

WHAT IS

POSTHUMANISM?

Cary Wolfe

posthumanities 8



University of Minnesota Press

Minneapolis

London

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Published by the University of Minnesota Press
111 Third Avenue South, Suite 290
Minneapolis, MN 55401-2520
<http://www.upress.umn.edu>

Library of Congress Cataloging-in-Publication Data

Wolfe, Cary.

What is posthumanism? / Cary Wolfe.

p. cm. — (Posthumanities series ; v. 8)

Includes bibliographical references (p.) and index.

ISBN 978-0-8166-6614-0 (hc : alk. paper) — ISBN 978-0-8166-6615-7 (pb : alk. paper)

1. Humanism. 2. Aesthetics—Philosophy. 3. Deconstruction. I. Title.

B821.W65 2010

149—dc22

2009037657

Printed in the United States of America on acid-free paper

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17 16 15 14 13 12 11 10

10 9 8 7 6 5 4 3 2 1

For my parents

1 Meaning and Event; or, Systems Theory and "The Reconstruction of Deconstruction"

As I said: humans can't communicate.

-NIKLAS LUHMANN, "How Can the Mind Participate in Communication?"

THE RECEPTION OF SYSTEMS THEORY IN THE UNITED STATES-and in North America generally-over the past decade and more has been vexatious at best. In a professional academic landscape in which most critics and theorists pride themselves on moving easily and syncretically between theoretical approaches that, at an earlier moment, were thought of more as warring factions, systems theory remains odd man out. When it is understood at all, it is routinely greeted with reactions ranging from suspicion to outright anger. Critics who think of their work (rightly or wrongly) as a component of a broader political project-at least "in the last instance," to borrow Louis Althusser's well-known caveat-often view systems theory as just a grim technocratic functionalism or a thinly disguised apology for the status quo, a kind of barely camouflaged social Darwinism. In this view, systems theory-in either its first-order, Norbert Wiener version or its secondorder, Niklas Luhmann retooling-gets assimilated to the larger context of post-World War II society's obsession with management, command-and-control apparatuses, informatic reproduction, homeostasis, and the like, rightly criticized by theorists like Donna Haraway in her important essay "The Biological Enterprise: Sex, Mind, and Profit from Human Engineering to Sociobiology."¹ Systems theory, instead of being invited to the party reserved for chaos and complexity theory and their interest in the unpredictability, creativity, and emergence of complex nonlinear dynamics, ends up dancing with Richard Dawkins's *The Selfish Gene*. Still others level more general charges familiar from the shopworn discourse of antitheory and lament

systems theory's excessive abstraction, its lack of attention to social and historical texture, and its blind ambition to assimilate everything in its purview as grist for its universalizing mill.

If these charges sound familiar, they ought to, because they are an uncanny echo of the sorts of things that we all remember being said about deconstruction (and specifically about the work of Jacques Derrida) when it came ashore in North America in the 1970s (Derrida's *Speech and Phenomena* appeared in translation in 1973, followed in rapid succession by *Of Grammatology* in English in 1976 and *Writing and Difference* in 1978). Of course, we all got over it, and the irony need hardly be remarked (but I'll remark it anyway) that it is difficult to find anyone who has had much success in the profession of literary and cultural studies in North America who did not cut his or her teeth on just these texts and whose deployment of lessons learned from them in his or her own work is not more or less automatic and unconscious (though that has changed some over the past decade with the hegemony of certain modes of historicism in which the antitheory component is especially virulent—a question I will revisit in some detail in chapter 4).

The reasons for system theory's chilly reception in the United States are complicated, and I'm not going to investigate them in any detail here, but I'll at least offer a couple of brief speculations. One set of reasons (not to be underestimated) is disciplinary and institutional. First, as many of us remember, "deconstruction in America"—a time capsule phrase if ever there was one—made its way into universities mainly via comparative literature departments; and if you think that was a precarious foothold, consider that the major practitioner of systems theory (Luhmann) has entered the U.S. academy primarily by way of German departments (or their equivalent fractions in larger comparative literature and language departments), mainly under the rubric of German intellectual history. (Here the work of scholars such as David Wellbery, William Rasch, and Hans Ulrich Gumbrecht is exemplary.) But over the past decade, many American universities have downsized or eliminated their German departments, and it is hard for me to think of any more endangered place to be in the humanities in the United States over the past ten years, with the possible exception of classics.

Related to this question of institutional foothold is another, different deficit: the absence of a nationally disseminated journal that is tethered to the theoretical

model. *Diacritics* (published out of the Comparative Literature Department at Cornell University) became something like the house journal for deconstruction in the 1970s and 1980s, but the *Stanford Literature Review*, which has done more than any single U.S. journal to consistently publish work in systems theory, is not *Diacritics*. A few special issues of other, well-known journals have been devoted to systems theory and Luhmann's work-*Theory, Culture, and Society* (published by Sage in Great Britain, though widely available in the United States), *MLN*, *New German Critique*, and one and a half issues of *Cultural Critique* titled "The Politics of Systems and Environments"-but nothing that has the kind of ongoing relationship to systems theory that *Representations* did and does for New Historicism. Moreover, systems theory has had to brook an even greater degree of disciplinary dissonance; where the establishing texts of deconstruction were quite identifiably within the purview of philosophy and often of literature, the major texts and figures of systems theory enter the humanities through the side door of science: either social science and sociology (with Luhmann), or the life sciences (in the case of Humberto Maturana and Francisco Varela), or the interface of first-order cybernetic computer science with neurology (in the case of Heinz von Foerster). Finally, there is the daunting difficulty of the theory itself, which-particularly in Luhmann's hands-gives even seasoned readers of theory pause with its extraordinary abstraction and rigor; its head-on engagement with problems of paradox, selfreference, and the like; its systematically counterintuitive findings; and its relative lack of creature comforts along the way for those who have signed on for the journey of what Luhmann unabashedly calls "super-theory." Of course, here again we should probably remind ourselves that it is hard to recall a major theoretical development about which something similar was not said, and some of our colleagues are old enough to remember similar complaints about the technical rigor and cold-bloodedness of that strange, alienating, scientific approach to literary texts called (gasp!) "the New Criticism."

Other speculations could no doubt be offered about why systems theory in the United States has not emerged as the kind of factor in cultural studies that it is most obviously in Germany, but my main point is not to analyze those reasons further. Rather, it is to nudge the reception of systems theory in a different direction by strategically bringing out some of its more "deconstructive" characteristics.² Indeed, I hope to make clear to skeptics that much of what they like about deconstruction is also much of what they should like about systems

theory, because systems theory in its contemporary articulation far from conforming to the stereotypes prepared for it in the U.S. academy-"may well be read," to borrow Dirk Baecker's formulation, "as an attempt to do away with any usual notion of system, the theory in a way being the deconstruction of its central term."³

To take only one example, let us revisit the epigraph with which I began. On the one hand (the dominant hand), Luhmann's contention that "humans can't communicate" seems not just counterintuitive but flatly wrong; in fact (as a colleague mentioned to me recently at a conference), it seems "insulting." And yet, as I hope will be clear by the end of my comments here, Luhmann's remark (rhetorically calculated, no doubt, to cause just such a stir) makes essentially the same point about the difference between "consciousness" and "communication" that we have quite readily accepted for decades now as gospel from Derrida: namely, his deconstruction of the "autoaffection" of the voice-as-presence and of the valorizing of speech (as an index of the self-presence of consciousness to itself) over writing (a recursive domain of iterative communication that is, properly understood, fundamentally ahuman or even antihuman). I will return to the ethical implications around this question of the "metaphysical" voice in chapter 6. Similarly, I will explore in more detail in the next chapter Derrida's insistence that it is just this sort of radical separation of what Luhmann calls psychic and social systems that will lead him to reject the notion of the signifier (as in Lacan's formulation of "the subject of the signifier," which seems at first glance quite cognate to Luhmann's formulation) in favor of the articulation of writing as fundamentally a structured dynamics of the trace. Equally important for my purposes in this book, as we will see in the next three chapters, is that this trace structure of communication extends beyond the human to nonhuman animals and indeed exceeds, as we are about to see, the boundary between the living and the mechanical or technical.

My pairing of systems theory and deconstruction here should come as no surprise because Derrida himself announces the convergence in his own terms in early, formative texts such as *Of Grammatology*, whose first chapter, "The End of the Book and the Beginning of Writing," begins with a section entitled "The Program." There Derrida argues that "the entire field covered by the cybernetic program will be the field of writing," but writing understood in terms of "the gramme or the grapheme," a writing that would name as its fundamental unit "an

element without simplicity"-which is to say, an element of irreducible complexity (specifically as systems theory uses the term). And a temporalized complexity at that, for, as Derrida writes, "cybernetics is itself intelligible only in terms of a history of the possibilities of the trace as the unity of a double movement of protention and retention."⁴

Derrida's claim, put forth as it was in the late 1960s, may seem even now a radical one, but in fact it was lodged against the backdrop of an entire revolution in the sciences that had already taken such models as axiomatic. In fact, the first chapter of the 1965 Nobel Prize winner Francois Jacob's remarkably influential *The Logic of Life* is also called "The Programme." There Jacob reminds us that "heredity is described today in terms of information, messages, and code." What this means-and this is clearly related to Derrida's early work on both Husserl and Saussure-is that "the intention of a psyche has been replaced by the translation of a message. The living being does indeed represent the execution of a plan, but not one conceived in any mind."⁵ Derrida would add to this, however, the point he presses in *Of Grammatology*:

If the theory of cybernetics is by itself to oust all metaphysical concepts-including the concepts of soul, of life, of value, of choice, of memory-which until recently served to separate the machine from man, it must conserve the notion of writing, trace, gramme [written mark], or grapheme, until its own historico-metaphysical character is exposed.'

As an example of such "character," interestingly enough, Derrida cites in a footnote not Jacob but the first-generation systems theorist Norbert Wiener, who "while abandoning 'semantics,' and the opposition, judged by him as too crude and too general, between animate and inanimate etc., nevertheless continues to use expressions like 'organs of sense,' 'motor organs,' etc. to qualify the parts of the machine" (324n3). Part of what I will be arguing in what follows is that Luhmann's handling of systems theory accomplishes just the sort of "conservation" of the logic of the gramme that Derrida calls for, a conservation that is crucial to any posthumanism whatsoever-not only because the movement of the program-as-gramme "goes far beyond the possibilities of the 'intentional consciousness'" as the source and guarantor of meaning, but also because once the notion of the program is invoked, one no longer has "recourse to the concepts that habitually serve to distinguish man from other living beings (instinct and intelligence, absence or presence of speech, of society, of economy, etc. etc.)"

(84).

As I have suggested elsewhere, this cross-talk between postwar science and what would come to be called "theory" is not limited to Derrida and Wiener. Indeed, perhaps the most profound backstory of all in contemporary thought is the ongoing, if episodic, influence of such new scientific discourses on thinkers who would emerge in the 1950s and 1960s to redefine the very landscape of the humanities and social sciences (think here of Foucault's interest in Jacob and Canguilhem, Lacan's in cybernetics, Lyotard's in chaos and catastrophe theory, and so on).⁷ My aim at the moment, however, is not to make that historical argument. Nor is it just to play up the deconstructive aspects of systems theory, nor even to suggest, as I have been, that the largely knee jerk reactions to systems theory in the United States have been misplaced (or at least, vis-a-vis the reception of deconstruction, rather ungenerously placed).

Rather, my emphasis here will on the usefulness of viewing second-order systems theory as (to use Luhmann's characterization) "the reconstruction of deconstruction."⁸ That project hinges on systems theory's extraordinarily rigorous and detailed account of the fundamental dynamics and complexities of meaning that subtend the reproduction and interpenetration of psychic and social systems. And systems theory then takes the additional step of linking those dynamics to their biological, social, and historical conditions of emergence and transformation, a crucial move that, as Gunther Teubner has argued, deconstruction either cannot or will not undertake. It is certainly the case that Derrida's later work has been intensely and increasingly engaged with the question of social institutions in all their forms-the law, the university, the question of rights, the institution of property, and so on-and the logics that ground and sustain their reproduction. But though he has raised such questions-worried them might be a better term-with a degree of nuance and suppleness perhaps unmatched in contemporary theory and philosophy, Derrida has not been especially interested in articulating the relationship between the theoretical complexities of those dynamics and the historical and sociological conditions of their emergence-conditions that he suggests impel such thinking at this very moment.⁹ (Whether this is a failure or a principled refusal on Derrida's part is an interesting question, and it is one I will return to later in this chapter.)

One could cite any number of Derrida's texts in this connection, but the recent collection of essays *Without Alibi* exemplifies quite well what I mean.

There Derrida considers the question of what he calls "a politics of the virtual," of "a certain delocalizing virtualization of the space of communication, discussion, publication, archivization," against the backdrop of this larger question: "Will we one day be able, and in a single gesture, to join the thinking of the event to the thinking of the machine?"¹⁰ "Today," he continues, "they appear to us to be antinomic.... An event worthy of the name ought not, so we think, to give in or be reduced to repetition," but rather "ought above all to happen to someone, some living being who is thus affected by it." The machine, on the contrary, is destined "to reproduce impassively, imperceptibly, without organ or organicity, received commands"; it obeys ¹¹ a calculable program without affect or auto-affection" (72).

If we are to address the sorts of questions raised here, Derrida argues, now is the time for a new kind of thinking. "How," he asks, "is one to reconcile, on the one hand, a thinking of the event, which I propose withdrawing, despite the apparent paradox, from an ontology or a metaphysics of presence ... and, on the other hand, a certain concept of machineness [Inachinalite]?" (136). This, he rightly observes, is "the place of a thinking that ought to be devoted to the virtualization of the event by the machine, to a virtuality that, in exceeding the philosophical determination of the possibility of the possible ... exceeds by the same token the classical opposition of the possible and the impossible" (135). "If one day," he continues, "with one and the same concept, these two incompatible concepts, the event and the machine, were to be thought together, you can bet that not only ... will one have produced a new logic, an unheard-of conceptual form. In truth against the background and horizon of our present possibilities, this new figure would resemble a monster" (73). It would be, in a word, posthumanist.

What I want to suggest, of course, is that systems theory in its second-order incarnation is just such a "monster," one whose cornerstone genetic mutation is the transfer of the concept of autopoiesis from organicity to the domain of not only psychic but also social systems, systems whose fundamental elements are not people or groups but communications and "events"-and events conceptualized along the lines Derrida lays out in the previous paragraph. We have already used deconstruction to help clarify a central point from systems theory-the separation of psychic and social systems-but here we can return the favor and use systems theory to clarify how the thinking of the event may be, in

Derrida's words, withdrawn from "an ontology or metaphysics of presence." On the one hand, events constitute the fundamental elements of psychic and social systems in Luhmann's scheme. On the other hand, "they occur only once and only in the briefest period necessary for their appearance (the 'specious present'). They are identified by this temporal appearance and cannot be repeated."¹² But "precisely this suits them to be the elementary units of processes," because "the system itself determines the length of time during which an element is treated as a unity that cannot be further dissolved; that period has a conferred, not an ontological character" (48). An element's unity "corresponds to no unity in the substrate; it is created by the system that uses them through their connectivity" (215); "accordingly," Luhmann continues, "an adequately stable system is composed of unstable elements. It owes its stability to itself, not to its elements; it constructs itself upon a foundation that is entirely not 'there,' and this is precisely the sense in which it is autopoietic" (48). And here, as much as anywhere, we get a specific sense of how systems theory thinks Derrida's event and machine all at once as a deconstructive enfolding of the difference between the system's iterative self-reference and the fleeting temporality of the event from the "outside"-a difference that not only serves as the very basis for the system's autopoiesis but also clarifies the fact, as Dietrich Schwanitz puts it, that "systems theory is anything but mechanistic."¹³

As for Derrida's part-you will have already guessed by my use of the term "iterative" a moment ago-we know what his version of this monstrosity of the event-machine looks like: it looks like *écriture*, *arche-writing* as *différance*, as *gramme* and as *trace*. For our purposes, it is all the more interesting, then, that in contrast to his notion of writing, Derrida has interrogated the concept of communication in a variety of contexts, and nowhere more forcefully, perhaps, than in his essay "Signature Event Context" and its related documents collected in *Limited Inc.* There he argues that his concept of writing can "no longer be comprehensible in terms of communication, at least in the limited sense of a transmission of meaning. Inversely, it is within the general domain of writing, defined in this way, that the effects of semantic communication can be determined as effects that are particular, secondary, inscribed, and supplementary." ¹⁴

The full resonance of this last assertion in relation to the dynamics of "meaning" in systems theory will become clear in a moment, but for now we

need to note as well that the difference between writing in Derrida's sense and communication as he defines it is marked by radically different relations to the question of the subject-and here, indeed, we encounter, from the point of view of humanism, part of its "monstrosity." As Derrida writes, "Imagine a writing whose code would be so idiomatic as to be established and known, as a secret cipher, by only two `subjects"-and "subjects" here is given in quotation marks:

Could we maintain that, following the death of the receiver, or even of both partners, the mark left by one of them is still a writing? Yes, to the extent to that, organized by a code, even an unknown and nonlinguistic one, it is constituted in its identity as a mark by its iterability, in the absence of such and such a person, and hence ultimately of every empirically determined "subject." ... The possibility of repeating and thus of identifying the marks is implicit in every code, making it into a network [une grille] that is communicable, transmittable, decipherable, iterable for a third, and hence for every possible user in general. To be what it is, all writing must, therefore, be capable of functioning in the radical absence of every empirically determined receiver in general.¹⁵

Herein lies the radically posthumanist dimension of writing-as-difference: the subject-in a process nearly proverbial for contemporary thought from Derrida to Lacan-only comes to be by conforming to a strictly diacritical system of differences, "effects which do not find their cause in a subject or a substance, in a thing in general, a being that is somewhere present, thereby eluding the play of difference."¹⁶ Moreover, those effects and relations are at once material, bodily, external, institutional, technological, and historical-they exist in all the specificity and heterogeneity of what Derrida calls their "iteration." Hence Derrida argues that "this pure difference, which constitutes the self-presence of the living present, introduces into self-presence from the beginning all the impurity putatively excluded from it. The living present springs forth out of its nonidentity with itself and from the possibility of a retentional trace. It is always already a trace." And what this means, in turn, is that "the trace is the intimate relation of the living present to its outside, the opening to exteriority in general."¹⁷

From the point of view of the philosophical tradition that Derrida is concerned to deconstruct, such will be the "corrupting" and "contaminating" work (the "monstrosity," if you will) of "iterability," which "entails the necessity

of thinking at once both the rule and the event, concept and singularity"; as such, it "marks the essential and ideal limit of all pure idealization," not as "the concept of nonideality," as ideality's pure other, but as the impossibility (or at the least the provisionality) of idealization as such.¹⁸ Like the undecidability that it unavoidably generates-and this will lead us to the final question we want to raise-iterability "remains heterogeneous" to, rather than simply opposed to, the order of the ideal, the calculable, the pure, and so on. As such, it names a form of ethical responsibility that entails vigilant attention to each specific, interfolded iteration of "rule and event," to "this particular undecidable" that "opens the field of decision or decidability" (116), one that "is always a determinate oscillation between possibilities" that takes place "in strictly defined situations (for example, discursive-syntactical or rhetorical-but also political, ethical, etc.). They are pragmatically determined" (148).

Exactly what the force and scope of this last assertion-"pragmatically determined" and in "strictly defined situations"-are for Derrida is a question that goes directly to Teubner's concerns already touched on earlier, and it is one to which I will return later in this chapter and the book (particularly in chapter 3). For now, however, I simply want to make the point that this picture of writing in the Derridean sense (and the restructuring of the question of the subject that it pulls in its wake) does not mark a difference between Derrida's *écriture* and the concept of communication in systems theory; rather, it is precisely what illuminates their convergence. When Derrida uses the term "communication" in *Limited Inc*, what he really has in mind is the model of communication mobilized by first-generation systems theory. That model, like the speech act theory of Austin deconstructed in *Limited Inc*, seems, but only seems (as it turns out), to rightly refer the question of meaning to its external formal dynamics rather than to ontology, intentionality, and so on. Of course, it is this very baggage attached to the term "communication" that Luhmann's work, like Derrida's, is dead set on rejecting. In fact, "Communication and Action," the chapter in *Social Systems* that makes this clearest, explicitly references Derrida's critique of Husserl in protesting that "the metaphor of transmission"-the metaphor that dominates first-wave systems theory-"is unusable because it implies too much ontology" in the picture it gives of both meaning (the "message") and the subject who is part of its circuit.¹⁹ Over and against this, as Schwanitz points out, both deconstruction and Luhmann's systems theory "make difference their basic category, both temporalize difference and reconstruct

meaning as a temporally organized context of displacement and deferral. Both regard their fundamental operation (i.e., writing or communication, respectively) as an independent process that constitutes the subject rather than lets itself be constituted by it."²⁰

Here, however, we find a diametrically reversed orientation or angle of approach in the two theories—one that, I believe, accounts for the "monstrosity" of deconstruction being relatively well received, while systems theory has tended to provoke all sorts of defensive and recuperative responses. To put this schematically, Derrida and Luhmann approach many of the same questions and articulate many of the same formal dynamics of meaning (as self-reference, iterability, recursivity, and so on), but they do so from diametrically opposed directions. As Schwantz has pointed out, the starting point for systems theory is the question of what makes order possible and how highly organized complexity, which is highly improbable, comes into being at all. Deconstruction, on the other hand, begins with taken-for-granted intransigent structures of logocentrism and the metaphysics of presence that are already ensconced in textual and institutional form, and then asks how the subversion of those structures by their own elements can be revealed.²¹

For Derrida, contingency, temporality, the event, "noise," and so on constitute the eruptive and finally irrepressible difference at the heart of any logos or law, a difference whose unavailability and unmasterability deconstruction aims to bring to light and sustain. For systems theory, however, this radical heterogeneity is handled within an adaptive and operational framework, as a fundamental evolutionary problem for autopoietic systems that have to reproduce themselves in the face of this overwhelming difference.²² Because of this reversal of orientation, the descriptions offered by systems theory ("autopoietic systems that can reduce environmental difference and complexity will continue to exist") have been misunderstood as prescriptions ("such systems should exist, and difference and complexity are negative values"). But, of course, systems theory doesn't desire the reduction of difference and complexity (indeed, Luhmann would be the first to insist that such would constitute a category mistake if ever there was one); it only describes how difference and complexity have to be handled by systems that hope to continue their autopoiesis.

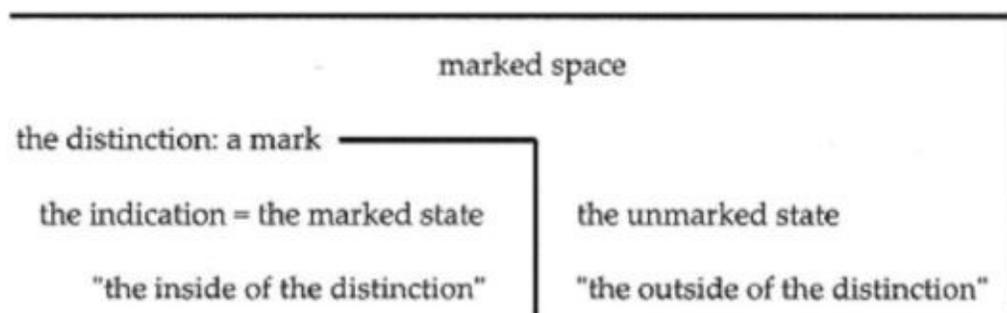
Systems theory, in other words, does not occlude, deny, or otherwise

devalue difference but rather begins with difference—namely, the cornerstone postulate of the difference between system and environment, and the corollary assumption that the environment of any system is always already of overwhelmingly greater complexity than the system itself. Since it is obviously impossible for any system to establish point-for-point correspondences between itself and its environment, systems thus handle the problem of overwhelming environmental complexity by reducing it in terms of the selectivity made available by the system's self-referential code; as Luhmann puts it, "The system's inferiority in complexity must be counter-balanced by strategies of selection." "Complexity, in this sense," he continues, "means being forced to select," and thus, in his winning formulation, "only complexity can reduce complexity."²³ Under pressure to adapt to a complex and changing environment, systems increase their selectivity—they make their environmental filters more finely woven, if you like—by building up their own internal complexity by means of self-referential closure and the reentry of the system /environment distinction within the system itself in a process of internal differentiation.²⁴

For example, the difference between the legal system and its environment is reintroduced in the legal system itself, which now serves as the environment for the various subsystems of the law, and the same could be said, within the educational system, about the various academic disciplines and subdisciplines, and so on.²⁵ This self-referential closure, however, does not indicate solipsism, idealism, or isolation but is instead crucial to understanding a fundamental principle I will return to throughout these pages, the principle of what I call "openness from closure." It "does not contradict the system's openness to the environment. Instead, in the self-referential mode of operation, closure is a form of broadening possible environmental contacts; closure increases, by constituting elements more capable of being determined, the complexity of the environment that is possible for the system." And this is why, Luhmann writes, "self-reference is in itself nothing bad, forbidden, or to be avoided"; indeed, it "points directly to system formation" because systems "can become complex only if they succeed in solving this problem and thus in de-paradoxicalizing themselves."²⁶

What makes such systems paradoxical in the first place is the unity of the difference between the two sides of the distinction that anchors the system's code. For example, the first-order distinction between legal and illegal in the legal system is itself a product of the code's own self-reference—that is to say, the

problem is that both sides of the distinction are instantiated by one side of the distinction (namely, the legal: hence the tautology "legal is legal"). But the tautological unity of this distinction may be disclosed only by a second-order observer, operating within another system and another code, which must remain blind to its paradoxical distinction if it is to use that distinction to process events for the system's autopoiesis, and so on and so forth. The formal notation for this dynamic that Luhmann borrows from George Spencer-Brown's *Laws of Form* will help make this clearer. As Bruce Clarke summarizes it, the form consists of four elements: (1) the "indication" or "marked state" of a distinction's "inside"; (2) the indication's "unmarked state," or the "outside" of the distinction; (3) the distinction itself as a unity of its marked and unmarked states; and (4) a second distinction between marked and unmarked spaces, made by a secondorder observer, which will obey the same form.²⁷ Thus:



What is most interesting here, however, is that these constitutive paradoxes, far from hindering the autopoiesis of self-referential systems, in fact force their autopoiesis.²⁸ And here-in this transvaluation of the paradoxes of self-reference from paralytic to productive-the lines of relation between systems theory and deconstruction come quite clearly into view. "If we want to observe paradoxical communications as deframing and reframing, deconstructing and reconstructing operations," Luhmann writes,

we need a concept of meaning ... as the simultaneous presentation ... of actuality and possibility.... The distinction actual/possible is a form that "re-enters" itself. On one side of the distinction, the actual, the distinction actual/possible reappears; it is copied into itself.... If we observe such a re-entry, we see a paradox. The re-entering distinction is the same, and it is not the same. But the paradox does not prevent the operations of the system. On the contrary, it is the condition of their possibility.²⁹

This is so, Luhmann writes, because "the totality of the references presented by any meaningfully intended object offers more to hand than can in fact be actualized at any moment. Thus the form of meaning, through its referential structure, forces the next step, to selection."³⁰ But that selection, of course, immediately begins to deteriorate in usefulness under pressure of the temporal flow of events, the "specious present," which then forces another selection, and so on and so forth.

Here we encounter systems theory's version of what Derrida calls the dynamic force of difference as "temporization" and "spacing," as "protention" and "retention," a process that "is possible only if each so-called present element ... is related to something other than itself, thereby keeping within itself the mark of the past element" while at the same time being "vitiating by the mark of its relation to the future element," thus "constituting what is called the present by means of this very relation to what it is not."³¹ Or as Luhmann puts it, "One could say that meaning equips an actual experience or action with redundant possibilities"-namely, what was selected (the actual) and what could have been (the possible)-and this is crucial for any system's ability to respond to environmental complexity by building up its own complexity via the form of meaning.

This is what Luhmann means when he says that "this formal requirement refers meaning to the problem of complexity."³² "The genesis and reproduction of meaning presupposes an infrastructure in reality that constantly changes its states," he writes. "Meaning then extracts differences (which only as differences have meaning) from this substructure to enable a difference-oriented processing of information. On all meaning, therefore, are imposed a temporalized complexity and the compulsion to a constant shifting of actuality, without meaning itself vibrating in tune with that substructure" (63). From an adaptive and evolutionary point of view, then, self-reference and the form of meaning do not indicate solipsism. Quite the contrary. As Luhmann points out, it is "unproductive for meanings to circulate as mere selfreferentiality or in short-circuited tautologies.... One can think, 'This rose is a rose is a rose is a rose.' But this use of a recursive path is productive only if it makes itself dependent on specific conditions and does not always ensue" (61). And herein lies the difference for Luhmann between meaning and information, one that recalls Derrida's emphasis in *Limited Inc* on the specific pragmatics of iterability.

Luhmann continues: A piece of information that is repeated is no longer information. It retains its meaning in the repetition but loses its value as information. One reads in the paper that the deutsche mark has risen in value. If one reads this a second time in another paper, this activity no longer has value as information ... although structurally it presents the same selection." Something can be meaningful, in other words, but have no informational value; or to put it another way-one that will bear directly on my discussion of form and poetry in chapter 10-form and formalism are only part of the story when it comes to meaning.

One thus "begins not with identity but with difference"-with two differences, in fact: the difference inherent in every experience "between what is actually given and what can possibly result from it" that is given in the internal form of meaning itself; and the difference between meaning and information that is forced on the system by environmental complexity and temporality. "Only thus can one give accidents informational value and thereby construct order, because information is nothing more than an event that brings about a connection between differences-`a difference that makes a difference.' Therefore, we encounter the decomposition of meaning per se," the "de- tautologization of meaning's self-reference" forced on the system by the adaptive pressure of the environment, of the "outside world" (75). This is why-contrary to the view of systems theory as solipsistic, imperialistic, and so on-Luhmann insists that "the difference between meaning and world is formed for this process of the continual selfdetermination of meaning as the difference between order and perturbation, between information and noise. Both are, and both remain, necessary. The unity of the difference is and remains the basis for operation. This cannot be emphasized strongly enough. A preference for meaning over world, for order over perturbation, for information over noise is only a preference. It does not enable one to dispense with the contrary" (83; italics mine).

In the form of meaning, then, we find that systems increase their contacts with their environments paradoxically by virtualizing them. "Meaning is the continual actualization of potentialities," Luhmann writes,

but because meaning can be meaning only as the difference between what is actual at any given moment and a horizon of possibilities, every actualization always also leads to a virtualization of the potentialities that could be connected up with it. The instability of meaning resides in the

untenability of its core of actuality; the ability to restabilize is provided by the fact that everything actual has meaning only within a horizon of possibilities ... [that] can and must be selected as the next actuality.... Thus one can treat the difference between actuality and possibility in terms of temporal displacement and thereby process indications of possibility with every (new) actuality. Meaning is the unity of actualization and virtualization, of re-actualization and re-virtualization, as a self-propelling process. (65)

This "virtualization" via meaning is an extraordinarily powerful evolutionary dynamic, and it is put to good use by both psychic and social systems. Indeed, Luhmann insists, "Not all systems process complexity and self-reference in the form of meaning"-and here one could think of various biological systems³³-"but for those that do, it is the only possibility. Meaning becomes for them the form of the world and consequently overlaps the difference between system and environment" (61). Or as Luhmann sometimes characterizes it-in a formulation resonant not only with Derrida's essays such as "Structure, Sign, and Play" but also with Emerson's philosophy and the core preoccupations of romanticism-"The relationship between meaning and world can also be described with the concept of decentering. As meaning, the world is accessible everywhere: in every situation, in any detail," which is to say that "the world is indicated in all meaning. To that state of affairs corresponds an a-centric world concept" (70), and hence "the closure of the self-referential order is synonymous here with the infinite openness of the world" (62).

This coimplication of psychic and social systems via the formal dynamics of meaning, combined with Luhmann's simultaneous insistence on the strict separation of psychic and social systems as discrete autopoietic entities, marks one of systems theory's most difficult and counterintuitive features-but also one of its most powerful innovations. In a formulation as matter-of-fact as it is beguiling, Luhmann writes: "Humans cannot communicate; not even their brains can communicate; not even their conscious minds can communicate. Only communication can communicate."³⁴ "What we experience as our own mind operates as an isolated autopoietic system," he points out, and in fact, that isolation is "an indispensable condition of its possibility" (170). There is "no conscious link between one mind and another," nor is there any "operational unity of more than one mind as a system"-all of which, Luhmann argues, is

essentially taken for granted at this point by contemporary neurophysiology (170). Indeed, he asks, how could any psychic system maintain its own functions if it shared its unity with other minds? How could I deliver a lecture if I shared the moment-to-moment ebb and flow of psychic activity of even one other consciousness in the room? In this sense, "communication," Luhmann writes, "operates with an unspecific reference to the participating state of mind; it is especially unspecific as to perception. It cannot copy states of mind, cannot imitate them, cannot represent them. This is the basis for the possibility of communication's building up a complexity of its own" (178).

Our intuitions, of course, would seem to suggest otherwise, and this is so precisely because psychic systems and social systems have coevolved, each serving as the environment for the other, and this "has led to a common achievement, employed by psychic as well as social systems."³⁵ That achievement, of course, is meaning. "Meaning," Luhmann writes, "is the true `substance' of this emergent evolutionary level. It is therefore false (or more gently, it is falsely chosen anthropocentrism) to assign the psychic ... ontological priority over the social. It is impossible to find a `supporting substance' for meaning. Meaning supports itself in that it enables its own self-referential reproduction. And only the forms of this reproduction differentiate psychic and social structures"-namely, "whether consciousness [in the case of psychic systems] or communication [social systems] is chosen as the form of operation" (98). Here, as I have already suggested, we find Luhmann's answer to Derrida's critique of the autoaffection of the voice and of consciousness as presence in *Speech and Phenomena*, *Of Grammatology*, and elsewhere: of the fallacy that writing or communication could be referred for its efficacy as a representation to an ontic substrate of consciousness and the psychic system, whereas in fact it is the ontologically unsupported ur-dynamic of writing (Derrida) or meaning (Luhmann) that is fundamental and allows psychic and social systems to interpenetrate. And as we will see in later chapters (8 and 10), the disarticulation and interpenetration of consciousness and communication are crucial to how art (and within that, poetry) engages in a particular form of communication that is barred to other social systems.

The difficulty in understanding this disarticulation of consciousness and communication, Luhmann points out (in a disarmingly commonsensical moment),

lies in that every consciousness that tries to do so is itself a self-referentially closed system and therefore cannot get outside of consciousness. For consciousness, even communication can only be conducted consciously and is invested in further possible consciousness. But for communication this is not so. Communication is only possible as an event that transcends the closure of consciousness: as the synthesis of more than the content of just one consciousness. (99)

The confusing of consciousness and communication, if one wants to put it that way, is precisely why "the concept of meaning must be employed on such a high theoretical level. Meaning enables psychic and social systems to interpenetrate, while protecting their autopoiesis; meaning simultaneously enables consciousness to understand itself and continue to affect itself in communication, and enables communication to be referred back to the consciousness of the participants" (219).

The all-important medium that allows this interpenetration via the form of meaning to take place is, you will have already guessed, language. But "this does not mean language determines consciousness," Luhmann writes; "psychic processes are not linguistic processes," he continues, "nor is thought in any way 'internal dialogue' (as has been falsely maintained). It lacks an 'internal addressee.' There is no 'second I,' no 'self' in the conscious system, no 'me' vis-a-vis an 'I,' no additional authority that examines all linguistically formed thoughts to see whether it will accept or reject them and whose decision consciousness seeks to anticipate" (272). Luhmann's point here no doubt takes for granted similar formulations throughout Derrida's early work in *Speech and Phenomena*, *Of Grammatology*, and elsewhere, but the emphasis in Luhmann falls rather differently, on the evolutionary aspects of this disarticulation. What is important for Luhmann is that one must do justice to the powerful role of language in the coevolution of psychic and social systems while simultaneously paying attention to their autopoiesis and self-referential closure. On the one hand, "the evolution of social communication is only possible in a constantly operative link with states of consciousness," which is provided by the medium of language; on the other hand, language "transfers social complexity into psychic complexity" (SS 272) in a process generically referred to in contemporary theory as "subjectification" or "subject formation."³⁶ "The social system places its own complexity, which has stood the test of communicative manageability, at the

psychic system's disposal," but at the same time, language (and, even more, writing) ensures "for the communication system what Maturana calls the conservation of adaptation: the constant accommodation of communication to the mind. They define the free space of autopoiesis within the social communication system."³⁷

For Luhmann, then, language is not constitutive of either psychic or social systems but is rather a specific, second-order phenomenon—a type of "symbolically generalized communication media"—that those systems use in the services of the first-order processes of meaning for maintaining their own autopoiesis while at the same time enabling them to interpenetrate and use each other's complexity to mutual benefit.³⁸ From Luhmann's point of view, language is "not just a means of communication, because it functions in psychic systems without communication" in the strict sense of having to take place (94); but at the same time, "communication is also possible without language" and may take place in all sorts of nonlinguistic ways, "perhaps through laughing, through questioning looks, through dress," and so on (150).

In fact, what is fundamental about communication for Luhmann is not its (dis)relation to language but that it is a "synthesis of three selections" (147): information (the content, if you like, to be communicated), utterance (the specific, pragmatic communicative event or behavior selected to communicate information), and understanding (a receiver's processing of the difference between information and utterance that completes the communicative act) (140-42, 147, 151). Again, the issue is not just difference; all forms of meaning, of which communication is a specific instance, operate by means of difference; the issue is whether (to remember Gregory Bateson's phrase) an utterance is a "difference that makes a difference" in terms of the system's autopoiesis. Or as Luhmann puts it, "difference as such begins to work if and insofar as it can be treated as information in self-referential systems" (40). To recall Luhmann's earlier example of the value of the deutsche mark, an utterance, once repeated, may retain the same form as meaning but lose its status as information; it retains the same form but has lost its capacity to "select the system's states" (40) —not because its form has changed but because the state of the system has. This fact draws our attention, in turn, to what Derrida in *Limited Inc* calls the "specific," "pragmatically determined" nature of any instance of undecidability, the emphasis on which would seem to run counter to Luhmann's assertion that

"communication is realized if and to the extent that understanding comes about" (147). Here again, however, Derrida and Luhmann converge on the same point from opposite directions; while Derrida emphasizes the final undecidability of any signifying instance, Luhmann stresses that even so, systems must decide; they must selectively process the difference between information and utterance if they are to achieve adaptive "resonance" with their environments. Thus underneath this apparent divergence is a shared emphasis-against "relativism" and "anything goes" reflexivity-on the determinate specificity of the signifying or communicative instance that must be negotiated, which is precisely why in Limited Inc Derrida rejects the term "indeterminacy" because it occludes an understanding of the "determinate oscillation between possibilities (for example, of meaning, but also of acts)."39

In Luhmann as in Derrida, writing takes center stage as the paradigm of communication, but only because it exemplifies a deeper "trace" structure (the gramme of the program, as it were) of meaninga paradigm whose essential logic is for Luhmann only intensified by the sorts of later technical developments, beginning with printing, in which we have already seen Derrida himself keenly interested in texts like *Without Alibi* and *Archive Fever*. In this light, the problem with "oral speech," as Luhmann describes it, is that it threatens to collapse the difference between information and utterance, performatively subordinating information to utterance and presuming their simultaneity"leaving literally no time for doubt," as Luhmann puts it40-in precisely the manner analyzed in Derrida's early critique of the subordination of writing to speaking. But if the value of language is that it is "the medium that increases the understandability of communication beyond the sphere of perception" (160), then writing is its full realization. "Only writing," Luhmann observes, "enforces the clear distinction between information and utterance," and "only writing and printing suggest communicative processes that react, not to the unity of, but to the difference between utterance and information.... Writing and printing enforce an experience of the difference that constitutes communication: they are, in this precise sense, more communicative forms of communication" (162-63).

Language, then, may be "a medium distinguished by the use of signs"-one that is capable of "extending the repertoire of understandable communication almost indefinitely in practice," an achievement whose significance "can hardly be overestimated." But "it rests, however, on functional specification. Therefore

one must also keep its boundaries in view" (160). For Luhmann-and this is something like the negative image or reverse aspect of Derrida's early reading of Saussure, specifically his drawing out the full implications of Saussure's contention that language is a diacritical system that operates "without positive terms"-to subsume the dynamics of meaning under the theory of the sign is to ignore what he calls the "basal, recursive self-reference" that "forms the context in which all signs are determined" (71). Hence "the concept of the symbolic generalization of meaning's self-reference replaces the concept of the sign that until now has dominated the theoretical tradition" (94). And it also provides an important bridge between Derrida's contention that the trace structure of writing/communication is not limited to the domain of the human and the linguistic alone-a contention that Luhmann's work allows us to situate within a coevolutionary account of the relations between meaning, communication, language, and the forms of complexity they make possible in psychic and social systems.

For Luhmann, whether or not to understand Derrida precisely in terms of the theoretical tradition of the sign has been a matter of some uncertainty-an uncertainty that mirrors, to a large extent, broader disagreements in theory and philosophy about how Derrida is to be read, and whether, moreover, the same understanding applies to his earlier versus later work.⁴¹ At certain times, Luhmann suggests a high degree of translatability between the two theories, while at others he is concerned to keep his distance.⁴² But my point here is not to rehearse these differences (much less to suggest which understanding of Derrida is "right"); nor is it to further systematize the relationship between Luhmann and Derrida along the lines already carried out quite ably by critics such as Dietrich Schwanitz, David Wellbery, Drucilla Cornell, Hans Ulrich Gumbrecht, and others. Rather, my point is to suggest that if systems theory needs deconstruction in the sense I touched on at the outset, then deconstruction also needs systems theory to help carry out work toward which it has, in comparison, only gestured.

This complementarity rests, as I have been arguing, on two fundamental disarticulations in Luhmann that are at the core of Derrida's work as well: the disarticulation of psychic and social systems and, on an even more fundamental level, the disarticulation of the formal dynamics of meaning from language per se. In my view-and I will develop this claim in detail over a range of contexts in

the next three chapters-it is from this double disarticulation that the ethical and political ambitions of deconstruction derive. Those ambitions-and how they are motivated by a certain set of theoretical commitments-are aptly expressed by Derrida at moments like this one in the interview "Eating Well," to which I will have occasion to return more than once during these pages:

If one reinscribes language in a network of possibilities that do not merely encompass it but mark it irreducibly from the inside, everything changes. I am thinking in particular of the mark in general, of the trace, of iterability, of differance. These possibilities or necessities, without which there would be no language, are themselves not only human... And what I am proposing here should allow us to take into account scientific knowledge about the complexity of "animal languages," genetic coding, all forms of marking within which so-called human language, as original as it might be, does not allow us to "cut" once and for all where we would in general like to cut.⁴³

At such moments, Derrida unfolds the implications of the point he first made, for U.S. audiences, in *Of Grammatology*: that the form (and force) of differance, the gramme, and the trace indicates a recursive, iterative dynamics of meaning that exceeds the rather tidy purview of human linguisticity alone. As Derrida puts it in *Of Grammatology*, "In all senses of the word, writing thus comprehends language" (7). And it is on the strength of that theoretical commitment that the ethical issues involved-in this particular case, issues related to what is popularly known as "animal rights"-arise.

Similarly, in a remarkable late essay on Lacan's rendering of the human/animal divide vis-a-vis the "subject of the signifier," which I explore in some detail in the next chapter, the ethical question of our obligations to nonhuman beings is generated by a theoretical articulation of the force of the trace (versus the Lacanian "signifier") that pushes Derrida's thought very much in the direction of Luhmann's work on the dynamics of meaning in autopoietic systems. As Derrida puts it there, "It is difficult to reserve, as Lacan does, the differentiability of signs for human language only, as opposed to animal coding. What he attributes to signs that, in a language' understood as belonging to the human order, `take on their value from their relations to each other' and so on, and not just from the `fixed correlation' between signs and reality, can and must be accorded to any code, animal or human."⁴⁴

Not only do such passages make clear that Derrida is offering us not a theory of language, nor even one of writing, but a far more ambitious, and thoroughly posthumanist, account of the paradoxical and deconstructive dynamics of meaning; they also make it clear that the account of meaning in systems theory should be viewed as the "reconstruction of deconstruction," one that provides the sort of rigorously articulated analysis toward which deconstruction only gestures philosophically (but for that very reason, in a sense, more provocatively than the "science" of Luhmann's sociology). This joining of forces between deconstruction and systems theory is crucial, I would like to think, not just from systems theory's vantage but from deconstruction's as well. Derrida points toward this necessity in an important footnote in *Positions*, where he writes:

The critique of historicism in all its forms seems to me indispensable.... The issue would be: can one criticize historicism in the name of something other than truth and science (the value of universality, omnitemporality, the infinity of value, etc.), and what happens to science when the metaphysical value of truth has been put into question, etc? How are the effects of science and of truth to be reinscribed? ... Finally, it goes without saying that in no case is it a question of a discourse against truth or against science. (This is impossible and absurd, as is every heated accusation on this subject.) And when one analyzes systematically the value of truth ... it is not in order to return naively to a relativist or sceptical empiricism.⁴⁵

If we believe Gunther Teubner, such a perspective only draws into even sharper focus the need to supplement deconstruction with systems theory, whose explanatory force resides not only in a renovation of science that enables it to take account of self-reference and the manifold challenges of constructivism, but also in its ability to link these epistemological innovations to the historical emergence and specificity of particular social forms. Moreover, Teubner suggests, systems theory thus enables us to understand a crucial fact about social and political effectivity that in his view is lost on-or at least lost in-deconstruction: that the disclosure of paradox does not in itself threaten the autopoiesis of social systems, a point that in turn bears on the putative political force of deconstruction's philosophical intervention. As Teubner puts it-and this would, I think, actually amount to taking seriously Derrida's insistence on the specific, pragmatically determined character of all instances of iteration and

undecidability, now writ large "Derrida's nightmare" is that

it is the secret of autopoiesis that social systems are no longer threatened by the paradoxes of their deconstructive reading. Autopoietic self-reproduction means that in routine operations they are constantly de-paradoxifying their foundational paradox. Thus, they are capable of deconstructing deconstruction, of course not in the sense that they can exclude it on a long-term basis but in the sense that they shift, displace, disseminate, historicize deconstruction itself, which drastically changes the conditions of its possibility.⁴⁶

What this suggests for Teubner is that a deconstruction that took account of "the foundational paradoxes of emerging social systems, would need to become historical, especially to recognize its own transformations. While the basic structures of the paradox remain the same, social processes of their invisibilization and the threatening moments of their re-emergence depend on historical contingencies.... The distinctions which are used for de-paradoxification," he continues, "are dependent on historical-societal conditions of plausibility, of acceptability, are contingent on binding knowledge in particular societies."⁴⁷

Now one might well argue that Derrida's work-particularly his later investigations of questions of justice in relation to law, rights, and so on (both in his own work and in that of his interlocutors) -is quite cognizant of this fact and indeed does what it does precisely to confront such systems of "binding knowledge" with internal paradoxes and contradictions to which they must respond. But my larger point here is that the ahistorical, asociological character of deconstruction is not at all obviously a failure per se on Derrida's part, as Teubner would have it; indeed, it might well be viewed, from the vantage Derrida voices above on the "effects of truth," as a resolutely philosophical refusal. Derrida's rejoinder to Teubner would no doubt be that systems theory-even on Luhmann's terms-cannot have its science and eat it too. This is so because, as Luhmann explains, the particular kind of operation that uses distinctions in the services of designation is called "observation." "We are caught once again, therefore, in a circle: the distinction between operation and observation appears itself as an element of observation."⁴⁸ Empiricism, in other words, must always give way to contingent (and deconstructable) self-reference, even if we acknowledge that observation takes place always in "pragmatically

determined" instances of historical articulation.

From a Derridean point of view, then, the advantage that Teubner finds in Luhmann's historically oriented analysis would simply be referred back to an empiricism whose untenability Luhmann himself makes clear. Luhmann, Derrida would argue, cannot maintain that "there exists no observer-independent, given reality,"⁴⁹ and at the same time hold that "self-reference designates the unity that an element, a process, or a system is for itself. 'For itself' means independent of the cut of observation by others."⁵⁰ If it is indeed the case that "both attributions, observer attribution and object attribution, are possible," and that "the results can therefore be considered contingent,"⁵¹ then this means from a Derridean point of view that the empiricism on which any historicism depends and tacitly trades is rendered permanently problematic. What we are really dealing with is a specific undecidability, in the domain of meaning, about what sorts of attributions are made, by whom and to whom, and with what particular effects. Thus when Luhmann holds that "the difference between self-reference in the object and self-reference in the analysis, between the observed and the observing system, comes to be reflected in the problem of complexity,"⁵² what this really means, in Derridean terms, is "comes to be reflected in the deconstructibility of the very distinctions upon which such a formulation depends."

Moreover, Derrida would surely be the first to argue that even if such distinctions are tenable in "analytical" terms (to take Luhmann's procedure at its word), when they come to be expressed in language, then our ability to draw clear boundaries between what Luhmann calls the "empirical," "analytical," and "semantic" dimensions of observation/ description is only further eroded. There are, then, at least three orders of complexity here: the autopoietic self-reference (neither analytical, logical, nor linguistic per se) of any system that makes self-reference and heteroreference a product of its own self-referential closure; a second level of complexity in which some of those autopoietic systems use the form of meaning to process environmental complexity and reproduce themselves; and a third level of autopoietic systems that, in addition to using basal self-reference and meaning, also use language. To acknowledge as much is, from a Derridean point of view, simply to take account of what we have already discussed as the "contaminating" force of iterability-its "monstrosity," as Derrida puts it-which mitigates against the kind of conceptual ideality that would

appear to be in play in Luhmann's assumption that the "empirical," "analytical," and "semantic" dimensions can be so neatly separated. Hence, as Derrida insists in *Limited Inc*, "there can be no rigorous analogy between a scientific theory ... and a theory of language," and in fact, "it is more `scientific' to take this limit, if it is one, into account and to treat it as a point of departure for rethinking this or that received concept of `science' and of `objectivity'" (118).

What is involved here, then (to return to the text of Derrida's with which we began), is a certain difference between Derrida and Luhmann in relation to thinking "the grammar of the event." As Derrida insisted for over forty years, "I don't know what a grammar of the event can be," except, as Peggy Kamuf puts it in her introduction to *Without Alibi*, as "a reduction, a cancellation of the very thing being called `event.'"⁵³ Of course, Luhmann would respond that the only way any of us are even around to declare such an inability at all is precisely on the basis of a prior "reduction" of environmental complexity, one that provides the autopoietic conditions of possibility for raising such questions (or any questions) in the first place. Or in Luhmann's words: "One must be capable of generating both continuity and discontinuity, which is easier in reality than in theory."⁵⁴

42. Ibid., 149.

43. "The Man with the Blue Guitar" and "Tea at the Palaz of Hoon," in *The Collected Poems of Wallace Stevens* (New York: Random House, 1990), 165, 65.

44. Jacques Derrida, *Specters of Marx*, trans. Peggy Kamuf (New York: Routledge, 1994), xix.

1. Meaning and Event

1. In Donna J. Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 43-68.

2. My remarks here are a continuation of my attempt to align systems theory and poststructuralist theory more generally in my previous two books. In *Critical Environments: Postmodern Theory and the Pragmatics of the "Outside"* (Minneapolis: University of Minnesota Press, 1998), this took the form not just of separate chapters devoted to Maturana and Varela and Luhmann (on the one hand) and Foucault and Deleuze (on the other) but also of an intensive analysis of Luhmann's and Deleuze's differences as they can be teased out by attention to the theoretical topography of "the fold." In my last book, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago: University of Chicago Press, 2003), the focus was instead not primarily on Luhmann but on Maturana and Varela (and, to a lesser extent, Gregory Bateson) and how their evolutionary theory of the emergence of "linguistic domains" can help us to give some evolutionary content to Derrida's theory of the relationship between signification as a trace structure and the question of nonhuman and posthuman subjectivity.

3. Dirk Baecker, "Why Systems?" *Theory, Culture, and Society* 18, no. 1 (2001): 61.

4. Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore, Md.: Johns Hopkins University Press, 1976), 9, 84.

5. Francois Jacob, *The Logic of Life: A History of Heredity*, trans. Betty E. Spillmann (New York: Pantheon Books, 1973), 1-2.

6. Derrida, *Of Grammatology*, 9.

7. See the introduction to my edited collection *Zoontologies: The Question of the Animal* (Minneapolis: University of Minnesota Press, 2003), xi.

8. Niklas Luhmann, "Deconstruction as Second-Order Observing," in *Theories of Distinction*, 101.

9. See Gunther Teubner, "Economics of Gift-Positivity of Justice: The Mutual Paranoia of Jacques Derrida and Niklas Luhmann," *Theory, Culture, and Society* 18, no. 1 (2001): 29-47.

10. Jacques Derrida, *Without Alibi*, trans. and ed. Peggy Kamuf (Stanford, Calif.: Stanford University Press, 2002), 210, 72. See also Derrida, *Archive Fever: A Freudian Impression*, trans. Eric Prenowitz (Chicago: University of Chicago Press, 1996).

11. This is probably the point-on withdrawing the thinking of the event from an ontology-to insist once again on the difference between Derrida and Deleuze-or, for that matter and from a certain, more contemporary vantage, the difference between Luhmann and Varela. For an overview of these questions on the terrain of the Luhmann/Deleuze difference, see my *Critical Environments*, esp. 114-28.

12. Niklas Luhmann, *Social Systems*, trans. John Bednarz Jr. with Dirk Baecker (Stanford, Calif.: Stanford University Press, 1995), 67.

13. Dietrich Schwanitz, "Systems Theory According to Niklas Luhmann- Its Environment and Conceptual Strategies," *Cultural Critique* 30 (Spring 1995): 146.

14. Jacques Derrida, "Signature Event Context," trans. Samuel Weber and Jeffrey Mehlman, in *Limited Inc*, by Jacques Derrida, ed. Gerald Graff (Evanston, Ill.: Northwestern University Press, 1988), 3.

15. Derrida, "Signature Event Context," 7-8.

16. Jacques Derrida, "Differance," trans. Alan Bass, in *A Derrida Reader: Between the Blinds*, ed. Peggy Kamuf (New York: Columbia University Press, 1991), 64.

17. Jacques Derrida, "Speech and Phenomena," trans. David B. Allison, in *A Derrida Reader*, 26-27.

18. "Afterword," trans. Samuel Weber, in *Derrida, Limited Inc*, 119.

19. See Luhmann, *Social Systems*, 139, 145. Luhmann insists on his difference with Derrida's critique of this set of problems, but only by way of a reductive reading of Derrida's approach. I will return to this point, and the stakes involved in it, later.

20. Schwanitz, "Systems Theory," 153.

21. *Ibid.*, 156.

22. See Luhmann, *Social Systems*, 10: "Systems must cope with the difference between identity and difference when they reproduce themselves as self-referential systems; in other words, reproduction is the management of this difference. This is not a primarily theoretical but a thoroughly practical problem, and it is relevant not only for meaning systems."

23. *Ibid.*, 25, 26.

24. "System differentiation," Luhmann writes, "is nothing more than the repetition within systems of the difference between system and environment. Through it, the whole system uses itself as environment in forming its own subsystems and thereby achieves greater improbability on the level of those subsystems by more rigorously filtering an ultimately uncontrollable environment. Accordingly, a differentiated system is no longer simply composed of a certain number of parts and the relations among them; rather, it is composed of a relatively large number of operationally employable system/ environment differences, which each, along different cutting lines, reconstruct the whole system as the unity of subsystem and environment" (*Social Systems*, 7).

25. Think here, for example, of the Napster controversy and how changes in technology have forced a renegotiation of the interpenetration of economic and legal systems on the specific subsystemic site of intellectual property law—a classic example of how systems, following Luhmann's analysis of interpenetration, use each other's own complexity to enhance their own for the

purposes of controlling (or at least steering) the other.

26. Luhmann, *Social Systems*, 37, 33.

27. Bruce Clarke, *Posthuman Metamorphosis: Narrative and Systems* (New York: Fordham University Press, 2008), 67. The text figure, "The Form of Distinction," was first published in George Spencer-Brown's *Laws of Form* (New York: E. P. Dutton, 1969).

28. As Teubner, a distinguished legal scholar, has pointed out, autopoietic social systems thrive on paradox in the sense that "de-paradoxification means to invent new distinctions which do not deny the paradox but displace it temporarily, and thus relieve it of its paralyzing power," so that, for example, "in European legal history, institutionalized distinctions between natural and positive law or, currently, distinctions between legislation and adjudication, have produced their impressive cultural achievements despite or precisely because of the legal paradox" ("Economics of Gift," 32).

29. Niklas Luhmann, "The Paradox of Observing Systems," in *Theories of Distinction*, 83-84.

30. Luhmann, *Social Systems*, 60.

31. Derrida, "Differance," 65-66.

32. Luhmann, *Social Systems*, 60.

33. On this point, see Luhmann, *Social Systems*, 37: "On this basis," he writes, "one can then distinguish between, on the one hand, organic and neurophysiological systems ... and, on the other, psychic and social systems, which are constituted by the production and processing of meaning." Luhmann's point is that both types of systems are self-referential, but for the latter, "meaning enables an ongoing reference to the system itself and to a more or less elaborated environment." In a now-obsolete vocabulary, we would say that meaning enables a "representation" of the system /environment relation to the system itself (which is kept from being representationalist precisely by the inescapable fact of self-reference of all systems).

34. Luhmann, "How Can the Mind," 169.

35. Luhmann, *Social Systems*, 59.

36. Luhmann, "How Can the Mind," 173; *Social Systems*, 272.

37. Luhmann, *Social Systems*, 272; "How Can the Mind," 173. Although I cannot explore this here in any detail, it is worth noting, as Luhmann argues, that "the relationship of the accommodation of communication to the mind and the unavoidable internal dynamics and evolution of society is also evident in the fact that changes in the forms in which language becomes comprehensible to the mind, from simple sounds to pictorial scripts to phonetic scripts and finally to print, mark thresholds of societal evolution that, once crossed, trigger immense impulses of complexity in a very short time" ("How Can the Mind," 174).

38. Luhmann, *Social Systems*, 161.

39. Derrida, *Limited Inc*, 148.

40. Luhmann, *Social Systems*, 162.

41. Here, very schematically, one would find Rodolph Gasche's reading of Derrida at one end of the spectrum, and Richard Rorty's at the other. For a useful overview of these different ways of reading Derrida, see Rorty's "Is Derrida a Transcendental Philosopher?" and "Two Meanings of Logocentrism: A Reply to Christopher Norris," in Rorty's collection *Essays on Heidegger and Others: Philosophical Papers*, vol. 2 (Cambridge: Cambridge University Press, 1991).

42. As for the former, see, for example, Luhmann's *Art as a Social System*, trans. Eva M. Knodt (Stanford, Calif.: Stanford University Press, 2000), 98-100, 157-58; for the latter, see, for example, Luhmann's "Deconstruction as Second-Order Observing" and *Social Systems*, 145-47, which seems to endorse Derrida's reading of Husserl in *Speech and Phenomena*, only to assimilate Derrida's work to "a theory of signs (language theory, structuralism)."

43. Jacques Derrida, "'Eating Well' or The Calculation of the Subject," in *Who Comes After the Subject?* ed. Eduardo Cadava, Peter Connor, and Jean-Luc Nancy (New York: Routledge, 1991), 116-17.

44. Jacques Derrida, "And Say the Animal Responded?" trans. David Wills, in

Zoontologies: The Question of the Animal, ed. Cary Wolfe (Minneapolis: University of Minnesota Press, 2003), 126, 137 (*italics mine*).

45. "Positions: Interview with Jean-Louis Houdebine and Guy Scarpetta," in *Positions*, trans. Alan Bass (Chicago: University of Chicago Press, 1981), 104-5n32.

46. Teubner, "Economics of Gift," 36.

47. *Ibid.*, 37-38.

48. Niklas Luhmann, "The Cognitive Program of Constructivism and the Reality That Remains Unknown," in *Theories of Distinction*, 134.

49. Niklas Luhmann, *Observations on Modernity*, trans. William Whobrey (Stanford, Calif.: Stanford University Press, 1998), 19.

50. Luhmann, *Social Systems*, 33.

51. Luhmann, *Observations on Modernity*, 48.

52. Luhmann, *Social Systems*, 57.

53. Peggy Kamuf, introduction to *Without Alibi*, 6.

54. Luhmann, *Art as a Social System*, 156.

2. Language, Representation, and Species

1. Terrence W. Deacon, *The Symbolic Species: The Co-evolution of Language and the Brain* (New York: Norton, 1997), 442. Though I cannot make the argument within the confines of this essay, I would suggest that Deacon's work is, if anything, more Cartesian than Dennett's. This becomes clear in the final chapter of the text, which, even as it attempts to argue for a substantial continuity between the mental lives of human and nonhuman animals, reinstates, via the terms "representation" and "experience," the quintessentially Cartesian distinction we will see Dennett run aground on—namely, the distinction between sensations and the experience of sensations (possible only for beings who operate with symbolic representations) that anchors Descartes's infamous