The Little Bang: The Early Origin of Language

Eric Gans

Department of French
University of California, Los Angeles
Los Angeles CA 90095-1550
gans@humnet.ucla.edu

Recently I was asked to review applicants at UCLA for a postdoctoral fellowship. The competition was based, along with the usual CV and recommendation letters, on a project proposal relevant to this year's topic: the sacred. There were some sixty applicants working in the modern period since 1800; these new PhD's included literary scholars, philosophers, historians, a few anthropologists, even a musicologist. I was taken aback to discover that not a single one of these projects made reference to the name or ideas of René Girard. When I remarked on this to the director of the program, a professor of English with a solid background in philosophy and literary theory, he offered the explanation that these ideas had had a vogue twenty years ago, but were no longer in fashion today.

However exaggerated and shortsighted it may be, I take this judgment on the part of an astute and reasonably unbiased observer as a call to action. Like it or not, the academic world, the university, is the center of American intellectual life. The ideas that motivate COV&R emerged from the university and, however powerful they may become and remain outside it, it is important for their survival that they retain their visibility within it. Thus it is important that we put aside any differences that may divide us in the pursuit of this goal that I know we all share. I will return to this point at the end of my talk.
What is the origin of language? This question is not only one of formulating hypotheses about the origin, but of deciding what it is that we mean by the question itself. Recent advances in neuroscience, cognitive science, speech physiology, paleontology, primatology, linguistics, and related fields make this question both easier and harder to answer than when I wrote *The Origin of Language* over twenty years ago.

I can say at the outset that nothing I have learned in the course of my research dissuades me as a humanist from venturing into an area in which the dominant voices are no longer those of linguists and prehistorians, but those of neuroscientists. As they have always done, scientific advances permit those concerned with the human, "anthropologists" in the broadest sense of the term, to redraw the boundaries of the domain within which anthropological reflection truly belongs. This position is not one widely held by the

scientists themselves, who generally share an Enlightenment view for which all thinking not subject to scientific method, particularly that of religion, is a primitive survival condemned to, and deserving of, the fate of alchemy and Aristotelian cosmology. In this view, my—I think I can say, "our"—kind of anthropology is not a respectable field of inquiry at all. The hypothetical attribution of an originary function to an event or scene considered memorable in itself is not—yet—understood as a necessary methodological tool in the human sciences. Yet a scientific method expanded to include events would not have to put religion within brackets as an expression of the irrational or explain it by an ad hoc theory of psychological expediency, but would begin to integrate within itself the understanding of the human that it has been the historical function of religion to provide.

I do not think we need accept the Enlightenment vision of history as the story of the continued advance of science into domains progressively vacated by unscientific thought. No doubt we no longer rely on religion to supply the basis for cosmology or for natural science in general. And as our knowledge of the brain continues to progress, it may no longer be necessary to rely on metaphysical philosophy in order to understand the processes of language and thought. But human culture is not centrally concerned with natural phenomena or even with logic or linguistic structure. It is concerned with the regulation of human interaction, with ethics, and however much science can help provide ethical thought with options, it can never usurp its central cultural function.

This last point is usually expressed by the old saw that you can't get to "ought" from "is." Science tells us how it is, not how it ought to be. I have no quarrel with this formulation as a practical rule of thumb. But its simple dichotomy oversimplifies human reality and encourages a certain complacency on both sides. It goes hand in hand with the relegation of religion to a shallow notion of "faith"—generally combined with the familiar platitude about religion's value in maintaining morality. What must be understood is rather how this dichotomy came about in the first place, and how it is linked to the human possession of language. How is it that the same creatures who alone are capable of scientific thought are also alone capable of—some would say, culpable of—forms of thinking that cannot be reduced to scientific thought? Why, in a word, is the origin of language also the origin of the sacred? The failure of the scientists of this past century even to ask this question, let alone to answer it, is all the proof we need that anthropological thinking in the sense that you and I understand it, what I call "originary thinking," has a central and irreplaceable role to play in the ongoing effort to understand human origins.

What then *is* the origin of language? The question may be split into two parts, each of which has evoked in the scientific discourse of recent years a very different kind of response. We may call them the hard originary part and the less hard (but not easy) prehistoric part. The first, hard, part of the question addresses what I myself have always taken for essential: the moment, whether or not drawn out in actual time, of the emergence of language from non-language, which is also to my mind the moment of the emergence of the human from the non-human. The second, easier, part is concerned with reconstructing the intermediate

stages between this origin and language as we know it.

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The second part of the question has generated a vast amount of research over the past two decades. As a result, our understanding of the parameters that define the physical and mental capacity for human language and their possible emergence in the course of primate evolution has become ever more precise. I will share some of these results with you in a moment. But on the hard part of the question that I attempted to address in *The Origin of Language*, that of the specific motivation and occasion of the origin of language and the human, there is a near-silence that grows in embarrassment in proportion to the anthropological intuition and semiotic sophistication of the writer. This is, in a way, a form of progress. Only the naïve or retrograde still dismiss the importance of this question, as was common a generation ago, by proposing that human language emerged over a long period of time through the gradual improvement of primate communication systems. As our understanding of the underlying neurological means by which language evolves, is learned, and is transmitted becomes more precise, and as, accordingly, its radical difference from all other forms of animal communication is appreciated, the source of what one writer calls the "magic moment" in which language began becomes all the more mysterious. I will speak to you later of a partial exception to this rule: a scholar whose solution to this enigma, as we shall see, strongly resembles that proposed in *The Origin of Language*, although it stops before reaching the unique scene of origin postulated by the "originary hypothesis" on the basis of the theory of mimetic desire.

How then should we envisage this unique scene? The difference between human language and animal communication is most simply defined by what Fernand de Saussure called the "arbitrariness of the signifier," the fact that the word "cow" has no resemblance to a cow. This arbitrariness affects even signs born from natural perception: Saussure cites the word "pigeon," whose onomatopoetic origin in the Latin *pipio* has been forgotten. The reason why signs become arbitrary even when they once were not is that, in contrast with animal signals, signs subsist not in the real world but in a language- world that lies "above" the real world and in which it can be represented. We may symbolize this difference by saying that the signal relates to its object "horizontally," whereas the sign relates to it "vertically."

What makes the origin of language of particular interest to us is that the generation of the vertical signification of language from the horizontal, appetitive relationships of the real world may be described in terms of the Girardian triangle of mimetic desire. Normally we imitate each other's appetitive acts by performing the same action on a different object: when I see you pick an apple, I pick an apple of my own. But since mimetic desire makes me suspect that your apple was better than mine, my gesture and yours are destined to converge one day on the same object. At this point, mimesis is blocked; the appropriative gesture is aborted. The only way to avoid destructive violence is to refocus our attention

from the human model to the object toward which his gesture points. Although this unique object of desire cannot itself be reproduced, it may be represented by a reproducible sign of human language. Hence, in the terms of Generative Anthropology, the "aborted gesture of appropriation" becomes the originary sign.

But although the mimetic triangle contains all the elements necessary for the emergence of the sign, language as the foundation of the human community must have arisen in a collective event where mimetic tension is intensified by the multiplicity of the participants. The object desired by all members of the group—say, the carcass of a large animal brought down by a hunting party—becomes the center of a circle surrounded by peripheral individuals who act as the mediators of each other's desire. The originary sign provides the solution to or, more precisely, the *deferral* of a "mimetic crisis" in which the group's very existence is menaced by the potential violence of rivalry over the central object. The emission of the first sign is the founding event of the human community.

How is this hypothetical scene to be situated in the course of biological evolution? Over the years my thinking on this subject has evolved; or perhaps I should say: has been purified. When I wrote *The Origin of Language,* I was uniquely concerned to develop the consequences of the hypothesis that language originated in a self-conscious event or scene. Thus I made no reference to the specific historical circumstances or even to the geological era in which such an event might have taken place. From the perspective of an empirical scientist, this would have been inconceivable, but I considered it the humanist's duty to develop the logical consequences of the idea of the human as the possessor of language independently of the vagaries of empirical data. I sought to construct a hypothesis limited by Ockham's razor to the minimal conditions of the emergence of the human. I might add that, at the time, over twenty years ago, scholars were far less in agreement than they are today about the moment of prehuman evolution at which language first appeared; among the tentative time-frames proposed, I simply chose not to choose.

There were then and, for the moment at least, still are two views of the time at which language originated; we may call them the "early" and "late" hypotheses. The dominant early hypothesis is that language in some form, what some writers call "symbolic" activity and I prefer to call "representation," appeared at the same time as the genus *Homo*, whose emergence from *Australopithecus* around two million years ago coincides with the first evidence of stone tools—the so-called Oldowan technology. In this hypothesis, the increase in brain size from *Homo habilis* through *Homo erectus* to the Neanderthals and *Homo sapiens* was itself the product of language.

The late hypothesis, which still has a few supporters today, was constructed to explain the contrast between what appeared to be extreme technological stagnation over some two million years of tool-making and the "take-off" of about 50,000 years ago that produced more sophisticated technologies, cave art, evidence of ritual burials, and eventually the

Neolithic invention of agriculture that in ten or twelve thousand short years made us what we are today. More than tool technology, it is the appearance at this time of the first indubitable signs of "culture"—that is, ritual, religious culture—that gave this hypothesis its plausibility.

With respect to the choice between the early and late hypotheses, I admit to having displayed a mild degree of what psychologists call "dissociation." I was far more concerned to defend the single origin of humanity against the once-popular multiple-origin hypothesis than to decide at what moment this single origin might have taken place. By not choosing between early or late language origin, I was able to retain features of each without really reflecting on their incompatibility.

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The early hypothesis seemed dictated by simple logic. According to the late hypothesis, the first speakers were the so-called Cro-Magnons, *Homo sapiens* genetically identical with ourselves. The late hypothesis could therefore be maintained only if one assumed that our modern brain and speech-production apparatus could have evolved independently of language. In this case, language would arise as what Stephen Gould calls an "exaptation," a mere accidental byproduct of the interaction between cognitive evolution and pre-linguistic communication systems. (Chomskian linguists are fond of this position because it seems to justify their idea of a "language module" evolving independently of any overt human behavior.) In contrast, the originary hypothesis presupposed that language as the first human act would arise among creatures with *no* prior brain and vocal tract adaptations and would itself drive their acquisition of these adaptations. This is the logic of all evolutionary modifications; the first ancestor of the whale to take to the ocean would not have had fins designed in advance for this contingency.

Yet, despite all this, I was attracted to the late hypothesis because it seemed to solidify the link between language and ritual culture that my own perspective emphasized. In this regard, the (perhaps exaggerated) technological stagnation and absence of evidence of "symbolic" cultural activity in early *Homo*—one writer wondered what such creatures could possibly find to talk about—seemed convincing arguments. Mere stone tools were no proof of language, especially after it was realized that the intricate, lozenge-shaped flint "choppers" were not products of refined craftsmanship but cores left behind after the simple blades were chipped off. Since the paleontologists didn't find it absurd that all our physical and presumably even our mental evolution could take place before we acquired language, I accepted the possibility as a real one.

A possible cure for my dissociation was the compromise hypothesis proposed by Derek Bickerton, one of the major figures in the study of language origin. Bickerton is best known for his 1981 book, *The Roots of Language*, where he proposes that the universal basic

syntax of “creoles”—languages that arise when crude multilingual dialects called “pidgins” come to be spoken as native languages by the children of the original speakers—demonstrates the existence of something like Chomsky’s “grammar module.” Bickerton’s more recent *Language and Species* (1990) proposes, on the analogy of the distinction between ungrammatical pidgin and grammatical creole, both an early *and* a late origin for language. The early origin, at the time of *Homo habilis*, would have involved the emergence of “symbolic reference,” the linguistic sign, but not syntactic structure. Syntax, in Bickerton’s view, could not have evolved gradually, since there are no examples of a language intermediate in syntactic complexity between pidgins, which he finds comparable to the utterances of young children as well as to those of apes instructed in human language, and the natural languages of today. (It is a tenet of modern linguistics that all known languages, from those of the Australian Aborigines to contemporary English, are equally “advanced” and permit in principle of reciprocal translation.) Thus the emergence of syntactically mature language as we know it, which Bickerton situates at the time of late origin around 50,000 years ago, would have reflected evolutionary developments in the brain that were realized in language all at once in some inexplicable final mutation.

Just as the child’s aptitude for learning language demonstrates the existence of “something like” Chomsky’s grammar module without however answering the key question of exactly how his brain is adapted to this learning process, the contrast between, on the one hand, the language of creatures whose brain was not yet specifically adapted to language, whose material cultures were apparently stable over hundreds of thousands of years, and who gave no evidence of symbolic activity, and, on the other hand, the language of people anatomically identical to ourselves, (relatively) innovative in their tool kit, and who buried their dead and drew pictures on cave walls, demonstrates that “something like” Bickerton’s dichotomy must be true, but without giving evidence either for or against its dichotomous nature. The fact that no intermediate forms of language exist today is no more proof that modern syntax emerged all at once than the absence of intermediate forms between lizards and snakes proves that the latter lost their legs all at once. Even if all modern languages derive from a common ancestor spoken around 50,000 years ago, there is no need to assume that this *Ursprache* itself emerged in a single mutational leap beyond primitive pidgin-type languages. Students of sign language suggest persuasively that the link may be provided by gesture.

Today I have emerged from my dissociative state; I accept the theory of early origin and reject that of late origin. Far from presenting a threat to the originary hypothesis, early origin makes it all the more plausible. It is a failure of imagination to conceive the first language as anything like the language of today. It would be unfaithful to Ockham’s razor to attribute to the originary sign anything but a minimal difference that separates human language from animal means of communication. I will go into more detail on this point in a moment, but first I want to make more explicit the consequences of early origin for the fundamental reflection, based on the mimetic theory of desire, that I call Generative Anthropology.

The originary hypothesis is an attempt to come to grips with the most salient truth about human language: that language as we know it, the language of the sign rather than the signal, represents not a gradual development of animal communication but a radical break from it. When I wrote *The Origin of Language*, I was aware of no other researcher who took this position. Even today, most writers on the subject have not yet grasped the difficulty it poses. Bickerton and Terrence Deacon—whose ideas on the subject I will discuss shortly—are virtually alone even now in treating this radical break as a problem for evolutionary theory. But not even Deacon, and you will see how tantalizingly close he comes to the positions of Generative Anthropology, has taken the final logical step consonant with this position.

The core of the originary hypothesis is not the hunting scenario I have suggested as the scene of the origin of language but the simple affirmation that there *was* an event, a minimally unique scene of origin of the human defined by language. The originary hypothesis proposes that the linguistic sign, unlike all previous modes of information transfer, from the persistence of subatomic structures through the genetic code to the evolution of signal systems among mammals, depends neither on hard-wired connections nor on learned associations but on the memory of a *historically specific* founding event. Animals learn from the past and plan for the future, but only humans experience *events*. To the deconstructive critique that one cannot be "present" at human events because they are mediated by language, I would answer that it is precisely this mediation that defines them as events. The fact that events exist only insofar as they are commemorated through representation only means that the originary event is the event of the first commemoration.

All culture is scenic in the sense of evoking the tension between the desiring periphery and the desired center of a collective scene. This has been noted by a few anthropologists, notably the late Victor Turner. An isolated individual can evoke the scene in imagination only because it has already existed in public reality. Language too, as the core of the system of representations that is human culture, evokes such a public scene. And since from the first this scene was by definition memorable, the intuition of memorability inherited from this scene allows us to offer a hypothesis of its constitution consonant with our empirical knowledge on the one hand and the principle of parsimony or Ockham's razor on the other.

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Since the possibility of confirmation is remote indeed, our hypothesis is fated to remain speculative. What purpose then is served by enunciating it? We recall that the primary point of the hypothesis is not the reconstruction of the scene of origin but the postulation that there *was* a scene. But if this point is worthy of consideration, then our hypothetical reconstitution of the first scene will not be altogether unhelpful in articulating its various moments. For once we agree to entertain the idea that there really was a scene of the origin of language, then this origin is not simply that of language, but of human culture in

general—of the sacred, in the first place, and of everything that the sacred implies: desire, resentment, sacrifice, and what might be called the three E's: ethics, economics, esthetics (spelled in the French manner without an "a"). To articulate all these categories in a single scene has been the chief goal of my writings on Generative Anthropology.

Before pursuing this argument further, I would like to make myself very clear on one point. The originary hypothesis is neither a social contract nor a variant of what the political philosopher John Rawls calls the "original position." It is not, in other words, a fictional schema but a hypothesis, a "scientific" hypothesis, if that word is useful. The difference between these two categories is less obvious than at first glance, but it is nonetheless real. Hobbes's or Rousseau's "social contract" and even Rawls's "original position" present, as the outcome of a scenic confrontation among potentially conflicting parties, ideal versions of social hierarchies that in reality evolved through various historical stages. The rationale for such patent fictions, and the reason why we take them seriously, is that we can only justify the generation of a social order involving human inequality out of what we conceive intuitively as "natural" human equality as the result of an implicit unanimous agreement to suspend this equality. But the otherwise unexplained source of our intuition of equality is precisely, according to the originary hypothesis that alone explains it, the model of the reciprocal exchange of language in the originary scene. Hence the fictive "contract" is not, as some would claim, the original of which the originary hypothesis is a copy but, on the contrary, an example of our recourse to the originary scene to provide an ethical raison d'être for the structure of the human community. But whereas hierarchical or indirectly egalitarian structures may be justified by social contract scenes that have no pretensions at reflecting an even hypothetical reality, the originary hypothesis describes an egalitarian scene that is as close as we can make it to "what really happened."
Taking a position for the early origin of language sharpens the radical implications of the originary hypothesis that were mitigated by leaving the moment of origin indeterminate. The originary scene of which we speak must be the origin not just of language but of all the fundamental categories of the human. If we are permitted to retain in our imagination the images of our Cro-Magnon ancestors hunting mammoth, burying their dead, and creating cave-paintings, statuettes, and carved bone tools, it becomes much easier to conceive a scene of origin in which all the categories of human culture have their common root. If, on the contrary, we reject any such imagery and accept that the first moment of language must have taken place among creatures not yet adapted to it in either brain nor behavior, who looked and behaved more like bipedal apes than humans, whose very first "word" may well have been a gesture lacking any phonic component, then we are forced to face up to just how radical our hypothesis really is. But far from putting the entire enterprise in doubt, the striking rapprochement between this minimal formulation of the originary hypothesis and the conclusions of recent scientific research make it not only plausible but even, I regret to say, almost respectable.

It is well and good that early origin forces us to abandon our Cro-Magnon imagery because

this imagery hides what is most difficult to assimilate in the hypothetical scene of origin: that it is a unique occurrence in Darwinian biology, a “speciation event” that is truly an event—”punctuated equilibrium” with a vengeance! Yet this conclusion is inescapable. Those who until very recently affirmed against all logic or precedent the multiple origin of our species were merely inverting the exceptionalism of human origin that they thought they were escaping. If human monogenesis seems uncomfortably close to the Biblical creation of man, it is because the Biblical narrative expresses, in however unscientific a form, a truth of human origin that science has not yet faced up to: that it must have taken place in and as an event. The origin of the sign is the origin of a new symbolic consciousness, and this consciousness, even in its most rudimentary form, could not have emerged unconsciously.

What does it mean to say that the origin of language was a “speciation event”? Clearly the genetic constitution of the participants themselves was not modified. But from this modest but not imperceptible beginning, the creators of the new symbolic culture separated themselves off from other bands of hominids who did not have such a culture. The advantage of this culture that fashioned our ancestors into a new species was, to cite the one-sentence formula of the originary hypothesis, that culture effects “the deferral of violence through representation.” There are two complementary elements in the hypothesis that scientific research has not yet assimilated: the origin of the human sign in an event, and the function of the sign as the representation of the sacred, which is, as Girard has taught us, the externalization of the human potential for self-destructive mimetic violence. We cannot understand the one without the other. For the sign to commemorate an event as the origin of the human community, this event must be both absolutely and minimally memorable. I will speak in a moment about its minimality. But its memorability implies the absolute necessity of the event for the group’s survival, which is to say, the deferral of its mimetic self-destruction and its establishment as a human community.

This does not mean that all other groups of hominids who did not create language or adopt it from those who did were destroyed by internal conflict. Because the language users, who were also culture users, had at their disposal a more stable bulwark against internal violence, they were able to acquire more potent and potentially dangerous means of violence. Such means include not only improved weaponry but more elaborate ethical structures involving differential roles protected by laws, including the marriage laws that characterize all human societies and that are often referred to in rather misleading terms either as “incest prohibitions” or as rules for the “exchange of women.” Human societies governed by sacred interdictions could withstand mimetic pressures that in non-human societies would lead either to breakdown in violence or to the abandonment of communal unity. Hence over the course of generations the neo-humans would inevitably absorb, kill off, or drive away their prehuman rivals.

Understood in this manner, early origin only strengthens the originary hypothesis. The idea

that the members of a society that evolved apparently little over hundreds of thousands of years would have had “nothing to talk about” is true only if we think of language as primarily a means of conveying information about the world. But if we understand it as first and foremost a means of deferring violence through the designation of a sacred mediator, then it becomes perfectly plausible that it could evolve very slowly without lacking in functionality at any stage. Ritual activity, like artistic activity, always contains information about the world, but this information is subordinate to the human order it subserves. As the brain became increasingly adapted to language, language itself could become increasingly complex both in vocabulary and in syntax. The complexity of society could not overstep the limits of the symbolic culture of which language was the formal underpinning, but the existence of such a culture would continually move natural selection in the direction of the language-culture adaptation, with more complex and efficient social orders continually driving out, killing off, or absorbing their rivals.

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Nor, incidentally, does the fact that language reached maturity with the fully evolved Cro-Magnon brain imply that language since that time has remained in a steady state. This Chomskian dogma, reinforced by the fear of appearing to acquiesce in the colonialist stigmatization of “primitive” languages, has only recently been breached. We know of no “primitive” languages; given the appropriate lexicon, all extant and historically attested languages are equally capable of expressing all thoughts. But, as Bernard Bichakjian has observed, all languages of whose historical development we are aware have evolved irreversibly from a more to a less highly inflected state (for example, from Latin to French) and, in general—this is Bichakjian’s major thesis—in the direction of being assimilable by children at an increasingly early age.

What is not explained by this attractive hypothesis is, if Bickerton’s creole studies demonstrate that we “naturally” adopt a subject-verb-object word-order-based syntax, and if, as Bichakjian observes, children learn this type of language more easily than any other, why the older generation of languages was so highly inflected. I would suggest that this gives credence to the idea that language was, until the relatively recent time of the cultural take-off that inspired the late origin hypothesis, designed specifically (which does not mean consciously) to be *difficult* for children—or adults—to learn. Vestiges of linguistic initiation rites remain in the institutions of religiously oriented language instruction in our own society—Church Latin for Catholics, Biblical Hebrew for Jews, Koranic Arabic for Moslems, not to speak of the sacrosanct Latin and Greek of Eton and Oxford. The take-off itself, rather than being attributable to our sudden acquisition of a “syntax module,” is perhaps preferably explained in the inverse fashion as a product of the final liberation of language from the strict confines of the sacred and its extension to more general social usage.

The foregoing has given you an idea of the originary hypothesis and of its compatibility with

the early origin of human language. In the time I have remaining, I would like to suggest how, thus situated, the hypothesis provides the key to beginning the arduous process of integrating the humanities, including religious thinking, with the social sciences.

Let me begin by saying a few words about an important book that appeared in 1997, Terrence Deacon's *The Symbolic Species*. Deacon is a neuroscientist whose presentation of the emergence of human language is founded on ongoing research into the structure and evolution of the brain; but unlike most laboratory scientists, Deacon also has a real grasp of the relevant anthropological issues. He is keenly aware of the qualitative difference between human language and animal systems, a difference that he expresses in the terms of Charles S. Peirce as that between *indexical* signs—those learned through association with their object, as in Pavlov's famous experiment where a dog is taught to make the ringing of a bell an "index" of the presence of food—and the *symbolic* signs of language, which are, as Saussure called them, "arbitrary" because their reference to a worldly object is mediated through a sign-*system* in which the signs are interrelated with each other. Finally, whereas Bickerton views language and thinking strictly from the perspective of the individual speaker, even refusing Chomsky-like to define language as a mode of communication, Deacon is sensitive to language's communal nature.

Deacon's central point, that the human brain with its unusually large prefrontal cortex evolved as a result of language rather than being the cause of its emergence, is not new, although it has never before been presented in such persuasive detail. But in the domains of greatest concern to the *Colloquium on Violence and Religion*, Deacon's work makes a number of decisive advances. His knowledge of the brain's "Darwinian" internal structure—dictated not by a genetic blueprint but by the "survival of the fittest" synapses—frees him from the monolithic Chomskian view of syntax to which Bickerton's double-emergence theory still pays tribute. Above all, Deacon dismisses the traditional "pragmatic" scenarios for language origin and comes very close to my own originary hypothesis.

Deacon's explanation for the origin of symbolic representation begins with the dependency of proto-human societies on meat, procured by all-male hunting and scavenging parties whose activities would oblige them to be away from home for long periods of time. Under such circumstances, these societies would be highly motivated to maintain female fidelity by creating a symbolic bond of marriage as opposed to the merely "associative" bond of animal monogamy. Such symbolic reinforcement would have clearly advantageous effects on reproductive fitness, the driving force of evolution.

Deacon's reasoning, amazingly daring and subtle by the standards of the social sciences, does not lead him to propose an originary event as such. But his discussion includes many key components of such an event:

1. meat-eating and sharing as essential to proto-human survival
2. the difficult necessity of maintaining peace among members of the male hunting group
3. the necessity that hunters refrain from eating their prey on the spot but bring it home to their mates and offspring
4. the first sign as functioning to establish an ethical institution
5. the collective nature of the meanings of language
6. the reinforcement of symbolic reference through ritual

If we combine these six points in a scene of ritually repeated renouncement-followed-by-division, mediated by the sign, of the meat of the sacred animal/victim, we have, for all intents and purposes, the generative hypothesis of the origin of language.

Reading Deacon's book aroused in me mixed feelings. Although I was gratified to see so many elements of the hypothesis I had constructed on the basis of the theory of mimetic desire replicated by an empirical scientist who had not the least inkling of this theory, I wondered whether empirical research was now reaching the point at which it could replace humanistic thinking in the same way that modern chemistry replaced alchemy. But on reflection I realized that, on the contrary, the ever-progressing scientific work in this area provides us with what the Greeks called a *kairos*, a critical moment of opportunity for us as representatives of humanistic and/or religious thinking grounded on the mimetic theory of desire.
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In the course of my university career, I have seen the practice of textual criticism by which the humanities are defined rise to become a model for the "softer" social sciences, then go into a decline that corresponds to that of the cultural category of literature itself. These developments have coincided, I think not coincidentally, with René Girard's discovery within a literary context of the paradoxical structure of human mimesis and his subsequent construction on this basis of a fundamental anthropology. Girard's insistence that the masterpieces of Western literature from the Greeks through Shakespeare, Dostoevsky, and Proust provide a sharper understanding of desire than modern "theory," notably Freudian theory, is undoubtedly justified, but it is an affirmation whose very truth contains its own closure. To announce this closure is not to affirm apocalyptically the "end of literature," but merely to observe that the literature, cinema, television and what have you of our time no longer provide us with new, as yet untheorized lessons about the fundamental nature of desire. The result is the end, not of literature, but of a certain conception of literature. Girard's revelation about mimesis is both a tribute to the power of this conception and a harbinger of its disappearance.

In this context, as the recent history of the question of the origin of language illustrates, the anthropological initiative seems fated to pass from the humanities to the social sciences. Yet humanistic thinking has, precisely on this point, a central contribution to make. Humanistic

thinking is paradoxical thinking. In the heyday of the New Criticism, the highest compliment one could pay a literary work was to show it was a repository of paradoxes. I would claim that the paradox that made this text-centered criticism possible and toward which its discourse was always hinting is nothing other than the paradoxical structure of mimesis that culture had always "known" but that was first explicitly articulated by René Girard.

Of the many consequences of mimetic paradox, the most significant is the domain of signification itself, the world of language. The originary hypothesis describes nothing other than the "resolution" of the paradox of mimesis through the deferral effected by the sign, whose substitution for its sacred, inaccessible referent is the defining gesture of humanity itself. An intellectually curious scientist like Terrence Deacon can come very close to bringing together the necessary conditions for the birth of language. But the birth scene of the linguistic or "symbolic" sign eludes him because positive, scientific discourse does not contain the category of paradox. The French thinker Jacques Derrida, who denies the very validity of the notion of an "origin of language," supplies nonetheless a necessary ingredient of our hypothesis in his "non-concept" of *différance*, which means "at the same time" (an expression itself paradoxical) *deferral* and *differentiation*. To understand the emergence of the sign is to understand the collective non-act of deferral that is "at the same time" the emission of a gesture or sound that "means" the scene and its central object because it does not, like an animal signal, call the others to action, but on the contrary, becomes a substitute for action, realizes its deferral by differentiating the members of the group from the object and from each other.

If the originary hypothesis is indeed the best explanation of the origin of language, this truth cannot remain hidden from positive science. It would be absurd to conclude that, because the roots of the originary hypothesis lie in the humanities, mimetic theory and Generative Anthropology are of interest only to humanists. On the contrary, the rapprochement between the empirical sciences and Generative Anthropology that Deacon's work appears to presage offers us a crucial opportunity to integrate the paradoxical thinking of the humanities with the positive thinking of the sciences in a mode of thought that I have no compunctions about calling, in the French fashion, "human science."

What lends substance to this conclusion is the most profoundly paradoxical consequence of the paradox of mimesis: that what I call "humanistic" thought is ultimately indistinguishable, not from scientific thought about the human, but from a way of thinking that does not appear focused on the human at all: that of religion. I entitled one of my books *Science and Faith* in an effort to stress that religion and science are not condemned to a dialogue of the deaf but constitute complementary and interacting means of understanding the human. Scientific thinking can be carried out only under conditions of metaphysical peace; in the ethical reality of human social life, faith is what maintains the preconditions of this peace.

Although we have learned since the Renaissance that religion is not very useful for thinking about the gravitational interaction of celestial bodies, it remains indispensable for thinking about the ethical interaction of human beings. The fact that we commonly say that religion is "about God" rather than humanity reflects the structure of the originary scene, in which what we call humanity was constituted, literally, "about" God as the center of the human circle. Once it is admitted, as the logic of mimetic theory demands, that the originary sign is equivalent to the name-of-God, the science of human origin is obliged to take into itself as a hypothesis—that is, in the scientific version of faith—the co-emergence and co-existence of the human with what can only be understood as subsisting in "another world" because it is inaccessible to us: the sacred, which we can grasp without violence only through the medium of the sign.

Is Generative Anthropology then some kind of secular equivalent of religion? Let me provide a mnemonic tool to help tell them apart. The originary hypothesis has sometimes been described as a "big bang" theory of culture, by analogy with the cosmological "big bang" in which the universe emerged or was created. The analogy is appealing, but it is inaccurate. It is not the originary hypothesis that begins with "In the beginning, the Lord created the heavens and the earth." It is *religion* that should be called the "big bang" hypothesis of human origin, if only because it is time that we realized that the Biblical creation story too is a hypothesis whose presentation of the event of origin reflects an understanding not yet mastered by science.

If the originary hypothesis of Generative Anthropology is not a "big bang," then what is it? I think it is more accurately described as a "little bang." The originary event was a bootstrapping operation that by definition could not announce itself with the dramatic power available at later stages of culture. Yet neither could such an event be imperceptible. It was not a big but a little bang. Its "littleness" brings it into accord with the scientific requirement of Ockham's razor, to simplify or minimize one's hypotheses as much as possible. At the same time, the "bang" cannot, as positive science wishes it could, be minimized out of existence. If you just remember the term "little bang," you will recall to mind the link between Generative Anthropology and religion, and you will understand why I am so very glad to have had the opportunity to speak to you today.