	Katz-Postal Hypothesis: transformations preserve meaning
1965	Aspects of the Theory of Syntax (Chomsky)
1966	Chomsky’s sabbatical at Berkeley
1967	Ross writes a letter to Zwicky
1968	Camelot, 1968
1969	Texas Conference on Goals of Linguistic Theory
1970	Lakoff’s PhD dissertation
1971	On Generative Semantics (Lakoff), <i>Studies out in Left Field</i> (McCawley)
1972	<i>Semantic Interpretation in Generative Grammar</i> (Jackendoff)
1973	Nyaah, nyaah!

The public opinion, however, was tilting increasingly in favor of the opinionated generative semanticists and their frivolous approach. Lakoff felt so certain of becoming the victor of The Linguistic War that he ended one of his 1973 papers with the victorious cry *Nyaah, nyaah!*

And indeed, as a force of opposition – poking holes in the proposals of interpretatives – Generative Semantics was very successful and attractive. However, their dominant position in the field as of 1974 onward required visionary leadership. Alas, the foremen of Generative Semantics could not keep the field together.

As a matter of fact, Generative Semantics basically

The fate of Judith Levi’s Generative Semantic doctoral dissertation is characteristic of the rapid disintegration of her field. The dissertation was supervised by the brilliant McCawley and successfully defended in 1974, at the peak of Generative Semantics. But when she published the dissertation in 1978, her book had a difficult time finding an interested audience, because the Generative Semantic community was gone.

Unsurprisingly then, after the hot-headed years of shouting and polarization, it was Interpretative Semantics, and not Generative Semantics, that could finally claim victory in The Linguistic War. Indeed, by 1977, twenty years after Chomsky’s

paradigm-shifting Syntactic Structures, everything was relatively quiet again.

The crumbling state of Generative Semantics in the second half of the seventies turned into one of the feeding lines for the new linguistic paradigm of Cognitive Linguistics, which emerged during the eighties and established itself in the nineties. Since then, Chomskyan linguistics and Cognitive Linguistics have been living next to each other, without much contact or drama. But just as Chomsky could spark the first cognitive revolution, the emergence of Cognitive Linguistics brought a **second cognitive revolution**.

The first cognitive revolution indicates the shift from an almost mechanic stimulus-response model of language, to a meaning-oriented cognitive model. The second cognitive revolution indicates the movement from a theoretical syntactic theory, to a psychologically grounded theory of language.

This second cognitive revolution in linguistics has been attributed to, among many others, two key figures: George Lakoff and Ronald Langacker. The latter became famous and very influential by writing two monumental volumes on the Foundations of Cognitive Grammar in 1987 and 1991. Langacker cast meaning and usage – just like Generative Semantics – as central in the analysis of linguistic phenomena (although, admittedly, this was already the main tenet of pre-structuralist European theories of the 19th century, such as Hermann Paul and Michel Bréal.

Today, the combination of syntax, meaning and pragmatics is accepted by the many

Cognitive Linguists out there, and some Chomskyans are not all too opposed to accepting some meaning and pragmatics in their syntax.

This brings to question whether Interpretative Semantics has justly claimed the victory and declared the end of The Linguistic War of the late seventies. Given the broad acceptance of many ideas that originate in Generative Semantics, together with the waning – but nonetheless still strong – paradigm of Generative Grammar, would it not be more accurate to say that Interpretative Semantics won an important battle, but that The Linguistic War is not over just yet?

Truly, The Linguistic War has been very quiet in the past two decades. Cognitive Linguistics as a field installed its own journals (e.g. Cognitive Linguistics, since 1990, by Dirk Geeraerts) and conferences (e.g. International Cognitive Linguistic Conference, since 1989, by René Dirven). As a result, there has been no need to look for contact and exchange with Chomsky's field. Moreover, the research questions and methodologies of the two fields could not be farther apart.

The only noteworthy uprising took the form of a 2003 article by Frederick Newmeyer and a response by Gregory Guy – both professors who experienced the roaring battle of the sixties and seventies – in the flagship journal *Language*. Newmeyer argued along Chomskyan lines to exclude usage-phenomena from grammar. By doing so, he provoked a series of responses that defended the Generative Semantics a.k.a. Cognitive Linguistics point-of-view to include usage-phenomena in grammar. The series was closed

by Gregory Guy's letter in 2005. It is striking that no-one jumped to Newmeyer's defense.

So, what will the future bring for linguistics? Obviously, no one can tell, but something is certainly going on. Construction Grammar, a strand of Cognitive Linguistics that was initiated by (among others) Langacker's student Adele Goldberg, is becoming increasingly popular, and its research questions come close to the syntactic questions that are being asked in the Chomskyan domain. With the two fields now approaching each other, one can observe growing animosity and polarization – but also a willingness to embrace cross-fertilization and collaboration. For any linguist, in whatever field of linguistics, these are exciting times. ¶

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Books

Randy Allan Harris, (1993). *The Linguistics Wars*. New York: Oxford University Press.