# General Systems Theory in the Human Sciences: Gilles Deleuze, René Girard, and the Question of Scientific Method in Cultural Systems

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> All a priori theories of representation, whether religious or philosophical, constitute obstacles in the path of radical demythification. The belief that there cannot be any advance except in the direction of more cognitive nihilism plays in our world the role formerly reserved to religious faith. It makes all discovery impossible in the religious and scientific field. Far from being an end, the current disenchantment can be viewed as the precondition for a more scientific stage in the study of man.[1] – René Girard

René Girard's remarks above, from an interview with Diacritics (1978), seem to us a refreshing, optimistic, and suggestive point, especially in view of the current attitude of intellectual crisis in the humanities. The intellectual crisis we refer to has been stated well by Hans Gumbrecht in his, The Production of Presence: What Meaning Cannot Convey.[2] This crisis organizes itself around the question of the relationship between aesthetics and violence, for Gumbrecht, this is "the question of whether aesthetic epiphany…

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[1] Rene Girard, "An Interview with Rene Girard." *To Double Business Bound* (Baltimore: Johns Hopkins University Press), 212-213.

[2] Hans Gumbrecht. *The Production of Presence: What Meaning Cannot Convey* (Stanford University Press, 2009), 83-88; 114-115.

necessarily involves an act of violence….” Gumbrecht suggests that allowing for the association of aesthetic experience with violence helps us to understand why certain phenomena can be so 'fascinating,' however, he notes that 'such beauty accompanies the destruction of lives.”[3] Assuming the necessity of violence in aesthetic experience, the intellectual crisis can be defined as follows: if contemporary critiques of representation negate the normative criteria through which it would be possible to determine acceptable standards of violence in the first place, then strategies of interpretation based on such normative criteria must come under crisis.  On these terms, Girard's suggestion in the quotation above becomes all the more pertinent.

Moreover, we believe that Girard's anticipation   still resonant and still precocious   that our disenchantment may be the harbinger of a more scientific stage in the human sciences, is gaining momentum. Perhaps one might interpret recent movements in Continental philosophy and theory   such as speculative realism, object-oriented ontology, and criticisms of 'correlationism' in general   to be representative of precisely this trend toward a reinvigoration of scientific models in the humanities.   Both speculative realism and object-oriented ontology owe an intellectual debt to Gilles Deleuze and his 'difference philosophy.'   Thinkers such as Manuel DeLanda, John Protevi, and Miguel de Beistegui, among others, have successfully linked Deleuze's ontology to the sciences (sometimes in order to ground them), for instance, complexity and other dynamic systems theories. Deleuze makes more than occasional reference to these systems sciences.  For the space of this essay, we shall focus on the writings of Gilles Deleuze as representative of the reinvigoration of the use of scientific models in the humanities.

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[3] *Ibid*, 115.

With the application of the ontology of Gilles Deleuze and the general systems theoretical approach to the study of complex phenomena (from molecules to societies), the signs are present that we are in a position to ground the human sciences, as well as Girard's own theory of the scapegoat mechanism and of culture, broadly conceived, in a scientific framework. The adoption of such systems-theoretical, scientific frameworks and perspectives, undergirded by the 'difference philosophy' of Gilles Deleuze, might contribute to the amelioration of the current intellectual crisis in the humanities, but without returning us to forms of positivism that would seek to totalize the projects of the individual, humanistic disciplines under the banner of some intellectual progress.

We shall only speak to this briefly, but if this sort of promise seems to us reasonable, it is because the ontology of Gilles Deleuze is one that thinks difference in a fashion consonant with the form of intellectual pluralism demanded by the human sciences. Moreover, it is our contention that a style of thought that seeks to preserve the very differences that it thinks, similarly aims to preserve the cultures and cultural objects of its investigation, and enables those cultures, and even those objects, to 'speak' for themselves.

In this essay, then, I will offer the following readings:

1. I will interpret Rene Girard's theory of the scapegoat mechanism and his theory of the genesis of human culture on the model of a Deleuzian general systems theory. This becomes part of a determination to decide whether cultural theories may be adequately grounded using scientific models.

2. To do this, I shall first describe what a Deleuzian general systems theory is and how it operates.

3. However, since many readers may be skeptical of the idea of linking the work of Girard with that of Deleuze, especially in view of Girard's own scathing review of Deleuze and Guattari's *Anti-Oedipus*, "Delirium as System," I will begin this essay by reassessing Girard's review, focusing on its misinterpretations of *Anti-Oedipus* (mainly Deleuze's complex theory of desire).

4. Finally, then, in rereading Girard's review I shall draw out the profound affinities between Deleuze's and Girard's projects, affinities that neither Girard's own essay, nor the scholarship that has hitherto treated Deleuze and Girard's relationship, have done well to emphasize. Indeed, Deleuze and Girard may be thought together productively and toward productive ends.

There has been some attempt of late in the literature on Deleuze to read his philosophy as a theory of complex systems. While most of these attempts have focused on the connections between Deleuze's philosophy and complexity theory itself, it is rather more productive to read Deleuze's philosophy on the broader terms of a general systems theory. Complexity theory, after all, is but a species of general systems theory. If we find some discontent with the complexity theory readings of Deleuze, it is because in concentrating on only one among the many theoretical frameworks in the general theory, such readings end up confining Deleuze's philosophy to this particular complexity framework and thus, to the particular systems that this framework studies.

Complexity theory has been almost exclusively represented in the literature as a theory of living systems. Notwithstanding the banal assertion that Deleuze's philosophy took as its main concern living systems, this kind of description confines Deleuze's philosophy to a study of living systems in like

fashion, closing off Deleuze's philosophy to systems that are non-living, such as geological or atmospheric systems, or to systems that are linguistic, grammatological, or cultural an anti-Deleuzian act of equivocation undoubtedly. Since the general systems theory allows one to study all of these various systems with its comprehensive battery of concepts, it seems obvious that we would do better to think Deleuze's philosophy along the grain of a general systems theory. This gesture would of course be productive in the case of the present essay where the aim is to think the Girardian cultural system according to a Deleuzian general systems-theoretical framework.

Notably, Girard's work has already been taken up by thinkers more and less amenable to, and more and less consciously aware of, the general systems theory. Thinkers such as Ilya Prigogine, Francisco Varela, Paisley Livingston, and Jean-Pierre Dupuy come to mind readily. Girard, too, has in turn devoted much interest to the work of these thinkers. Chris Fleming highlights this point in his book Rene Girard: Violence and Mimesis (2004). He notes:

Another line of development stemming from explicitly Girardian problematics …can be seen in much of the significant intellectual output of the French CREA (Centre de Recherche en Epistémologie Appliquée), an institute whose members have included such esteemed thinkers as Francisco Varela, Jean-Pierre Dupuy, and Henri Atlan, and whose explicit mission it is to investigate the relationships between models of self-organization in the biological and physical sciences, and in cultural theory.[4]

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[4] Chris Fleming, *Rene Girard: Violence and Mimesis* (Polity Press, 2004) 154-155. "For instance, Varela (a neurobiologist) and Dupuy (a political philosopher) have together looked at theories of cognition in relation to Girard's work; Illya Prigogine, the Nobel-Prize winning chemist, has drawn explicit parallels between his notion of 'dissipative structures' and Girard's hypothesis of surrogate victimage; and the biophysicist Henri Atlan has discussed the notion of self-organization in physical systems and Girard's model of social upheaval and consolidation. One of the founding members of the CREA was Jeanne-Pierre Dupuy….Dupuy has done a lot of very interesting work at the intersections of political philosophy, systems

These facts should richly corroborate the assertion that Deleuze and Girard may be thought together productively and toward productive ends. For, the work of both has already been taken up and integrated into a general systems theoretical framework, including not only systems of biology, but within physical and cultural systems as well. First, I want to offer some assurance, over against Girard's own intuitions about the Deleuzian difference philosophy that the intellectual project's of each may be articulated on common ground.

Girard's principle contention with Deleuze's difference philosophy is expressed thusly: Deleuze and Guattari's Anti-Oedipus operates on a purely metaphysical principle of difference; their theory of desire, then, "has nothing to do with a real perception that discovers real objects in the real world. It is a pure differentiating principle that operates on a pure undifferentiated…it is the metaphysical dualism borrowed from Bergson" (Girard 1978).[5] The problem with this method, for Girard, is that a differentiating principle conceived in this fashion will tend to rely on a procedure of assimilation that fails to take into account either the real, empirical world the theory is supposed to explain (a speculative idealism as Girard highlights above), or the transcendental ground that conditions the empirical objects themselves.

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theory, economics, and cognitive science. He has brought Girardian thinking to bear on a startlingly wide range of fields, although, at present, relatively little of his work has appeared in English translation…. He has also engaged in the phenomenon of self-reference in philosophy, anthropology, economics, and critical theory, bringing the work of Girard to bear on….'tangled hierarchies.' Pointing to structural and logical isomorphisms between what he sees as tangled hierarchies in a variety of disciplines, Dupuy has brought an anthropological sensibility to the logical structure of formal systems; he argues, for instance, that self-referential paradoxes and self-fulfilling prophecies exhibit the 'logic of the sacred.'" The present essay, then, should be read as one in the series of studies that applies Girard's work to systems theory.

[5] René Girard. "Levi-Strauss and Contemporary Theory." *To Double Business Bound: Essays on Literature, Art and Mimesis* (Johns Hopkins University Press, 1978), 161. Though Girard's object of criticism in the quote above is Levi-Strauss's reading of myth and ritual, he levels the same criticism at Deleuze and Guattari's *Anti-Oedipus*, as I will show below.

Either of these conceptions, taken alone, will foster the metaphysical dualism evident in, for instance, Bergson's philosophy, which rejects a-priori the fact that:

> Symbolic thought demands both conjunction and disjunction [of the separate conceptions, conceived on a more complex theoretical economy]. If the observer is not familiar with the conjunction, he is likely to concentrate unduly upon it; failing to perceive its disjunctive role, he will mistake it for a complete assimilation.[6]

Again, while it is true that Girard has intended these last remarks for Levi-Strauss's reading of myth, we may accept that they would apply similarly to Deleuze and Guattari, especially since Deleuze's own metaphysics is indelibly Bergsonian and was perceived that way by the scholars of his intellectual milieu, such as Girard. Suffice it to mention for now that Deleuze's ontology, his philosophy of difference, is not dualist, though Bergson's was, and avowedly, in certain respects. These same criticisms could then indeed be applied to Deleuze's philosophy since Girard specifically accuses Deleuze in this article of committing the same sort of methodological errors as Levi-Strauss has in his own Bergsonism. Girard writes:

> [Levi-Strauss's] differentiating principle becomes more isolated and abstract than ever. He reinforces in his own work the very features that lead to the attitudes he deplores. The same epistemological nihilism moves the later work of Gilles Deleuze. His fluxification of all differences, in L'Anti-Oedipe, is a parodic mimicry and a confusion of the structural gesture par excellence: the differentiation of the flux. Differentiation itself, this time, turns undifferentiated, and the two together, more sacred than ever, are supposed to herald the schizophrenic liberation of our structuralist and capitalistic society. The all purpose differentiating machine is beginning to look like a played-out toy, a

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[6] *Ibid*, 161.

> primitive noisemaker, perhaps that must be agitated more and more wildly to keep the public and even its own users at least mildly interested. The metaphysical dualism is disintegrating from the inside but it still holds sway. It is natural for the entire venture to end up in the current solipsistic idealism of the linguistic structure.[7]

Girard's central concern here is that Deleuze's philosophy of difference, supporting as it does his theory of desiring machines, has become a grand metaphysical theory that can no longer separate out the transcendental ground of its assertions from the claims it makes regarding the empirical world without admitting a distinction between the two orders of being, a distinction that would render Deleuze's ontology dualistic. Thusly, it has become another overarching form of idealism, uncritical and, despite Deleuze's intentions, dualistic.

We believe that Girard's criticism of Deleuze's difference philosophy is based on a profound misunderstanding of Deleuze's transcendental empiricism, the method by which his difference philosophy operates. The transcendental empiricism is a method the object of which is to recover the transcendental structures that condition the empirical world in its actual diversity and not in its empirically apparent diversity. The transcendental empiricism is a method, to shift the terms of the discussion to ones closer to Girard's criticisms, that aims at thinking the undifferentiated as a differentiated unity and at thinking unities in their multiplicity.

Deleuze's transcendental empiricism works out of two main traditions, that of the more conventionally philosophical problematic of Kant's

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[7] René Girard. "Differentiation and Undifferentiation in Lévi Strauss and Current Critical Theory." *Directions for Criticism: Structuralism and Its Alternatives*. Edited by Murray Krieger and L.S. Dembo. (The University of Wisconsin Press, 1977), 133.

Transcendental Deduction and that of the structuralist problematic of thinking invariances in the various semiotic systems. In Kantian terms (a thinker Deleuze of course constantly referenced), Deleuze's transcendental empiricism aims to offer a unique solution to the problem of how it is that concepts apply to the specific objects of intuition (the problem of the Transcendental Deduction). Since the Deduction is that Kantian problematic that marks the relationship between the classical empiricist and idealist accounts, Deleuze's transcendental empiricism continues this very project, but in the more structuralist sense in which we no longer speak of a foundational subject and subjective a-priori conditions of synthesis.

That said, what then is the nature of the relation between transcendental philosophy, that is, an account of conditioning, and thinking empirical difference, the conditioned in experience? If we can accept that difference is precisely that which is determining, then the attempt to think difference is the attempt to account for that by which thought contents are determined such that they are that thought content and no other. In terms of experience, the task to think difference is that of thinking that by which the given in experience is determined as given, to be the given as such. The particular inadequacy of the Kantian transcendentalist position, at least in its endeavor to think difference, is that it begins with the thesis that concepts and intuitions are of different orders of being. Following from this, intuitions appear external to concepts such that a synthesis of the two orders of being is required for the production of experience. Hence the need for the following Kantian requirements if the circle shall be squared and a dualism avoided: the elaboration of the conditions by which experience is possible at all, and for the invention of a subjective faculty capable of synthesizing the two orders of being so that grounded and justifiable knowledge may be generated. The problem of thinking difference

arises most harshly for Kant when the attempt is made to offer a complete determination of experience. Since concepts remain for Kant merely formal, external principles that can account for that by which intuitions are given only in principle  that is, concepts can account the formal but not singular differences of the given in experience   they are unable to deliver complete, that is, fully determined knowledge of the given. So long as we keep to these requirements, we can see how the transcendental idealism proves inadequate.

Deleuze's own resolution of the failure of Kant's Deduction can be stated on the following terms: not to specify determining differences as posits, but to account for the specific production of the given. For Deleuze, to account for the specific production of the given is to think difference, and thinking difference is precisely the task that his transcendental empiricism promises to achieve. Deleuze's own transcendental empiricism moves beyond accounts of simple conditioning (transcendentalist) in that it is able to determine 'real' experience. Similarly, transcendental empiricism is able to move beyond empiricist accounts in that it is able to specify the real conditions by which determining differences, the singular in nature and experience, are given. This will become apparent once we return to Deleuze's particular form of structuralism, which we would like to understand in view of general systems theory. Under these problematics, we shall see that it is only when difference is understood in itself   and not in relation to pre-established forms of identity  to be productive of multiplicities, as an auto-production of difference, that determining difference can be thought.

We should not confuse the terms system and structure, however. In his article Deleuze and Structuralism" Towards a Geometry of Sufficient Reason," Tim Clark highlights the essential difference between structure and system in

Deleuze's difference philosophy.8  It is because Deleuze's notion of structure is different than the conventional structuralisms in its specific implementation of the modal concept of the virtual that it is not subject to the Girardian criticisms of Levi-Strauss's own form of structuralism, a form of structuralism that is indeed a moment of the "the current solipsistic idealism of the linguistic structure," to use Girard's phrase.  If the Deleuzian structuralism avoids this criticism it is because Deleuze intends structure to refer to a virtual field that conditions the various empirical structures, instantiated in systems (linguistic, physical, social, etc.) diachronically, and with regard to their genetic determinations.  Thus we see that Deleuze's structures are virtual, and issue into real world systems, into empirical subjects and objects:

For Deleuze, then, static genesis goes from the virtuality of structure to the actuality of its incarnation.... By employing this distinction, but following Deleuze's substitution of virtual and actual for possible and real, virtual structures can be understood to be incarnated in actual systems, static genesis being understood as the passage from structure to system.  This passage is one of logical or static determination: the space and time immanent to virtual structure determine the spaces and times of actual systems.9

Along these lines, Deleuze's notion of different/ciation describes the very process Murphy calls the movement from the virtuality of structure to the actuality of its incarnation.  This movement unfolds in a continuous state of open-ended transformation.  Thus we see that Deleuze's structures are virtual, and issue into real world systems.   We may liken the Deleuzian virtual to the undifferentiated ground of which Girard speaks.  Accordingly, the notion that

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8 Tim Clark. "Deleuze and Structuralism." *Deleuze and Philosophy: The Difference Engineer*. Edited by Keith Ansell Pearson. (Routledge, 1997), 58-72.
9 *Ibid*, 67.

the virtual is structured means that the undifferentiated is differentiated in Deleuze and does not imply, as Girard may suspect, "the fluxification of all differences." Thusly, Deleuze's transcendental empiricism, once appropriately understood, is not susceptible to the following Girardian criticism that mistakes the unconscious, or virtual, for an undifferentiated field of more and less random material flux:

Desire, we have seen, has nothing to do with persons. On the side of the unconscious, there are only parts in 'desiring machines.' This is the level we can call infra-individual, here called 'molecular.' At the other extreme, there is the collective level, the 'world-historical,' also defined as 'molar.' There is nothing, or almost nothing, between the two. Deleuze and Guattari put considerable talent and staggering rhetoric at the service of a cause they deem deserving: the destruction of everything in between and the avoidance of any concrete problematic of desire.[10]

Once we see that the unconscious is structured in a highly specific fashion, by the virtual structures themselves, then we can accept that desire is produced concretely, in actual systems, even if its nature is altered in the process, a point Deleuze anticipates. The general systems theory augments the distinction between the virtual and the actual in its study of the relationships and processes of transformation between the virtual structure and the actual

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[10] René Girard. "Delirium and System." *To Double Business Bound: Essays on Literature, Art and Mimesis* (Johns Hopkins University Press, 1978). Girard has elaborated his concern on the following terms: "If true desire is unconscious and still crushed by repressive codings, even in capitalism, how do the two authors know it exists? It is especially the delirious forms of schizophrenia that inform them, since these forms explode suppression in order to free true desire. In this delirium, all effective attitudes, all structural positions, all conceivable and inconceivable identifications appear juxtaposed , without exclusion or totalization of any kind, in perfect openness and readiness to accept constantly new forms….The authors certainly do not intend to exclude the Oedipus complex, at least at a certain moment in the critique, but they want to include it and absorb it on the same grounds as everything and anything, dispelling its full import through an excessive inclusion, so to speak." From "Delirium and System," pp. 84-85.

systems determined by these virtual structures. The process of differentiation refers to the first part of Deleuze's equation 'different/ciation,' that equation which specifies the differentiation of the virtual (or undifferentiated for Girard) and describes the formation of virtual problematic fields, which are united through the relations of singularities. This is the first stage in the creation of a new actual form, an organized system.

Placing the validity of Girard's reading of Deleuze's structuralism and his principle of differentiation aside, we want to turn to what we believe to be Girard's underlying concern about the Deleuzian philosophy. Speaking to his reservations with the current intellectual milieu, characterized by a methodological dogmatism that stifles the philosophical enterprise under the slogan of the death of metaphysics, Girard has stated this concern well. We suspect that Girard includes the work of Deleuze (and Guattari) among those guilty of that "poststructuralist and philosophical temptation" that would "fail to mention the domain of application where imitation is inevitably conflictual: appropriation" (Girard 1978).[11] What the poststructuralists and philosophers miss in this domain is the particular way in which [mimetic desire] is structured by a (scapegoat) mechanism of desire that would not be Hegelian and would not be "specifically human."[12] Girard recasts this point in an interview where he addressed a polemic with Philippe Lacoue-Labarthe. As Girard has it:

My first objection is that the author does not see the real basis for my quarrel with Plato. Plato's problematic fails to mention the domain [of appropriation]. No one has ever perceived that failure. Everybody always imitates Plato's concept of imitation. As a result of this curious mutilation, the reality of the threat imitation poses to the harmony and even to the survival of

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[11] *Ibid*, 201.
[12] *Ibid*, 201.

human communities has never been correctly assessed. The omission by Plato of acquisitive mimesis as a source of conflict is paradoxical because Plato still shares but cannot justify the universal terror of primitive communities for mimetic phenomena. Thus, the dynamics of mimetic rivalry are rooted in a disputed object and not in that "Hegelian desire for recognition" that I have always viewed as derivative insofar as it resembles Hegel's of more elementary mimetic interferences over an object. At that elementary level the word desire is not appropriate…. In order to perceive the disconcerting simplicity and elementariness of that starting point, one must realize that mimetic rivalry is not even specifically human.[13]

We believe that Girard's concern with the following cannot be expressed as a concern with Deleuze's philosophy, all mentioned in the passage above. Deleuze's philosophy cannot be said to: 1) neglect of the domain of appropriation, 2) be subsumable under the Hegelian theory of desire and 3) sound a specifically human tenor of mimetic rivalry. If we believe that Girard's concern cannot be extended to Deleuze's philosophy it is for the following: 1) in his own reading of Plato,[14] Deleuze finds a concept of appropriation in Plato's theory of Ideas,[15] 2) Deleuze's theory of desire is decidedly anti-Hegelian and proceeds by a method of triangulation that may have more in common with Girard's own theory of desire than may be assumed by Girardians,[16] and 3) Deleuze's theory of desire is not-human centered.

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[13] Not the original source, but cited in, *Mimesis in Contemporary Theory*. Edited by Mihai Spariosu. (John Benjamins Publishing Company, 1984), 80.

[14] See appendix to Deleuze's *The Logic of Sense* (Columbia University Press, 1990), appendix: "Overturning Platonism."

[15] Deleuze reads Plato's theory of Ideas as a theory of appropriation. For Deleuze, the Platonic Idea offers a transcendental criterion for differentiating between true and false claimants in an agora of competing claimants, claims.

[16] Deleuze's theory of desire applies first to an unconscious that produces subject based on its own desire and not on the desire of any subject, as in Hegel.

While there are numerous, if surprising, similarities between Girard and Deleuze, we shall concentrate on only one of them for the space of this essay. We shall concern ourselves with their theories of the production or genesis of complexity in actual, empirical systems. Again, I want to argue that Girard's theory of the scapegoat mechanism as the generator of culture can be thought productively on the Deleuzian general systems theory where it can find a perhaps more rigorous, scientific ground. While Girard's theory of the scapegoat mechanism is a genetic theory, I want to concentrate on the way his work has been taken up and directed by Paisley Livingston, systems theorist and Girard scholar. Because Paisley Livingston has already set the Girardian generational theory (Girard's theory of the scapegoat mechanism) in a systems theoretical context, in concentrating on Livingston's particular adaptation of Girard (one Girard has endorsed), I shall be able to make more direct links with Deleuze's own 'genetic' theory of systems.

Now that we are in a position to accept that the projects of Deleuze and Girard are rather more similar than Girard himself may have suspected, or than is reflected in the literature that makes joint use of the two, scant though it be, we may return to Girard's important conviction about the nature of the epistemology of the human sciences. Girard's conviction below echoes Deleuze's own sentiments about the nature of philosophical enterprise. Again, Girard had stated:

> The present cognitive nihilism is rooted in a purely philosophical idea of truth and of the means to reach that truth. All established methodologies, such as structuralism, are dogmatically bound to the idea of truth. The sciences of man in their past and present state still share in an ideal of direct mastery and immediate evidence that is the epistemological dimension of what Derrida calls "the metaphysics of presence." This avaricious ideal dominates both empiricism and phenomenology, which are never abandoned without a fight because their

practitioners cannot see any other possibility of knowledge. As a result, most people feel today that the end of all certain knowledge has arrived. The only intellectual activity they conceive is the interminable and the solemn burial of "Western philosophy." I believe the opposite to be true. When the failure of all dogmatic methodologies is fully acknowledged, the scientific threshold is close. We are about to give up that grasping and avaricious ideal that makes it unthinkable for the researcher to move away from the data and, in his despair, humility, craftiness, or mere idleness, look for possible clues in areas distant enough from these data to have been left unexplored until then, clues that obviously cannot yield the kind of direct evidence sought by the dogmatic methodologies. This is the threshold of hypothetical knowledge.[17]

Girard has here anticipated the attitude we believe to characterize the Deleuzian general systems theory view, which accepts that science may usefully inform philosophy. It is only when the two disciplines intersect that we may find ourselves on the threshold of hypothetical knowledge, as Girard attests. Girard extends his crucial point about the death of philosophy. We quote it at length for its importance to the connections we wish to draw between Girard's work and Deleuze's:

> I take the death of philosophy seriously, I repeat, but to me this death can only mean once more what is already meant in the other areas from which philosophy and the philosophically inspired dogmatic methodologies have been successfully dislodged: the crossing of a scientific threshold. Questions these methodologies cannot successfully answer will be answered in a scientific framework....If I am right about victimage, if not only ritual but hominization itself are dependent on this process, the consequences are no less shattering for modern than for traditional beliefs and it might be prudent to postpone the final theoretical reprise for a while. This is a task that I will never complete, I am afraid. Judging from

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[17] René Girard. "An Interview With René Girard." *To Double Business Bound: Essays on Literature, Art and Mimesis* (Johns Hopkins University Press, 1978), 213.

past history it can already be seen that the old effort to turn the study of man into a science is far from dead and ultimately it will triumph.[18]

Deleuze scholar John Protevi states this attitude on similar terms, marking, too, the centrality of escaping the paradigm of the dogmaticist and ushering in, in its place, a method that would concern itself with a hypothetical, scientific principle. This principle would be the productive or genetic mechanism, whether it be the Girardian scapegoat mechanism or the Deleuzian transcendental empiricism methods similar indeed that conditions the occurrence and behavior of actual, empirical systems from a structured, transcendental ground. On these points, Protevi writes:

> Although the work of Jacques Derrida is a magnificent achievement and a lasting contribution to the tradition of post-phenomenological European philosophy, it is, while still necessary to any progressive philosophical and political practice, primarily of propaedeutic value in the reflection on and intervention into the convergent fields assuming the highest importance in the material structuring of the current global system of bodies politic: recombinant genetics, cognitive science, dynamical systems theory and others. Derrida's work, though destroying the self-evidence of the various identification machines at work today-the naturalized self-images of nations, races, genders, subjects and so on-by inscribing the production of meaning in a world of 'force and signification', can only prepare the way for the radicality of Deleuzean historical-libidinal materialism: the principles guiding the empirical study of forceful bodies politic in their material production.[19]

Protevi's remark echoes Girard's own lamentation over the preponderance of the dogmatic methodologies in the current intellectual milieu, a preponderance typified by the Derridian deconstruction of

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[18] René Girard. "An Interview With René Girard." *To Double Business Bound: Essays on Literature, Art and Mimesis* (Johns Hopkins University Press, 1978), 216.
[19] John Protevi. http://www.artsci.lsu.edu/fai/Faculty/Professors/Protevi/Introduction.html.

metaphysics. The Deleuzian general systems theory may deepen our hypothetical knowledge by providing the ontological principles by which the scientific fields may find their experimental foundation. Moreover, after we describe in fuller detail what the Deleuzian general systems theory is, we shall be in a position to read Girard's scapegoat mechanism, a genetic theory of the genesis of culture, on these terms.

First, what is general systems theory? General systems theory is "a complex of theories, concepts, and commitments that signifies, as Von Bertalanffy largely considered the theory's founder surmised in 1928:

> "...a change in the world picture that constitutes 'a new natural philosophy.' The systems movement is an 'interdisciplinary discipline'; a specialty traversing traditional specialties, and an open avenue toward general theory, linking and integrating the fragmented pieces of contemporary scientific thought. It is a mode of organizing existing findings in the human sciences in reference to the concepts of systems, and systemic properties and relationships."[20]

The systems view gives us a perspective for viewing the human organism and its diverse ways of being (linguistic, cultural, and political), including the metaphysical and theoretical delights and frustrations it takes in the very activity of thought, in the greater context of nature.[21] In describing the system as a natural one, we may both: 1) return to an idea of a 'new philosophy of

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[20] Ervin Laszlo. *The Relevance of General Systems Theory* (Braziller: New York, 1972), 4.

[21] Ervin Laszlo. *The Systems View of the World: The Natural Philosophy of the New Developments in the Sciences* (New York: George Braziller, 1972), 4. "Systems sciences are springing up everywhere, as contemporary scientists are discovering organized wholes in many realms of investigation. Systems theories are applied in almost all of the natural sciences today, and they are coming to the forefront of the human sciences as well." We choose this remark from Laszlo, one of the early popularizers of systems thinking, for its relevance to the theme of this essay: the deployment of systems thinking and methods in the human sciences."

nature,' and 2) overcome the 'life-centered' complexity systems theoretical view, which I have alluded to above.

General systems theories attempt to determine the internal evolutions of systems as these systems progressively differentiate themselves as an effect of the perturbations, or shocks, they receive from being embedded in their various environments. This process of progressive determination may be divided into two phases, ontologically indistinct:

1) the progressive differentiation is first determined according to a static genesis, or, analysis of the virtual structures, or attractors of the phenomenon under consideration. This would correspond to its virtual, or transcendental determination, and would refer us to a realist ontology independent of the human mind;

2) the progressive differentiation of a system would be determined dynamically, according to a complete determination of the system under consideration. This would correspond to a mapping of the initial singular point and those ordinary points of the actual system, conceived according to the amount of change the system may undergo before transforming itself into a distinct phenomenon, marking another singular point.

General systems theory may be understood on the model of the Deleuzian difference philosophy and its ontology. This is so insofar as it may make use of those philosophical concepts and forms of thought common to Deleuze's project. One of the important goals of our project will be to read the general systems theory along the grain of those same philosophical concepts and forms of thought that informed Deleuze's own philosophy. For instance,

we shall see the applicability of transcendental philosophies such as Kant's to the general systems theory inasmuch as Kantian transcendental philosophy allows us think a set of conditions for appearances that are not themselves perceivable in the appearances themselves.[22]  This would correspond to the distinction in Deleuze's philosophy between the virtual and the actual, and in general systems theory, between the patterns of regularity systems are meant to represent and the epiphenomenon they are meant to capture, model, and often predict.  With these philosophical concepts, the epistemology of general systems theory may begin to escape the egregious dogma that the phenomenon is something that exists in itself in its own right and that epistemology is but a representation of these things as they are in themselves, a view enforced by classical thermodynamics, with its propensity to consider only the final states of the phenomena under consideration.

Stated succinctly, Deleuze's transcendental empiricism is a general systems theory that attempts to explain the genesis of complex forms (subjects and objects, but also larger aggregates, such as communities and cultures) through the material of intuition itself.  Put otherwise, Deleuze's attempt, like other systems theoretical accounts, is a genetic, or morphogenetic account of how it is that forms or structures arise from the matter, from the merely given, in the manifold of sensation.  Empiricism, or the theory of how intelligibility is manufactured from matter (sense-data), becomes transcendental, then, when it is explained how it is that that matter is already intelligible (conceptual, ideal), but also, and crucially, how it is that that matter may generate its own intelligibility (namely, without the aid of a subject, transcendental, empirical, etc.., in any case, an operator of this nature).

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[22] This formulation owes a debt to Levi Bryant.

Under the revisions of the Deleuzian and systems theoretical paradigm, a criterion of spontaneity maintains. This criterion asserts the following: that matter, the given in experience, or the manifold itself, generates forms (of sensibility, concepts, Ideas, as well as of objects, objectivities, worlds or umwelts), including subjects constituted alongside object syntheses spontaneously, through the resources of matter itself. The criterion of spontaneity here outlined contains both an architectonic and a mechanics, the two are interdependent, distinct only formally. The architectonic consists in a catalogue of materials: 1) all manner of forms of matter (so, too, its potential or virtual intelligibility), that is, any set of elements: physical particles (sub-atomic, atomic, molarities), biological elements (cells, organs, organ systems, populations, etc.), linguistic elements (phonemes, words, sentences, languages), cultural elements, populations, rituals, practices, etc., as well as 2) the variety of possible relations within these classes of elements, and 3) the series of singularities, or distinct form-matter pairings, these elements generate in the various relations and interactions they undertake.

The mechanics again, inseparable from the architectonic consists in the processes by which these elements and classes of elements entertain relationships, along with the singularities these elements emit in relationship, organizing themselves into distinct phenomena. Thusly, the architectonic and the mechanics of this Deleuzian, systems-theoretical account implied in the criterion of spontaneity may explain the constitution of real experience, that is, both objects as seen from the perspective of an observer (for instance, the human whose perception is confined to an apprehension of spatialized extensities) and the virtual in experience, the implicated intensities or fields of potential from which the observed objects emerge.

On these systems theoretical terms, Deleuze's endeavor should be taken to be an account of how sensibility itself is generated. The criterion of sensibility is met, for Deleuze, by way of difference itself. For Deleuze, difference is that by which the given in experience is given; it is the principle by which the given in experience is produced. He says in Difference and Repetition, "Difference is not diversity. Diversity is given, but difference is that by which the given is given as diverse."[23] Thus, we see that difference itself is the differentiator internal to the field of sensibility. Difference differentiates itself, through passive, spontaneous syntheses, simultaneously into both a self-sustaining system, with its forms of sensibility and an environment (umwelt), with its corresponding objects.

Again, it is through the satisfaction of the criterion of sensibility, through its passive syntheses, that Deleuze's ontology qualifies as a systems theory. In his later theory, the systems theoretical components of Deleuze's philosophy have been examined most carefully by Manuel De Landa. De Landa has argued, in systems theoretical terms, that Deleuze and Guattari's theory of abstract machines also satisfies the criterion of sensibility:

> The concept of the BwO was created in an effort to conceive the genesis of form (in geological, biological, and cultural structures) as related exclusively to immanent capabilities of the flows of matter-energy information and not to any transcendent factor, whether platonic or divine.[24]

If we are to productively read Deleuze's philosophy as a systems theory, we should concentrate on the idea of genesis, which can be viewed as a type of

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[23] Gilles Deleuze, *Difference and Repetition*. Trans. Paul Patton (Columbia University Press, 1994), 222.
[24] Manuel DeLanda. *A Thousand Years of Non-Linear History* (Zone Books, 1997), 263.

synthesis. I define synthesis as the manner in which the genesis of the sensible is undertaken. This form of synthesis can augment an account of the sufficient, and not merely necessary, conditions of the sensible. That is, in accounting for the precise genesis of the sensible, without recourse to transcendent principles of its constitution, Deleuze offers us a version of synthesis that would lead from the necessary conditions of experience of the sensible all the way to the sufficiently singular being of the sensible itself. Rather than synthesis being a function of the mental/conceptual activity of the transcendental unity of apperception, Deleuze's transcendental empiricism grants a synthetic power to the sensible itself. But of course systems theories have long been deployed in attempts to explain phenomena of self-organization.

For Deleuze, the sensible synthesizes its formed matters in a process of what he calls (especially in the Logic of Sense) 'counter-actualization,' while the virtual structures we have spoken of reciprocally determine or synthesize the sensible in a process of actualization. From the point of view of this process of (counter-) actualization, Deleuze has described the spontaneous synthesis of the sensible according to a theory of differentials $(dy/dx)$, or spatio-temporal dynamisms. The differentials are components of the virtual multiplicity that act as the conditions of actualization of the empirical world. The differentials may be considered, too, as forces, but are meant to signify the genetic, or sufficient conditions of experience, ultimately immanent to the actual, empirical system itself, that are that by which the given in experience is given. The process of actualization is one in which the differentials spontaneously generate what it is that we come to perceive empirically as extensities so that the differentials can be said to 'preside over the formation of extensities.' That difference in-itself is 'covered over' in the process of actualization does nothing to alter the

ontological unity of the two domains of experience. The important observation to make is that it is the sensible itself, via the spontaneous activity of its differentials, the elements, and singularities produced among these elements in the specific relations they entertain, that is responsible for the production of the sensible (experience) and not consciousness itself. Accepting that the virtual multiplicities are the very being of the sensible, those structures that produce real world systems themselves, then, we see quite clearly the sense in which the sensible generates itself spontaneously, through its own immanent resources, and how, by extension, it satisfies the requirement of spontaneity of a systems theory.

If we are to read Girard's theory of the genesis of culture according to the scapegoat mechanism on the terms of a Deleuzian general systems theory, then we shall have to establish the parameters that would define the cultural system Girard refers to. Once we have in mind those elements that would constitute the cultural system, we may attempt to posit the virtual structures that would have given rise to these elements according to the precise mechanism of their production. It is here that we consult the work of Paisley Livingston. In a systems theoretical, genetic study of Girard's cultural system, Livingston has already enumerated these elements. These elements are a reformulation of the scapegoat mechanism itself. This point must be borne in mind.

Here we borrow from the "genetic hypothesis" of Paisley Livingston25 in order to provide a first, schematic presentation. We may observe that the

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[25] Points (a)-(e) of Genetic Hypothesis taken from Paisley Livingston. "Girard and the Origin of Culture." *Understanding Origins: Contemporary Views on the Origin of Life, Mind and Society.* Ed. Varela, Dupuy. (Kluwer Academic Publishing), 91-110.

following moments are essential to Girard's basic scenario of the genesis of the cultural system:

(a) The natural emergence or evolution of primates. Their social order is regulated by instinctual behavioral patterns, and above all else, by patterns of dominance and submission (this stage presupposes the existence of a natural environment, the emergence of life, and so on).

(b) The natural emergence of hominids characterized by increasing degrees of mimesis, and in particular, by so-called 'appropriative mimesis.' This mimesis generates typical sequences of interaction involving rivalry and violence.

(c) As a result of this emergence of intraspecific rivalry among hominids, there occur crises of violence that are disruptive of activities and relations within the hominid groups.

(d) The resolution of these crises of violence occurs by means of the mimetically-driven convergence of the group's behavior on the interactive patterns of victimization: the configuration of 'the many and the one' is the basic pattern of social order, realized through this mimetic convergence

(e) As a consequence of (d), there emerges a form of 'non-instinctual attention', beginning with mythical attitudes toward victims of collective violence (distorted images of the victim are wrongly perceived as cause of the crisis and its resolution whence the structuring of sacred representations around the two poles maleficence and beneficence). The symbols of the sacred are in turn the foundation of the diversity of cultural institutions, starting with myth, ritual, and sacred prohibitions.

Livingston's interpretation of the scapegoat mechanism, his catalogue of elements, represent not the empirical traits of an organized cultural system, but

rather the transcendental, virtual pre-conditions for the actualization of a more complex cultural system, the human cultural system. Livingston notes:

> Girard describes a hypothetical natural starting point for culture in a scenario that has multiple presuppositions. One of the most basic premises in his discussion of hominization is that language, symbolism, and representation were not always there, but emerged as a result of natural processes. He posits an 'origin' only if we mean by this an account of the possible antecedent conditions of the emergence of a particular set of phenomena. These conditions are extremely complex, and reference to them in Girard's hypothesis entails a commitment to many far-reaching assumptions.... some very complex natural conditions and behavioral patterns must be in place for the scenario to be realized, and these are conditions that could only make sense within a naturalist account.[26]

Here, then, we can see the power of the Deleuzian philosophy. Deleuze's transcendental empiricism offers us the 'naturalist' methodology by which we would determine, from our hypothetical elements, the virtual structures of the produced cultural system, that is, the principle of production of the cultural system to be explained. The merit of any particular principle, however, must be evaluated according to the empirical data it yields. Paisley Livingston has echoed this point:

> Girard's anthropology should be approached as a scientific project in which hypotheses are formed so that they may be evaluated in terms of available evidence.... I shall be discussing Girard's analysis uniquely within a very general naturalist framework that assumes a realist scientific epistemology.[27]

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[26] Paisley Livingston. "Girard and the Origin of Culture." *Understanding Origins: Contemporary Views on the Origin of Life, Mind and Society*. Ed. Varela, Dupuy. (Kluwer Academic Publishing), 91-110.
[27] *Ibid*, 93.

Speaking to his Girard concurs:

> Far from spelling the end of all knowledge, as the dogmaticist takes for granted, the gap between the hypothesis and the data becomes the space of verification…I mean simply that the victimage mechanism looks different enough from any existing religious practice, such as specific sacrifice, in a specific cultural context, or a specific sacred monarchy, etc., to cause the dogmaticist to shrug his shoulders and throw away the book in despair. But this very lack of resemblance is the sole reason for which the hypothesis can be concretely tested against an enormous variety of data. Either it will be possible to move from unanimous victimage to the specific data through fully intelligible steps or it will not. If these steps can really be taken in the case of one institution first, then a second, then a third, etc., the moment must come when the hypothesis becomes inescapable. It has proved its power as a generative mechanism of primitive religion.[28]

Thus, Girard himself speaks of the Deleuzian general systems theoretical notion of a generative mechanism that would not be a purely empirical description of a state of affairs, but rather an attempted articulation of the transcendental genesis of human culture.

So it is that we may accept that Girard's scapegoat mechanism may represent the virtual structure of the human cultural system. But how do we move from the virtual structures or pre-conditions to the actual, empirical system, from the principle to the date to be explained? The answer to this question is to be found, too, in Deleuze's philosophy. John Protevi has stated this procedure well. Borrowing from Henri Poincare's idea of a phase space that would offer a visual representation of the behavior of dynamic systems, Protevi specifies the instructions for the mapping of a specific systems behavior. We shall see that Girard's theory of the genesis of culture, the

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[28] René Girard. "An Interview With René Girard." *To Double Business Bound: Essays on Literature, Art and Mimesis* (Johns Hopkins University Press, 1978), 214.

scapegoat mechanism, may be mapped accordingly. Protevi outlines the following methodological points:[29]

1. Identify important aspects of a systems behavior, its "degrees of freedom."

2. Imagine or model a space with as many dimensions as the degrees of freedom to be studied.

3. Represent each state of the system by a single point, with as many values as there are dimensions

4. Follow the movement of the point, which represents the changing states of the system as it produces a line, a trajectory, through phase space.

5. Attempt to solve the equations governing the line and thereby predict the system's behavior.

Although I do not have the space to fill in the gaps of Protevi's more abstract points above, suffice it to say that in our effort to read Girard's theory of the scapegoat mechanism on the systems theoretical mapping procedure, in a phase space model, we ought to accept that point 1, above, would include an identification of the observationally remediable features of mimetic desire.[30] After all, for a general systems theorist, the precondition of individuation is the metastable system. Here we think of Girard's description of runaway appropriation, mimesis. Certainly systems characterized by runaway

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[29]The following list has been taken from Protevi's helpful essay at, http://www.artsci.lsu.edu/fai/Faculty/Professors/Protevi/DG/complexity.html

[30] Paisley Livingston. "Girard and the Origin of Culture."*Understanding Origins: Contemporary Views on the Origin of Life, Mind and Society.* Ed. Varela, Dupuy. (Kluwer Academic Publishing), 94-95. "Girard argues that his concept of mimesis makes it possible to raise the question of hominization and the emergence of symbolicity within a naturalist framework. An understanding of how this mimesis works is crucial to the whole theory, for this mimesis, while it has a natural origin, is in turn the origin or determining conditioning behind the patterns of action and representation held to be constitutive of a specifically human social order. In Girard's theory…temporal and etiological priority belongs to animal mimesis, no to desire, representation, victims, the sacred, violence, and so on, because it is this mimesis that is posited as a necessary causal condition of phenomena associated with all of these other terms. And this mimesis itself has an origin insofar as it is said to have evolved or emerged as a natural reality within the natural universe."

appropriation are certainly metastable and this is evident inasmuch as they are pervaded by violence. Points 2-5 prove to be more mathematical in orientation and so, for now, we will discuss the more relevant procedure which follows upon our initial mapping of the virtual potentials or structures. I also borrow the following description from Protevi:

> The patterns found in the phase space of self-organizing systems have various virtual features, such as "attractor," "bifurcate," and "zone of sensitivity," which are the respective names for: 1) a region of phase space toward which systems tend once their states approach a certain condition or "basin of attraction"; 2) points at which systems flip between one region of phase space and another (bifurcators thus represent trigger points when a system changes patterns); 3) a region where bifurcators cluster and amplify each other's effects, so that small differences in the system's parameters can provoke drastic changes in behavior (zones of sensitivity thus represent crises in the "life span" of a system)....The concept of the virtual is thus a way to understand the relation of any system to the probabilities of its behaviors.[31]

Although this point introduces terminology that we do not have the space to adequately define, we may imagine the following: Point 1) above would refer to Livingston's points (a) and (b), above, the meta-stable pre-condition of runaway appropriation, mimesis, and violence preceding the emergence of human culture. Points 2) and 3) above would, taken together, refer to Girard's so-called originary act of sacrifical violence,[32] or Livingston's point (c) above, that is, the act which triggers the actual, emergent human cultural order from the virtual pre-conditions.

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[31] Protevi. http://www.artsci.lsu.edu/fai/Faculty/Professors/Protevi/DG/complexity.html

[32] Rene Girard. "An Interview With René Girard." *To Double Business Bound: Essays on Literature, Art and Mimesis* (Johns Hopkins University Press, 1978), 218. "Even the most banal scapegoat effect is an unconscious structuring process....As these dynamics would unfold, victimage effects would come under our grasp, no doubt, but there remain less and less to be grasped."

We believe that Girard would affirm this sort of construction. After all, he remarked:

> ...unanimous victimage, for me, far from being an uninterrogatable given, has become the primary object of investigation. There is nothing metaphysical or mystical about its relative inaccessibility. The only "real" scapegoats are those we are unable to acknowledge as such...We should regard it...the one mechanism truly able to supplant and supersede all the earlier solutions to the paradox of human culture and the human subject.[33]

The mechanism and the consequences of these connections clearly demand fuller explanation, but for the space of this essay that will not be possible. The preceding has been only a sketch of the Girardian theory of the genesis of culture, with its fundamental scapegoat mechanism, grounded in the Deleuzian general systems theory within a scientific account, but we believe that the sketch outlines deeper, more profound correspondences that ought to be examined. For, Girard's anxieties over the intellectual crisis in the human sciences have hardly been mollified. Meanwhile, the question of whether they should be mollified remains crucial to what it means to practice the human sciences.

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[33] *Ibid*, 218.