The Atoms of Language: The Mind's Hidden Rules of Grammar

Mark C. Baker
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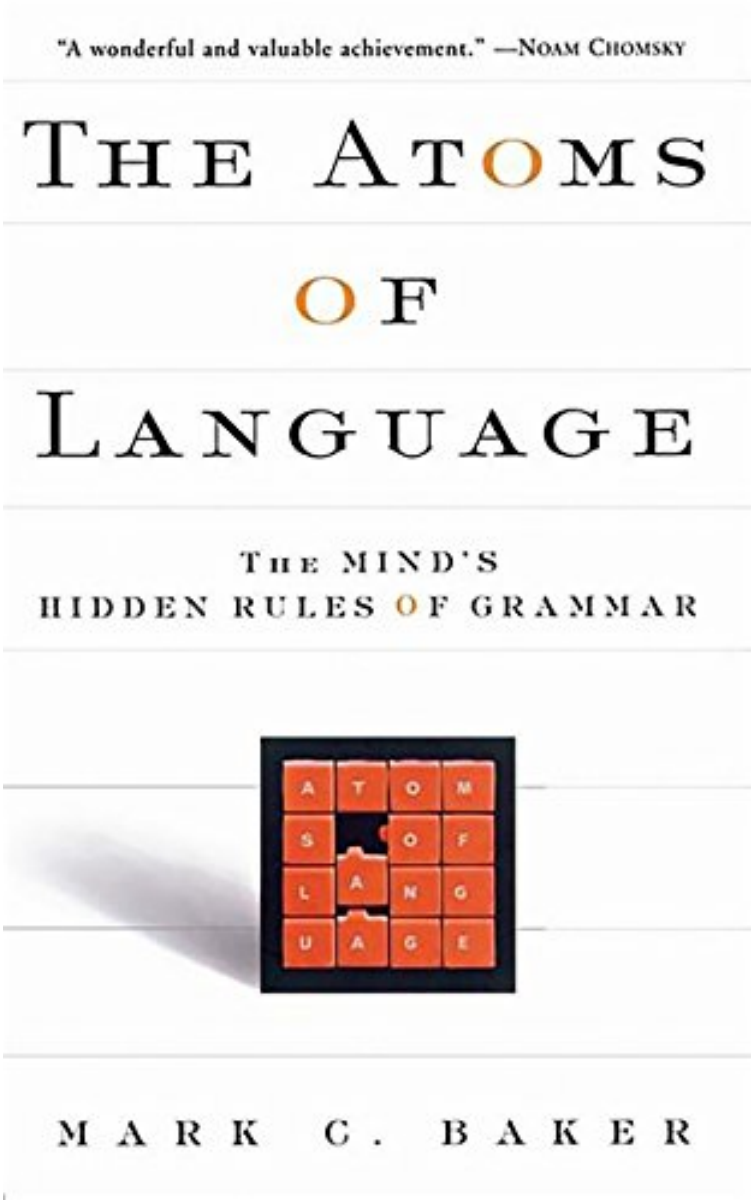

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Mark C. Baker : The Atoms of Language: The Mind's Hidden Rules of Grammar before purchasing it in order to gage whether or not it would be worth my time, and all praised The Atoms of Language: The Mind's Hidden Rules of Grammar:

2 of 2 people found the following review helpful. Superb Writing on a Complex SubjectBy Monty VierraI have given

this book a five-star rating for several reasons--five, to be exact. First, Mark Baker's writing is clear and accessible to non-linguists. Second, he has settled the language "differences" versus "similarities" debate. Third, he has pointed the way toward a resolution of the problem of what it is about language that seems to "shape" our thoughts. Fourth, he includes illustrations, tables, maps, and other visual aids that help readers understand his major points. Fifth, Baker provides effective support for readers in terms of clear notes, a list of references, a glossary of key terms, and an indexsomething which some academics seem to think we non-specialists arent interested in.In this review, I will focus on the second point mentioned above, namely the question of which is more important in languages, their underlying grammar or their everyday features? But first, I will give some background that I hope will help readers unfamiliar with but curious about this topic.Bakers Atoms of Language introduces non-linguists to parameters, a concept in linguistics that says our minds have switches for grammar that determine the structure of our language, a kind of pre-wired instinct which is part of what it means to be a human being. Experience from birth with our own language(s) gives us cues or clues as to how the switches should be set. Most of these switches are simple binaries, like the on/off switches for the lights in our house.For example, almost all languages have what we call subjects (S), verbs (V), and objects (O). If there were just two settings, then that would give us six options by simple multiplication. If we add in languages that have indeterminate patterns or those that are polysynthetic and dont fit anywhere on the scale, there are eight kinds of language. In principle, these eight kinds of language could be evenly distributed in all of the worlds languages, but thats not the case. There are two quite dominant patterns: SVO (ex. English) and SOV (ex. Japanese). These two patterns account for over 80% of all languages on several estimates, one in Baker and two online that I found.In addition, some linguists claim that there are 5~6,000 languages, but only a few thousand have been studied well enough to say for sure what their pattern is. Baker says 5,000 on page 139, and includes a useful table page 128 summarizing the data, but for the latest percentages see the World Atlas of Language Structures Online at wals.info. Gell-Mann and Ruhlen have just over 2,000 languages in their list of languages confirmed by type. Those who think that English-like languages (SVO) are the normJared Diamond in the Third Chimpanzee and Derek Bickerton (cited by Diamond) are wrong. There are more SOV languages, though not by a big margin.Why should anyone care about such things?The answer is that language is at the heart of who we are as individuals, as members of a culture, as citizens of a nation. But language is one of the defining characteristics of what it means to be human. If we want to find direct evidence of the soul, we have it in language.But if there are only a couple of major patterns, why are there other, minor ones? Why not just one? And, more important, why are other languages so annoyingly difficult to learn for many people (at least in English speaking countries)?Bakers central thesis is that the mind contains a framework for language that makes it possible for us to think in patterns of words in such a way that all languages are fundamentally connected. It's what makes translationand language teachingpossible. This framework is similar to a railroad junction and works through "parameters," which are settings, like train switches, that determine the direction a language takes. The choices are not unlimited; they are constrained by the logical possibilities in which thought can move, just as trains must stay on the tracks to get where they're going.This sounds like heady stuff, indeed, and toward the end Baker seems to descend into Plato's world of pre-existing abstract entities that somehow are awakened by experience rather than being a response to being conscious. Quoting Steven Pinker and others (pages 227 to 230), Baker says that we are faced with the ultimate "mystery" of why such a structure as grammar should exist in the first place.Baker's strength is in finding clear imagery to convey these complex ideas. On the one hand, he compares the theory of parameters to the periodic table of the elements used in chemistry, noting that we don't need to find every element right away to be able to use the table now (chapter 2, pages 44-49). On the other hand, Baker likens parameter theory to a recipe, where we can alter the flavor of a dish with only a handful of ingredients (chapter 3, pages 52-57). Both of these images helped me not only to understand how parameters work but how languages work, important from my perspective as an overseas teacher of English to speakers of other languages.To return for a moment to the idea that there are two main ways in which people order their languages, consider soup. In America and some parts of Europe, this is a dish that is often thick, which its contents mushed or pureed into a soft consistency. You have it before a meal and sip it gingerly because its piping hot. If you wait until it cools off, its often thick. But in other parts of the world, notably the Far East where I have lived for almost 20 years, a soup is most often a clear broth with vegetables, meat, and so on clearly visible within it. You eat the items from it, and then, after the meal, you drink it from the bowl (or use a spoon if you wish). It has cooled off by that time.Here are two diametrically opposed soups. They are prepared and consumed in drastically different ways, yet we recognize them as one thing. This analogy is useful, because people like me who are weak at chemistry can comprehend a recipe. Throughout Atoms of Language, Baker uses the recipe analogy to help us understand how things that seem so different are fundamentally the same. (Even I can get it, and my cooking is worse than my chemistry.)Most important, perhaps, is that Bakers Atoms of Language helps us understand why there are two opposing views about language and languages (chapter 2, pages 52-57). People who see a general or universal grammar of underlying patterns or recipes of languages tend to look at how all languages are connected internally. This internal linkage explains how and why we can translate languages and how and why people can learn new languages. Other people, however, emphasize the differences that we can see and hear in spoken and written language, the external parts of language. The difficulty of exact translation and frequent

cross-linguistic confusion leads them to suspect that the differences outweigh the similarities. Baker likens this difference to those dinner guests who ask for his wifes recipe for her homemade bread and those who prefer to take some extra slices home (pages 52-53).Baker believes we need to appreciate both viewpoints.He persuasively argues that when we do see differences of structures, we see them in all parts of the world. His most notable contribution comes from his careful study of Mohawk and other polysynthetic languages, ones which dont fit the patterns linguists have observed in well over 90% of all languages studied so far (chapter 4). Polysynthetic languages are found from temperate foreststo arid plateausto tropical bushlands (page 117), from Siberia to Central Mexico (Table 4.1, page 115). Because such languages are spoken all over the world, Baker rejects the notion they are related to their physical environments (117). He also disagrees with the idea that such languages reflect their cultures. There is no reason, he says, to suspect that Mohawk speakers think differently from English speakers in any fundamental sense (page 118). In fact, if historical conditions had been different, such languages might be spoken by world leaders and the more prevalent types we are used to spoken by more primitive cultures.As it happens, our guns, germs, and steel allowed our type to dominate the world. Today, polysynthetic languages happen to be spoken by very small language communities and are at risk of dying out as their speakers age and their offspring adopt other languages. Studying and preserving such languages can provide linguists a means of better understanding the nature of language itself.Before closing, I should mention that the book builds in difficulty. The fifth and sixth chapters tend to have more technical detail, and at a couple of points Baker says that readers might skip certain sections. Most of the notes I jotted down in my copy of the book, however, cover the margins of the seventh and final chapter, where Baker argues not simply for his own theory of parameters but for the notion that there is something outside human experience, something that exists before it and that somehow comes to us without any physical means. Its just there, in the mind, and not subject to any natural processes. In other words, he seems to reject the idea that constant experience coupled with natural selection over an incredibly long time played (and plays) a role in how languages work or change.His counter arguments, which he terms mysteries, dont always stand up. Discussing the opinions of Colin McGinn, Baker says that no one has ever seen pictures of the world or of something true in a brain autopsy (page 229). Thats a really odd statement; who has ever said that we might find such pictures in the brain? Apparently he (or McGinn) is not acquainted with what PET scans actually show in living brains. No, what Baker seems to mean is the picture of a perfect right triangle that we have in the mind even though he claims we have never sensed it (page 229).But why cant we have sensed patterns in what is around us soon after birth, starting when the senses begin to function in an orderly manner? I would contend that all our math formulas are ultimately derived from experience, and that we put that experience into ordered patterns that make sense far, far after the fact (a posteriori rather than a priori) when people had developed complex language for doing so. Just because we cannot call upon our memories of infancy with much if any certainty, we shouldnt automatically discount experience as the basis of our discovery (or imposition) of patterns on the outside world.If our species has only been around for a few thousand years, then Bakers implication that there is some non-natural source of our abstract ideas might be the only resolution to McGinns mystery. But if our species has been around for a million years and if we had predecessors with brains needing to find patterns in the world to stay alive, then it is likely that what seem like pre-wired instincts from a noumenal source are actually the result of millions of years of animal evolution. Before Pythagoras, there were the Egyptians who designed the pyramids. Before them, there were others who made things that workedeventually. Given what we know about modern trial and error, as Baker documents in his discussion of the 19th century discovery of the chemical table, Id say that perfect right triangles are the result of a long series of mucking about making things that didnt work perfectly at all. Eventually we got around to making triangles that worked pretty darn well, even in 3D. We dont need to look for a printed picture of it in the brain at death; we wont find it. Well find it in our having to discover ways to enhance our existence, or, in the case of the 3D triangles known as pyramids, our after-existence.To return to Bakers book itself: Its a fascinating work by a thoughtful writer. Its the best of the books I read in the last twelve months.0 of 0 people found the following review helpful. great introductionBy Joon SuThis is a great introduction for those who are interested in the science of language as it has developed over the last 60 years. Among other things, the author does a great job of showing how apparently wildly different languages at their core share many similar properties. All in all a great book for those looking to get an intro to the field!0 of 0 people found the following review helpful. Well-Written and Very EntertainingBy QuintonWhether you agree or not or buy into his theory is one thing. But what you have to admit is Mark Baker is hilarious and his writing is excellent. I would definitely recommend it to anyone with an interest in the field, even if they are not interested in the theory, at least for the laughs!

Whether all human languages are fundamentally the same or different has been a subject of debate for ages. This problem has deep philosophical implications: If languages are all the same, it implies a fundamental commonality--and thus mutual intelligibility--of human thought.We are now on the verge of solving this problem. Using a twenty-year-old theory proposed by the world's greatest living linguist, Noam Chomsky, researchers have found that the similarities among languages are more profound than the differences. Languages whose grammars seem completely incompatible may in fact be structurally almost identical, except for a difference in one simple rule. The discovery of

these rules and how they may vary promises to yield a linguistic equivalent of the Periodic Table of the Elements: a single framework by which we can understand the fundamental structure of all human language. This is a landmark breakthrough both within linguistics, which will herewith finally become a full-fledged science, and in our understanding of the human mind.

From Publishers WeeklyRutgers University linguist Baker delivers a milestone in the field of linguistics. In fact, the book goes far in establishing linguistics as a hard science. But before diving into linguistic jargon, Baker engagingly describes the success of the Navajo Code Talkers during WWII; their language proved the one cipher that eluded Japanese cryptographers. While most people would consider words the components of language a lexical rather than a grammatical issue Baker explores the "parametric theory" posited by, among others, Noam Chomsky, which cites grammatical structure or "parameters as the atoms of linguistic diversity." Many linguists find these parameters "recipes" for how words are put together to form meaning a satisfactory explanation for both the similarities and the differences between languages of completely different origins. English and Edo (West African), for example, are grammatically closer than English and French. Baker and others do not believe that word-order formulae stem from either cultural factors or "the survival dynamics of evolutionary biology." He doesn't, however, deny the cultural implications of language: numerous parameters prevented Napoleonic French, for example, from dominating Europe. Certain issues have weak explanations, such as the reasons that various Latinate languages developed divergent parameters. The concluding, somewhat indirect discussion of "hints of what parameters are related to" feels like a push for page count. Though Baker's comparison between linguistics and chemistry i.e., between the detection of grammatical "recipes" and chemists' long struggle to establish the periodic table may seem extreme to some, his clarification of complicated linguistics theories is more accessible than most. Sadly, few Americans care about word order (even in English), so this significant book may only get attention from specialists and libraries. "The Atoms of Language is a welcome introduction to what many linguists are actually engaged in every day." -- John McWhorter, Books Culture"A milestone in the field of linguistics." -- Publishers WeeklyAbout the AuthorMark C. Baker is a professor in the Department of Linguistics and the Center for Cognitive Science at Rutgers University. He lives in Camden, New Jersey.