

## UNDERSTANDING ORIGINS

BOSTON STUDIES IN THE PHILOSOPHY OF SCIENCE

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VOLUME 130

# UNDERSTANDING ORIGINS

*Contemporary Views on the Origin of  
Life, Mind and Society*

*Edited by*

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Springer-Science+Business Media, B.V.

**Library of Congress Cataloging-in-Publication Data**

Understanding origins : contemporary views on the origin of life, mind, and society / edited by Francisco J. Varela and Jean-Pierre Dupuy.

p. cm. -- (Boston studies in the philosophy of science ; v. 130)

"The material comes from an international meeting in September 13-16, 1987 at Stanford University"--Introd.

Includes index.

1. Life--Origin--Congresses. 2. Social structure--Origin--Congresses. 3. Cognition--Origin--Congresses. 4. Money--Origin--Congresses. 5. Money, Primitive--Congresses. I. Varela, Francisco J., 1945- . II. Dupuy, Jean-Pierre, 1941- III. Series. QH325.U53 1991

577--dc20

91-15433

ISBN 978-90-481-4090-9

ISBN 978-94-015-8054-0 (eBook)

DOI 10.1007/978-94-015-8054-0

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*Printed on acid-free paper*

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Originally published by Kluwer Academic Publishers in 1992.

Softcover reprint of the hardcover 1st edition 1992

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## PREFACE

The main intention of this book is to bring together contributions from biology, cognitive science, and the humanities for a joint exploration of some of the main contemporary notions dealing with the understanding of origins in life, mind and society.

The question of origin is inseparable from a web of hypotheses that both shape and explain us. Although origin invites examination, it always seems to elude our grasp. Notions have always been produced to interpret the genesis of life, mind, and the social order, and these notions have all remained unstable in the face of theoretical and empirical challenges. In any given period, the central ideas on origin have had a mutual resonance frequently overlooked by specialists engaged in their own particular fields.

As a consequence, this book should be of interest to a wide audience. In particular, for all those engaged in the social sciences and the philosophy of science, it is unique document, since bridges to the natural sciences in a mutually illuminating way are hard to find. Whether as a primary source or as inspirational reading, we feel this book has a place in every library.

The material comes from an international meeting held in September 13–16, 1987 at Stanford University, organized by F. Varela and J.-P. Dupuy at the request of the Program of Interdisciplinary Research of Stanford University. We are grateful to René Girard, the Program Director, for making it possible with the help of the Mellon Foundation. Our thanks also to Laurence Helleu for her skillful editorial help in the preparation of this book for publication.

In preparation for the Symposium, Andrew McKenna, André Orléan, Stuart Kauffman, Thomas Bever, and Francisco Varela were asked to prepare position papers which were circulated in advance to invited discussants who presented their comments during the meeting itself. The full program and list of participants is included in an Appendix. This book contains revised and updated versions of the position papers, a selection from discussants' presentations, and special lectures given by René Girard and Umberto Eco. The exception is the section on the

'Origin of Language' and Bever's paper, which, for various reasons, could not be included in this book.

The Introduction that follows provides the reader with a more detailed idea of the intellectual motivations behind this meeting, and some of the unifying threads running through the various contributions.

UNDERSTANDING ORIGINS: AN INTRODUCTION

We wish to start with the following observation: the humanities and the 'hard' sciences (here meaning especially biology and a good part of the cognitive sciences) differ considerably in their ambitions concerning the 'big questions'. The hard sciences are more daring than ever in proposing how the cosmos formed and life originated, how species evolved and the destiny of it all. In contrast, for the humanities it has been a time of dispersion, of fragmentation, of a dissemination which resists any attempt at integration on a grand scale. The time of the 'big theories' seems to have been left far behind.

It was not always so, and we can point to 1939, the year of Freud's death, as the turning point. Until then, the tradition of religious anthropology did not hesitate to postulate an origin to human cultures, a question which was inseparable from that of the origin of the religious. The central figures in this tradition — Fustel de Coulanges, Robertson Smith, Frazer, Durkheim, Hocart, and Freud — shared the hypothesis that every human institution is grounded in the religious, or, to be more precise, in ritual. A myriad of factors could be invoked to explain why this tradition disappeared quickly after World War II, and the subsequent schools considered it as plainly irrelevant. We may think, for example, of the structuralist movement in France and its postulation that structures are 'always already there'. Or the more positivistic bent of the Anglo-Saxon anthropology, personified for example by Evans-Pritchard. But more importantly we want to reflect on the general impact on the humanities of the work of Nietzsche and Heidegger, continued in the school of Jacques Derrida centered on the so-called 'deconstruction of Western metaphysics'.

The main question of metaphysics is, according to Heidegger, that of the origin of entities: why is there something rather than nothing? Faced with this question, Western metaphysics answers with the Leibnizian principle of sufficient reason: every effect has a cause, this arises from another cause, and so on, until one arrives at the first cause, self-sufficient, full and cause of itself, that is, God. This is the onto-theological argument: to the why-question one answers with the postulate of a

fundamental entity, which evacuates the ontological difference between Being and entities. The mystery of there-is thus disappears under the weight of the answer.

Heidegger, in contrast, proposes no response for he begins by deconstructing the very question: it is necessary not to search for a cause, but to let the mystery unfold fully; the answer is a question mark. "La rose est sans pourquoi" (Rimbaud), she has no reason or cause. Derridian deconstruction picks up along the same Heideggerian theme. It will concentrate on those philosophical creations such as Nature, Language, Reason, Origin, Meaning, Truth, and Subject, which appear as full, self-sufficient and the cause of themselves. The point is to deconstruct the claim of Logos to affirm itself as complete and self-sufficient, the ambition of philosophy to have immediate access to pure truth (*aletheia*), the illusion of mastery on the part of the human subject who puts himself in the place of God. In its "deconstruction of Western metaphysics", the intellectual enterprise launched by Derrida and his numerous followers in the wake of Heidegger, systematically debunks the Concept which, like the self-centered bourgeois ridiculed by Marx in *The Holy Family* "swells up to the point of taking himself for an atom, that is to say a being devoid of any relation, sufficient unto himself, without needs, absolutely complete, in a state of complete felicity".

The major tool used by Deconstruction is what Derrida calls the *logic of the supplement*. As René Girard says in the text that follows, this logic "reflects [the] general human inaptitude to self-centeredness, [the] failure of individual and collective narcissism, and the resulting fear of and fascination with otherness". This logic is the one through which every philosophical text deconstructs itself. Every time that a term appears in a theoretical text which beckons a Logos, a Concept, as self-sufficient, a vicious circle sets in, which undermines this pretension to autonomy from within. This happens because another term, supposed to be secondary and subordinated, and which should be nothing other than a derivation or complication of the primary Concept (for instance: culture, writing, form, etc.), appears as indispensable to the constitution of the latter. The origin appears as full and pure but, without the supplement which nevertheless follows from it, it would lose all consistency. Thus the secondary term appears at the same time as perfectly dispensable and perfectly indispensable. Even the most apparently perfect totality suffers inescapably from a constitutive lack.

The logic of the supplement, then, can be depicted in the form of a circular causality unifying two terms in spite of the fact that one claims to be hierarchically superior to the other, as depicted in Fig. 1.

The deconstruction of a hierarchical opposition, it should be remarked, is not the same as its simple removal. The hierarchical dimension must remain present one way or another. And neither does deconstruction consist in simply inverting the hierarchical opposition, in permuting its superior and inferior terms. Take the example, especially important for Derrida, of the hierarchical opposition between philosophy and writing. Philosophy devalues writing precisely because it is written! Writing constitutes a threat to philosophy in the same manner that money does to economics, because it is an obstacle, a barrier in the way of access to meaning and value. Since the ideal of philosophy is to reach the truth without mediation it must therefore deny the only means it has of expressing itself: writing. Bluntly put, philosophy *writes* W:

W: ‘*This is not writing*’

the obvious form of a self-referential paradox. We will return to this issue of self-reference frequently.

There is little interchange between the activity of deconstruction and scientific production. The deconstructors can well savor the illusion that they hold in their hands in fact a non-logic, since not only does it

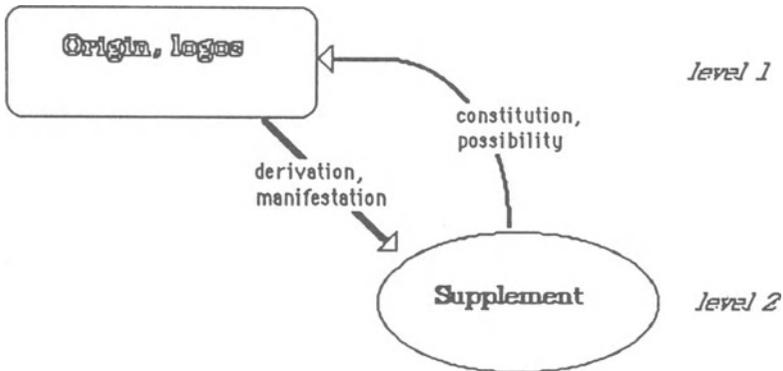


Fig. 1.

seem to elude *prima facie* scientific formalization, but it also undermines any postulations about an origin. Just take any scientific narrative dealing with the origin of some domain — life, meaning, language, money — and one could then bet that this discourse would self-deconstruct according to the logic of the supplement.

Let us consider an important example which well matches this expectation: molecular and cellular biology. It seemed that this discipline is a model success in the reduction of life to macromolecular chemistry, mainly through the discovery of the genetic code and the notion of a cellular programming which is supposed to stand at the base of all development as it (literally) writes the organism as it unfolds in its ontogeny. However, after an initial phase of enchantment with the idea, it has become clear — and the molecular biologists were the first to point this out — that if one takes the notion of a genetic program literally one falls into a strange loop: one has a program that needs its own product in order to be executed. In fact, every step of DNA maintenance and transcription is mediated by proteins, which are precisely what is encoded. To carry on the program it must already have been executed! Thus we can depict the situation as shown in Fig. 2.

Now, the practicing biologist does not lose sleep over this fact. For him the paradox is resolved since every cell is already derived from another cell, and thus an individual ontogeny already starts from the

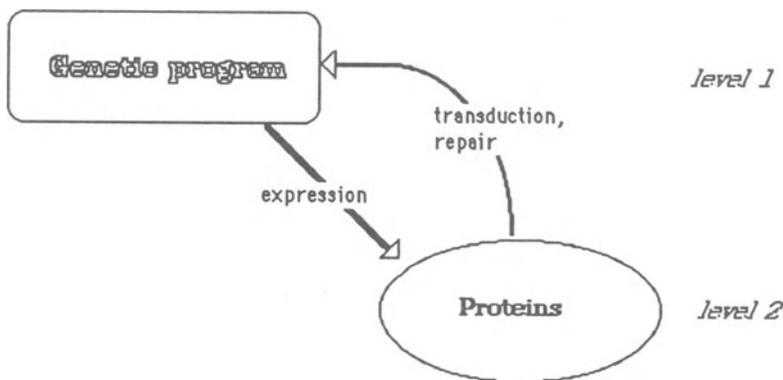


Fig. 2.

result of the mother's fertilized egg. From a more theoretical viewpoint, the issue is more thorny since at some point one must reach the origin of life and initiate the chain of autonomous individuals. These efforts to ground the autonomy of the living have taken precisely the form of an apparently paradoxical loop or *autopoiesis*:<sup>1</sup> the logic of the cell is that of self-production by a circular determination between its boundaries and its dynamics, which both produces the boundaries and is made possible by them, as indicated in Fig. 3.

For theoreticians this presents a profound interest: the observation that under certain conditions an assembly of components can link up in some intricate, circular causality — or to be more technical, by operational closure:<sup>2</sup> — so that there is an emergent new level which is neither reducible to the sum of its components nor is separate from its products. Whence the apparently paradoxical loop between two levels which appear to have, at first glance, a hierarchical relation (e.g. the cell as a unit vs. its chemical dynamics), and yet are hopelessly intermixed. The form of this logic is then that of two levels which must be kept distinct, and yet which are undeniably intertwined.

This kind of active self-reference is at the heart of the matter we wish to address in this book. In other words, it is one of our main contentions that the self-referential qualities of operative processes at various levels share common features, the most important one being

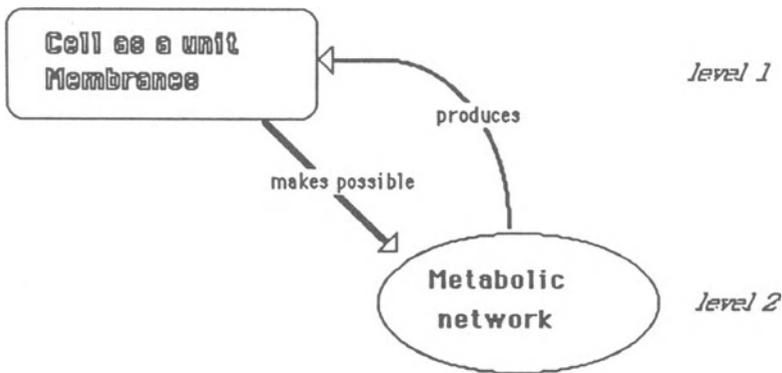


Fig. 3.

the constitution of a unitary entity (be it a cell system, a language, or a monetary system) that seems exterior to its components, and yet which is endogenously engendered by the intertwining of those very components. In this sense what may appear as exogenous (the Value, the Other) may be perfectly consistent with its being endogenously constituted if one looks at the entire inclusive logic of the situation.

Now, it is remarkable that those theoreticians of natural autonomous systems who have attempted to deal with the original grounding of life end up with a logic which mirrors the Derridian logic of the supplement, the main weapon to arrive precisely at the negation of all pretension to autonomous grounding and self-sufficiency! One of the main purposes of the meeting, and a main guiding line in this book, has been to try and break down the academic walls that have kept these two distinct modes of work separate, to confront them, and to search for further clarification. Our approach to this task has been to take specific notions of origin in life, mind and society as case studies. Let us now pause before returning to the more general principles we have addressed in this section, in order to consider the basic outlines of the case studies included here.

It seemed inevitable that we should devote a session during the meeting to the question of the origin of social order as seen from the vantage point of the fundamental anthropology of René Girard, whose special lecture is included here. We also asked Andrew McKenna to discuss the interface between Girard and Derrida, and have included the further commentaries by Paul Dumouchel and Paisley Livingston.

Girard's is indeed the only extant approach that links back to the classical religious anthropology, defying the interdictions of both structuralism and its deconstruction. It does not hesitate to confront the question of the origin of the sacred and, through it, the origin of all social and cultural institutions. As we shall see, however, the core of the logic used by Girard is none other than that of deconstruction and of the theory of autonomous systems.

We cannot summarize here the vast and complex work of Girard, which has unfolded over the years by various presentations which constitute progressive stages.<sup>3</sup> Two main foundational hypotheses are important for us here, the second being, in principle, derivable from the first. First and foremost the hypothesis of mimetism: men imitate each other in their desire; we never desire anything other than what the other

desires. This mimesis of appropriation ends up inevitably in conflict and violence: the other mutates from a model, to automatically become a rival, an obstacle.

This leads to the second hypothesis of victimization: all primitive societies would supposedly have lived a primordial and foundational event: at the climax of the war of all against all unleashed by the mimesis of appropriation, there was a polarization of all exacerbated violence focused on one arbitrary member of the group. These sacrificial exclusions, lived in the ignorance of that mechanism, would be the source of the sacred, of culture, of all human institutions.

Now it is certainly possible to read the Girardian thesis from the vantage point of deconstruction — which is not the same thing as deconstructing Girard with the tools of deconstructivism. This is what McKenna does in his text. “Girard’s originary scenario can accommodate a post-structuralist critique of origins because it posits that origin and *différance*<sup>4</sup> are one, that representation is the by-product of an originary *différance*, of mimetic desire, rather than the representation of an originary presence, of an origin of any kind.” One can argue with McKenna that in *both* Girard and Derrida, “in the beginning is imitation, not origin”. This is true in a sense for the mimetic mechanism: the original situation cannot be one of a subject *A* who imitates the desire of another subject *B*, who desires autonomously, since mimesis is universal. One is forced then to assume a double imitation, where *A* imitates *B* and *B* imitates *A*. Objects can flash out from this mechanism according to the logic of self-fulfilling prophecies. *A* believes that *B* desires *O*, makes the first step towards *O*, thus signifying to *B* that *O* is desirable. When *B*, in turn, manifests his desire, *A* has the proof that he was not wrong. The object *O* is not an origin, since it is in fact an effect, a supplement; at the origin there is only repetition.

A similar reasoning applies to the mechanism of the victim. The sacrificed victim — made sacred — pays for the others, is a scapegoat. But the use of this expression reveals a certain knowledge about the victimization mechanism that the collectivity of persecutors cannot have, for, if they did, that would mean the end of the said mechanism. McKenna points out that “the victim is always already a substitute, a signifier”, and adds “a mark, in Derridian terms, of a deferral”. Collective sacrifice, in fact, calms violence through violence, and is always a deferral of violence. Thus McKenna concludes: “Nothing Derrida advances by way of his critique of origins . . . is proof against Girard’s

anthropological hypothesis of human origins as rooted in the dynamics of mimetic desire.”

Another choice would be to read Derrida in the light of Girard. This is what Girard himself does in his text here. He shows how the “theories of origin of non-scientific culture”, that is, the foundational myths, are at least as much if not more than so-called Western metaphysics, embedded in the logic of the supplement. Girard explains this by using his own anthropological hypothesis: if the myths about the origin are structured around a paradoxical logic it is because they tell a story that *actually* happened, but which was lived in ignorance (*méconnaissance*). A society becomes unitary by way of an exclusion: that of the victim which thereby becomes sacred; without such an exclusion it would not exist. The myth expresses at the same time the internal and external nature, the indispensable and dispensable character, and the infinitely good and infinitely evil, of the sacralized victim. The latter *is* the supplement. The logic of the supplement is the logic of a narrative which tells of a real event with distortions which are not random, but well-defined and regulated. This supplement is at the heart of all religious thinking and, because the religious subsists in the philosophical, philosophy is also undermined by the supplement. “The logic of the supplement must be mythical first and philosophical second.”

It is this realist epistemology that discussants Dumouchel and Livingston address in their texts. Dumouchel remarks that Girard’s is a morphogenetic theory: it can account for the emergence of new forms. The mimetic mechanisms can produce new complexifications, the simple can give birth to the complex. The Girardian origin does not contain what will come out of it; it is not an essence. The Derridian critique has no effect on Girard’s theory since, as Derrida remarks, one cannot criticize metaphysics except with metaphysical concepts. And as Dumouchel says: “Implicit in Derrida is a concept of origin which cannot accommodate his own criticism of origin.” The Girardian theory of the origin of culture allows one to posit, and to conceive precisely, an origin which is not an essence.

In the same direction, Livingston also asserts that it is possible and desirable to unclutter Girardian thinking of all remaining metaphysics. To accomplish this it is necessary to plunge Girard into a ‘naturalistic framework’, which is, according to Livingston, what Girard himself wants to do: “Girard seeks to avoid the kind of circularity a deconstructionist expects to find in any theory of the origin of representation.” To

make this possible, one must root human mimesis in animal mimesis, to consider that “this mimesis has an origin: it has evolved or emerged as a natural reality within the natural universe.” This entails the existence of a purely instinctual mimesis, “an immediate and mechanical form of mimicry.” One can liberate original mimesis of all representational and intentional aspects. In the origin there would not be mimetic ‘desire’ but simply a mimesis of appropriation. In this sense Girard can account for this world of representations which is culture from a hypothesis where representations play no role.

If it is possible to read Girardian theory on the one hand in the sense of deconstruction, and on the other hand under a realist/positivist epistemology, it is because of a specific aspect of its configuration, namely that the origin it postulates is a supposedly real event, but which can only be produced because its reality is *méconnue*, misread by those who are the actors. Theory itself explains why the origin is real but inaccessible, being one of those strange objects which do not exist except in ignorance: see Fig. 4.

It is our contention, then, that Girardian theory, and other theories of origin, as we shall see shortly, require a more adequate philosophical framework. This would be an epistemology that neither seeks an ultimate, real grounding in the style of the hard sciences, nor does it satisfy itself in the nihilism of a permanent deconstruction. What is needed is some middle way, a meta-position which does not need

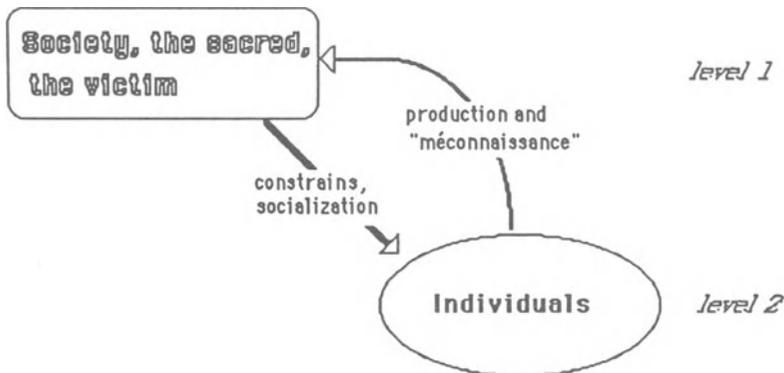


Fig. 4.

ultimate grounding while at the same time seeks an original mechanism for grounding. The apparent contradiction of this position is resolved, of course, by demanding that the mechanism of origin partake of the morphogenetic and paradoxical qualities that we have outlined so far, as exemplified in the two apparently unrelated cases of cellular organization and Girardian mimesis. This is the core of the interpretation we propose for a fresh look at the question of origin. But we are getting ahead of ourselves. Let us now return to consider the content of the other texts in the book.

The session on the origin of money was chosen precisely because it illuminates in an exemplary manner the core issues we have been discussing. In fact, the question of what gives the monetary token its value has been the subject of the most contradictory interpretations. Within this spectrum we find again the two extremes of the excavation of a real, absolute, grounding original event; and on the other the deconstruction into complete nihilism. The reading by Orléan of modern economic theories points precisely in the direction of some middle way of auto-foundation.

For a long time the economics of money has been dominated by the metallist tradition, which holds “that the foundational acceptance of money as medium of exchange should be understood as a belief in the intrinsic value possessed by money itself.” There is some good which has a ‘true’ value, usually referring to gold, and money owes its value to the fact that it contains or that it is at least backed by this real value of gold.

Few people today hold this position in face of the evidence that paper money — still called *fiat* money — still has value even if it has no intrinsic value and it is non-convertible. It is this evidence which explains why both structuralism and deconstructivism have abundantly used monetary metaphors for deconstructing the metaphysical conception of a sign as corresponding to a transcendental carrier of significance. These modern and postmodern demystifiers are happy to point to paper money as an example of signification: a mere ‘autonomous’ sign, without a referent, a sign of a sign, a copy of a copy, a simulacrum. The central treasure which should consecrate the value of money is empty, and this must be proclaimed loud and clear.

Orléan shows how it is possible to find another alternative in this sterile opposition. The origin of money resides neither in some ultimate

grounding, nor in an inaccessible time since always deferred, but in a *mechanism* of self-organization and of auto-exteriorization. This bootstrapping mechanism is the same one through which society projects itself as existing outside of itself, as it were.

A great originality in the approach of Orléan is his focus on the continuity between primitive and modern money, since “both are expressions of the social whole as a separate entity.” He thus reformulates the analysis of anthropologists such as Barraud, de Coppet, Itéanu and Jamous when they say: “there is no money in the absence of a transcendent order that gives it the quality of being a materialization of the social totality.”

This common reality makes it possible to distinguish modern from primitive money. For archaic societies it is the sacred which realizes and ‘materializes’ the movement through which society exteriorises itself (and Orléan makes here a link with Girard’s anthropology). There is a wealth of anthropological observations on this, and Orléan describes some of them, showing primitive money to be indissociably linked to the sacred. Modern societies do not have access to the same mechanism of exteriorization, and we are not surprised to see that ultra-individualist monetary theories, because they deny the transcendence of the social in regard to individuals, are led to deny the reality of money itself!

Orléan favors a particular monetary view, that of Keynes, because he thinks that it makes it clear how a process of auto-externalization is possible at all when considered in an individualist framework. Money and individualistic values can then be reconciled. The reality of money takes the form of conventions, always partly contingent and without grounding in some ultimate Reason or Nature, but without which society would not exist at all. This social activity leading to its viewing a part of its own doing as exterior to itself — money acquiring a value which seems to be given elsewhere — thus introduces a certain opacity which would be absent if some ultimate grounding was forthcoming. The nature of this process of conventions then appears as another instance of a highly interactive network of agents who find mutual satisfaction by their simultaneous acting. This endogenous solution acquires, in the eyes of the actors, an external value, thus creating precisely the logic of the supplement we have already encountered, as depicted in Fig. 5.

Jean-Joseph Goux points out the persistence of some features of

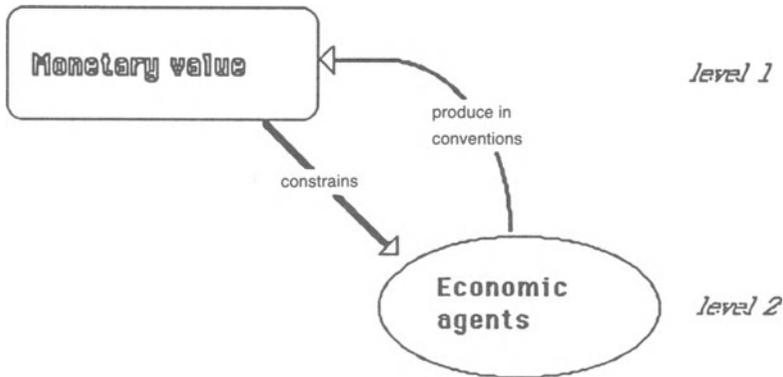


Fig. 5.

primitive money into modern money, starting with its sacrificial dimension: there is no standard of value or meaning without a kind of radical exclusion akin to a sacrifice, even in the case of modern money. To be sure, as the Greek case already shows, modernity introduces a fundamental rupture which can account at the same time for the birth of modern money, the rise of individualism, and the emergence of the ideal of social autonomy or self-institution. The Self as viewed by the moderns (and already by the Greeks) implies a dimension of transcendence (hence of sacrifice), but in the form of self-transcendence (self-sacrifice). Individualism tends to internalize this movement more and more within the individual subject himself. In the monetary domain the best illustration of this paradoxical de-transcendentalization is the circulation of the formerly transcendent standard of value as a medium of exchange, a means of circulation in the profane market.

Evolution and the question of how the living comes to be as we find it was, obviously, a central theme of the Conference as raised by Stuart Kauffman's main paper, and retaken by various commentators: Brian Goodwin, Susan Oyama, John Dupré, and Daniel Brooks. It must be said at the outset that the choice of participants for this session was quite explicitly from the critical side of current evolutionary biology. In fact, although the notion of adaptation is the centerpiece of much of