Right metaphor, wrong conclusion

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In the late 1990's a well-known linguist visited our campus and started his well-attended talk by asking us what the opposite of Universal Grammar was. Silence. When he said, "common sense," I made a spontaneous and audible belly-laugh, and then realized I was the only one in the room who responded this way. The linguist continued his talk, realizing that his joke had fallen flat, relatively speaking. I was embarrassed, reliving my graduate school days when I was one of the few who was critical of Universal Grammar; one never wants to be the only critical voice.

Universal Grammar, which dominated the field of linguistics for years and is still hanging around tenaciously, seeks to define universal principles that apply to all languages and distinguish human language from other languages, in essence making humans different from other animals. Decades of searching for these principles have turned this search into a kind of contest where Noam Chomsky and his followers maintain that some principle or quality is shared by all languages, and somebody somewhere finds a language in which it doesn't apply. Smart money has begun to bet on the detractors, since the world's variety of languages is virtually infinite, and recording of them is getting better. Almost nothing is shared by every language, and even the more obvious commonalities (such as: languages are spoken) have fallen under question.

My discomfort with Universal Grammar came to a head when I read the following passage by Vivian Cook (1997, p. 250-1).

> Since the early 1980's, Chomsky has proposed that knowledge of language consists of universal principles and varying parameters. Principles of UG are universal and apply to all languages, specifying what they have in common at an abstract level. Parameters keep the variation between languages within tight limits. A language may have one value for a parameter or another, but it *must* have one or the other; there are no other possibilities…Let us take the analogy of car-driving. Overall there is a principle that drivers have to keep consistently to one side of the road, which is taken for granted by all drivers in all countries. Exceptions to this principle, such as people driving down motorways on the wrong side, rate stories in the media or car chases in action movies. The principle does not, however, say, *which* side of the road people should drive on. A parameter of driving allows the side to be the left in England and Japan, and the right in the USA and France. The parameter has two values or 'settings' – left and right. Once a country has opted for one side or the other, it sticks to its choice: a change of setting is a massively complex operation, whether it happens for a whole country, as in Sweden, or for the individual travelling from England to France. So a universal principle and a variable parameter together sum up the essence of driving. The principle states the universal requirement on driving; the parameter specifies the variation between different

countries. Needless to say, the analogy between language and car-driving should not be taken too far. The driving principle and the value for the parameter are laid down by law while language principles and parameters come from the speaker's own mind rather than an outside authority.

Immediately, upon reading this, I thought of the rancher in the Outback, or the Forest ranger in a vast wilderness, those who regularly drive hundreds of miles of narrow dirt roads, and for whom even encountering another vehicle is a rare event, one which must be responded to properly, but only rarely. If the essence of driving were to keep to one side or the other, we would see this reflected in the ruts in the dirt tracks of the road, as they would be compelled to drive on one side while going one direction, and the other while returning, depending on which continent they lived in, or perhaps which country they were from. But this doesn't happen; in fact, a large number of drivers do the vast majority of their driving *in the middle of their road* except in the rare instances when there is a car approaching. A more accurate appraisal of the situation is this: driving in its essence is not restrictive. Each driver does what is easiest, smartest, or safest depending on his/her interpretation. At the point in which a community finds that there are enough cars to make wider roads and make a convention in which drivers stick to one side, drivers do that, because it's easier, smarter and safer. They all find it in their best interests to follow this convention. The law may be a force in this decision but is not always what dictates the change, and is often given more credit than due; that is, fear of the police is, by itself, not the only reason we keep to one side or the other.

I thought of two other examples that would help me to explain why "sticking to one side" is not a universal of driving, but rather a convention that makes life easier for most people in most places. In the Midwest USA, where I live, it is common for young kids with trucks or cars to go off the road, preferably in mud or wet grass, and spin their cars, making them as dirty as possible, and in general enjoying the thrill of using a vehicle in a nonstandard environment. Their counterparts in Saudi Arabia do what is known as "drifting": drive fast enough to lift your wheels off the road, and enjoy the spinning (if not flipping) that results. These dangerous kinds of activities are of course frowned upon by their parents, police, and civilized society, but they make me wonder about the "essence of driving," since, in essence, not all driving is in civilized society, on what we know as roads.

So I disagreed with Mr. Cook in his analogy, but, as time went by, I found that I also disagreed with him on another point: that we should not take this analogy too far. In fact, the farther I took the analogy, the more successful I was, until I had found a number of ways in which the process of driving was very similar to the process of using language. OK, OK, they're not exactly the same, but bear with me for a moment. In both cases we are using tools at our disposal to get what we need. In both cases the tools we use and the process of using them rely on the conventions of those around us; we cannot use the driving habits that are typical and that would be successful, in London, in Chicago; we must also change our language conventions to be successful in communication, as we travel from place to place. Finally, in any given event, communication or driving, one is aware of choices, and makes those choices based on

perceptions; those perceptions are variable from person to person as well as from instance to instance. But the perceptions motivate the choices, and the choices motivate the actions; the sum total of the actions that people take are known, in the one case, as "traffic," and, in the other, as "language," so, to understand each carefully, we must study the perceptions of the individual actors, or agents, as they make these choices. But each agent makes his/her choice without necessarily having access to the entire picture. One chooses one's route, for example, based upon one's past experience with the given roads, the given traffic patterns, the relative known time of passage, as well as other considerations, such as perceived danger, pleasing views, etc. The key word here is "perceived," since people's perception of danger is not always aligned with actual danger, and since each person's idea of what constitutes danger, or pleasurable views for that matter, may vary. In the same way, we change what we say according to our perception of how it will be received, and that perception changes according to our understanding of the receiver, and the way in which we want that receiver to perceive us and our meaning, as a result of what we say. It is a complex system in which everything we utter is dictated by variables affecting the individual perceptions of the individual agents. The purpose of this book is to lay out those perceptions, so that we can look at the big picture, the language as a whole, and understand its global patterns.

Both traffic and language, in my view, are what are known as self-organizing systems. Self-organizing systems are systems which may appear to be organized from above, by rules, genetic traits, or acts of God, but which in fact are better explained as complex systems made up of individual agents, each one operating under its own principles, and acting in its own self-interest. The patterns of the whole are best understood by understanding the motivations of the agents, none of which may understand the big picture. Research on self-organizing systems has exploded in recent years, as scientists have sought to understand and define forces at work that shape systems ranging from nerve networks to ant colonies; slowly, the idea has also expanded to be used to help us understand natural evolution, human history, and traffic networks. A small group of scholars has begun to apply principles of self-organization to language and language evolution as well.

For the purposes of this work, I will use Banzhaf's definition of self-organizing system:

> The term *Self-organizing Systems* refers to a class of systems that are able to change their internal structure and their function in response to external circumstances. By self-organization it is understood that elements of a system are able to manipulate or organize other elements of the same system in a way that stabilizes either structure or function of the whole against external fluctuations. (par. 1).

Banzhaf's view is important partly because language as we know it today is encountering enormous pressure from what can be considered external circumstances, namely the explosion of technological environments it is now used in. A Chomskian view of language, perhaps, would maintain that the universal principles of language will now simply be applied in different environments, but a different view might be that, given what we now know about human

behavior given the vast amounts of written data available from social media, some assumptions we have made about the nature of human language might well have been misguided, and in fact, might better be explained by a self-organizing model, one that does not assume that language is fundamentally oral in nature, or that its written versions are intrinsically based on the oral versions. Ke (2004) agrees that using self-organizing systems as a model for understanding language change is productive:

> Self-organization explains collective behaviors and evolution with the observation that the patterns at the global level in a complex system are often properties spontaneously emergent from the numerous local interactions among the individual components, and they cannot be understood by only examining the individual components...Language can be viewed as such emergent properties instead of products from some innate blueprint in humans. (p. 1, pars. 1 & 2)

The idea that language was a self-organizing system came to me independently, though I noticed eventually that others had come up with the same idea; in fact Ke's thesis (2004) was already published when I wrote the first six essays, but I hadn't seen it; others also have found this line of thinking. For me it was part of a natural process of discovering other cultural frameworks and noticing the differences, and wide variety, in ways of perceiving human behavior. I went to Korea fresh out of graduate school in 1986, and several things struck me immediately about the place; many of those continued to mystify me, even long after I returned and continued a 25-year career in language teaching. Almost immediately after I got there, I witnessed three middle-school girls walking together, with three violins, and one umbrella, staying dry in spite of a summer monsoon (gentle) rain. They were walking entirely in harmony, touching each other, and above all keeping all three violins dry. What I remember is the cultural aspect of it: it occurred to me that you couldn't get three Americans to walk this way, though we also act in harmony with others for mutual self-interest, and would certainly be capable of it physically. The idea of self-organization is that, looked at as a whole system, it is natural to assume that someone controlled it, and simply taught them how to do it or ordered them to do it. But quite often self-organized systems are simply the individual agents spontaneously acting in their own best interests, and making patterns that appear quite incredible, or well-ordered, to the outside observer.

Then, upon returning to the US, I was driving on Chicago's Lake Shore Drive one early morning, when I saw the American counterpart: at least six lanes of cars, bumper to bumper, going about 75 m.p.h., easily 20 over the speed limit, in a morning rush hour. Being somewhat new to the city, I was terrified at the thought that a single use of the brakes could spoil it for hundreds behind me; intense concentration was necessary to keep the pace. But the mutual speeding of six lanes that morning cut probably twenty minutes off of my commute as well as that of the others. And I realized: this was probably a regular event.

With helicopters above, and a city of six million, many of them working in the loop roughly from 8 to 5, traffic indeed was culture in and of itself in Chicago, and I studied it while I was there. I

often saw men at parties arguing about whether to take the tollway or the Edens at ten on a Saturday; virtually everyone knew when a Sox game would bottle up the Dan Ryan, and information about construction delays was passed around like cooked meat at a backyard barbeque. Yet in the morning, with our vehicles, each agent was alone with his or her perception, taking the route deemed to be best, and this, from the standpoint of the helicopters at least, made the pattern what it was. From below, we couldn't see the big picture and could only respond to traffic reports if we were organized. We knew the law, but in the case of Lake Shore Drive and other places, did what was expedient.

I mention this in essence because it guides my thinking about language. In language each utterance is, in essence, a choice guided by perceptions; one does the math, to the best of one's ability, and produces what one thinks will accomplish one's purpose in communication. The law in this case could be what we consider "right," or grammatical, and this could be a factor in some cases, but certainly not every case. As individual actors creating a language which is in essence the sum total of all the actions of all the actors, we are creating the system as we speak and listen, but we generally don't see the big picture, a limited and often incorrect view influences our perceptions and determines what we say. When the language changes, it's because the perceptions of its actors have changed. This can be measured, and should. This book is an inquiry into the ways language change can be seen as a self-organizing system: its moving parts, its points of change, its mechanisms of change. I am not a systems expert or a physicist, but I have watched people learn language for decades, and have begun to write about what I've learned; it's my hope that it will be of use in our continuing inquiry into the nature of language.

I'd like to mention one more thing before continuing with the book. I have encountered many theories of language, and, over time, have been unable to disprove almost all of them. Language is a complex phenomenon, guided by many principles, grounded in the real worlds of our perceptions and understanding of life as we know it. But it's not quite accurate to say that because one theory is more useful than another, the other is by nature wrong or misguided. On the contrary, these theories are not mutually exclusive; it is possible that language is a self-organizing system, and that *at the same time* there are universals that guide human construction of language and distinguish human language from that of others. I was disappointed at one point to read that Chomsky had somehow "disproven" Saussure, founder of structural linguistics and one of the early thinkers on this topic. Why should a new theory "disprove" another, if it's possible to glean useful information from each? Saussure made important points, generalizations that have possibly been forgotten, so I decided to return to the master for the next step of my inquiry. My goal is not so much to disprove anything, but rather to reconstruct a framework that will help in understanding human language, as it heads into one of its most turbulent eras.

(unfinished)

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