World-Systems Colliding: Thomas Pynchon and Niklas Luhmann

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“I have no idea what the significance of classical philology would be in our age, if not to have an untimely [unfashionable] effect – that is, to work against the time and thereby have an effect upon it, hopefully for the benefit of a future time.”
Friedrich Nietzsche. “On the Utility and Liability of History for Life”

“The scale of [Pynchon’s] work, large in geography and unafraid of major subjects, helped us locate our fiction not only in small anonymous corners, human and ever-essential, but out there as well, in the sprawl of high imagination and collective dream.”
Don DeLillo

I

The collision in my title references world-fictions elaborated by Luhmann and Pynchon during a period when the world-system itself intensified at an unprecedented rate. This essay will be a conflation of social theoretical and aesthetic tropes more than a comparative study. In some respects, I want to treat both the sociological and the literary imagination as equally “unafraid of major subjects” and attracted by “the sprawl of high imagination and collective dream”.

But first I want to address two popular claims in Pynchon criticism, claims that will be contested within the Luhmannian framework. The first is that the postwar American literary imagination is essentially paranoid. The “literary oneworldness” that Emily Apter finds in Pynchon and Don DeLillo,

has become exemplary of the postwar-American literary world system. It is work that exports a singularly American style of one-world thinking even as it revels in taking apart the commercial manipulation of the global psyche by American consumer capitalism. (“On Oneworldness” 385)

The second claim, already suggested by Apter’s meliorating appreciation of the revelry and resistance in Pynchonian paranoia, is
that the American world-system can be redeemed by its joining together with other worlds and other polities, and by moving toward another (not yet realized) world economy.

This second claim can take various forms among the numerous world-systems theorists in various disciplines gathered by Apter in her essay. One form is redemptive, replacing American monoculturalism with a “transnational” multiculture. Apter cites for example the philosopher Peter Singer's conception of world citizenship, “abstracted from history and nation, … bound together by a common dedication to distributive justice on a planetary scale.” (“On Oneworldness” 386) Similarly, the “utopian planetarity” of Etienne Balibar (deriving in part from Juergen Habermas’s notion of Weltinnenpolitik),

seeks to redeem oneworldedness through an ethic of transnational citizenship that would bolster international law, soften borders as zones of hospitality, and pluralize politics by wresting the right to representation from the class of elites. (“On Oneworldness” 386)

Another way to imagine the collision of world-systems is disciplinary, which would “entail breaking ‘the system’ that aligns American monoculturalism with unipolar thought, unilateralist politics, and a distinctly noncomparatist approach to ‘global’ literary studies.” (“On Oneworldness” 386)

Nobody, I think, disputes the value of greater openness and equitability among nations and social groups at the level of “family, class, cultural tradition, religious or national belonging.” (Berghaller and Schinko) The problem, rather, is that these traditional categories are no longer “fundamental,” as Hannes Berghaller and Carsten Schinko state in their call for papers for the present volume. In the current world-system, as understood by Luhmann, society is already divided into disciplines and practices whose relative autonomy, or “functional differentiation” in Luhmann’s terms, cannot be so easily broken. “[L]aw, politics, economy, education, religion, science, and the mass media,” according to Berghaller and Schinko, each constitute a social reality in its own right, “incommensurable with the realities of the other systems and unable to account for them except on its own terms.” To the extent that any one nation will transact with another, the transaction will be on terms already set by the “oneworld”
system that Apter and other theorists of “transnationality” or “planetarity” wish to overcome.

Paranoia, however frequent and pronounced as a theme in American postmodern fiction, is from the Luhmannian perspective not always a pathological projection of one’s own singular style outward onto the world. The trope of paranoia, the “leading edge” of the insight, in Pynchon’s *Gravity’s Rainbow*, that “everything is connected,” can also just as well be understood as a condition in which “nothing connects to anything.” The two possibilities are held together in Pynchon, even as societies in Luhmann are at once held together by their own networks and connections, and kept separate and distinct from the environment and from other societies. (From this perspective, the “global” network of computers, multimedia, and financial exchange is yet another, especially exclusive, province.) Like Tyrone Slothrop wandering the post-war “Zone” in *Gravity’s Rainbow*, we enter partially and momentarily in any number of systems and societies that go on working regardless of what we bring to our particular transactions and communications. Systems and societies function, in other words, precisely to the extent that they exclude us, and the paranoid disposition in postmodern fiction is a way of registering that exclusion.

Apter appreciates the incommensurability of paranoia (an all-encompassing pathology) and literary self-consciousness, which implies the ability to get outside oneself (if only to recognize one’s own paranoid or systems-making tendencies):

> Literary paranoia is undoubtedly most effective when not overtly themed, but Pynchon consistently breaks this rule. [Leo] Bersani notes that [Pynchon’s] characters “repeatedly refer to themselves as paranoid. There is the hitch: since when do paranoids label themselves paranoid?”
> (“On Oneworldedness” 375)

Luhmann’s answer would be that we recognize the oneness of the world-system at the historical moment when consciousness becomes separate from a functionally differentiated society. Where paranoia, in Apter’s formulation, is an expansion or projection of an individual’s consciousness onto the world, human consciousness is removed from systems in Luhmann - and that is why the systems are able to reproduce themselves, though with occasional communicative disturbances that I will explore in what follows.
To disturb, rather than “break in” (Apter) to the current world-system: this is the role of literary consciousness in American postmodern fiction. Literary language itself might be understood as a disturbance of the more specialized and operational communications that systems use to reproduce themselves internally, and to separate themselves from the operative language of other systems. So we may as well begin by considering Pynchon’s own variations on the term “world-system” itself.

II

Early in Against the Day, Thomas Pynchon’s counter-narrative of global modernity in its formative years (from the Chicago World’s Fair to the aftermath of the first World War) references are made to air-powered skyships, (Pynchon 26) to a character named “Chevrolette,” (29) and to another “young lady typewriter” in the office of a private detective (24).¹ These are not exactly anachronisms (though anachronisms abound in Pynchon’s late period novels.) Rather, Pynchon draws on “the discourse of the day” (Pynchon 57) – our own day, and theirs, so that the same word can reference objects that are now quite different from earlier references. Consider for example the appearance in the novel of a “World-System”:

Back in the spring, Dr. Tesla was able to achieve readings on his transformer of up to a million volts. It does not take a prophet to see where this is headed. He is already talking in private about something he calls a ‘World-System,’ for producing huge amounts of electrical power that anyone can tap for free, anywhere in the world, because it uses the planet as an element in a gigantic resonant circuit. (Pynchon 33)

The project, eventually published by Nikola Tesla (1927), was never realized and the term, somehow, never caught on although another, quite different science – sociology – does have an elaborate “World-Systems Theory” that will be an important context for Pynchon’s career-long literary reflection on world history. If this conflation of scientific, social, and literary theory seems like a stretch, we need only

¹ N. Katherine Hayles, in My Mother Was a Computer, contributes a chapter to this counter-history with the help of another shifting signifier: a “computer” in the era of mainframes was the woman who typed in the code written almost exclusively by male engineers and programmers.
look a little further in Pynchon’s narrative for a more directly political analysis, closer this time to the world-system of another Nicholas, the German systems theorist Niklas Luhmann:

Speculation began to fill the day. Once it had been enough to know the winds, and how they blew each season of the year, to get a rough idea of where they might be headed. Presently, as the Inconvenience began to acquire its own sources of internal power, there would be other global streamings to be taken into account – electromagnetic lines of force, Aether-storm warnings, movements of population and capital. Not the ballooning profession as the boys had learned it. (Pynchon 55)

“The boys” are the crew of the skyship Inconvenience, among them the physically awkward Miles Blundell who nonetheless is capable of moments of piercing intuition, as when he observes the hidden playing card in the hat of a local sharp working the Fair: “these peculiar feelings will surround me,” Blundell explains, “[l]ike the electricity coming on – as if I can see everything just as clear as day, how…how everything fits together, connects.” (24) That intuitive coupling – of material, psychic, and (not least) textual formations – is the connecting thread I propose to follow in this essay, through Pynchon’s novel and Luhmann’s unified theory of the world-system. My claim is that Against the Day, exemplary of an emerging world-fiction not limited to U.S. authors, can be seen to enact world-systems theory, and this is so, largely, because Pynchon has resituated his work in the medial ecology that both enables and constrains the world-system. The connectivity, “clear as day” to one character and an article of faith for an emergent corporate culture, is nonetheless precisely what Pynchon is writing against. It has been said of Pynchon, that he has crafted a literary career that “is impervious to narrative” (Wood 12) and his work is similarly resistant to each of its familiar, interacting stories: The narrative of a family (the Traverses), a conglomerate (operated under Scarsdale Vibe), and a developing transportation and communications network (“like electricity coming on”) are always attentive to, and often haunted by, “other global streamings” (Pynchon 55). The unity of the literary work depends not on a single overarching vision or encyclopedic accumulation, but rather on an interaction among separate knowledge realms, what Luhmann describes under the term, “functional differentiation”. These separate realms cannot be reconciled (no more than scientific knowledge can be kept from subordination to the financial support Tesla depends on, to bring his
vision to realization, though not in anything like its intended form). The knowledge between realms cannot be mediated, in the way that Marxist narratives discern formal consistency in common economic conditions and ecologies find commonality in the autopoietic reproduction of systems. What can be done – and this is narrative’s specific contribution to systems discourse – is continually to disrupt the closed realms of specialized knowledge. Narrative, like critique, is situated “against” systems, as a kind of resistance but also in a border relation; it occupies a space, one that is constantly changing, to the side of the system where it can hope to inflect its operations toward alternative ends.

Consistent with narrative’s incommensurability with and exteriority to the modern world-system, we find in Pynchon a predominance of under-regulated, unacknowledged spaces – the brothel, the gambling casino, the theater, and the black markets toward which Pynchon’s characters (nearly all of them) gravitate. These “other spaces,” the Zone of Gravity’s Rainbow, the topologies that deflect the line in Mason & Dixon, the night that shapes “the day,” form an environment to the world-system that is known, by those “living inside the system” (Gravity’s Rainbow) mostly as rumour, speculation, mysticism, innuendo, and noise. It is here, in these heterotopian and bordering spaces, that Pynchon imagines a future beyond the system’s own longue durée.

III

Starting with the electricity that lights the ‘White City’ of Chicago circa 1893 and devoting much of his narrative to Eastern European and non-white populations inhabiting the Fair outskirts, Pynchon offers a remarkable range of historical, scientific, multi-sensory, and multi-cultural reference. But there is little of the encyclopedism associated with modernist narrative and scarce interest in the politics of cultural pluralism. Balancing epical accounts of the “movements of population and capital” with small acts of linguistic and historical attention, Pynchon sets in motion a “resonant circuit” of his own between material and conceptual realms, using techniques drawn in part from Magical Realism (a practice that runs from Cervantes to Marquez and Roberto Bolano, skirting but never converging with the
mainstream of literary Modernism). Mostly, however, Pynchon’s interest, it seems, is mainly in *telling stories,* even when mapping present circumstances systematically onto a past era (proto-modernist Chicago, pre-revolutionary America in *Mason & Dixon*, the Pacific Northwest during the Sixties as contrasted, in *Vineland*, with the neoliberal reaction under Reagan).

Literary modernists also liked to collapse eras or rather displace the current impasse onto Empires of old: Classical Greece and contemporary Dublin in *Ulysses*, wartime London and past imperial centers in *The Waste Land*—“Falling towers/Jerusalem Athens Alexandria/Vienna London/Unreal”. The fall of empires can at least put the inevitability of current arrangements into doubt (though, as we shall see, the inability to imagine system-wide change as anything but total collapse is a perceived drawback of contemporary systems theory). Further, the collapse of an entire narrative into a single day (February 14, 1904 in *Ulysses*) ensures that there can be no history, no development, only a layering of eras in the longue durée of the present. To write *against* the day, is in this sense Pynchon’s attempt to reintroduce the history that modernist narrative bracketed off, or collapsed into a field where the political is always, everywhere, the politics of everyday life and the historical never more than a thick history of the present.

The technique of Modernist parataxis indicated to Joseph Frank a tendency to prioritize space over temporality as an analytical category: specifically, in the American context, such layering techniques might be said to arrive at the historical moment when “The Frontier ends and disconnection begins.” (Pynchon 53) Geography, and a prospect of freedom from the feudal holdovers in Europe, Russia, and China, may account in part for modernity’s American address. And there was always, in the founding of the United States, a determination *not* to be or become an Empire on the Roman model. To a degree, however, the conquest of open spaces early in the development of the United States may have been thought to resemble classical models of imperialism. Historically, the Roman model of marking entire populations as “barbarian” could be applied (as much through economic as military means) to any people, indigenous or

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2 The freedom to do so was earned by Pynchon’s having kept his private life hidden but also by creating “a career impervious to narrative”. The stories, too, are under no compulsion to produce events or develop. (Wood 12)
extraterritorial, not engaged in the project of modernity: the native tribes across the North American continent or the central Asian populations subdued first by the Tsars and then, through enforced “modernization,” by the Soviet Union. Once complete, however, the modern dominion over indigenous peoples would be supplanted increasingly by the exploitation of cognitive and cultural differences – primarily differences in education and access to professions and their various media of communication. Race, ethnicity, and pre-modern life-sustaining practices, though certainly a continuing presence, are now regarded as “identities” or “cultures” whose representatives press not collectively for an alternative, but inevitably for their own partial inclusion in the system. To be sure, an international tradition of revolutionary opposition to the world system remains, and Against the Day is devoted largely to narrating this counter-history in Europe and the United States. But these anti-systemic networks never build, in Pynchon, to full scale political movements: they are networks of individuals in communication with one another, a “counterforce” (Gravity’s Rainbow) that is defined in cultural and economic rather than military terms whose organization is of necessity ad hoc, a cognitive environment of half articulated differences, sexual and psychic departures, perceptual shadows and carefully maintained invisibilities by an emerging security state apparatus. None of these could ever be channeled into a programmatic alternative to the world system, despite Pynchon’s interest in the “Wobblie” movements of the early twentieth century, in Luddite resistance on the model of Edward Abbey’s The Monkey-Wrench Gang, and other counter-cultural movements that emerged with Pynchon’s early narratives in the 1960s and 1970s.

In terms of aesthetics, Pynchon’s expansive present moves beyond the modernist layering of eras and more closely follows (and to a degree had already inspired) the mode of William Gibson and Bruce Sterling in The Difference Engine, a novel whose Victorian English setting includes digital technologies and socio-political tendencies fully worked out by Charles Babbage and his associates but not put into widespread practice for another century. In Pynchon, the potential of a past era is always presented as if it were already realized – a practice that implicitly favors the discovery of present potentials and unnoticed possibilities in our own modernity. Writing “against the day” is never in Pynchon a straightforward opposition to the actual; it is a way, rather, to evoke an environment of unmarked or unrealized
potential at the edges of daylit consciousness. “Excursion” is the mode of Pynchon’s late narratives: a “step to the side” and continuing negotiation with the terms of “the day,” rather than a direct confrontation or resistance. (Pynchon 41) Different realms of information in his novels are confused routinely, encounters are staged not among “classes” so much as among professions and social roles. Even in a self-conscious “family” narrative such as *Against the Day*, families rarely remain together for long, neither birth nor marriage nor death are sources of narrative closure (and the death of Webb Traverse only burdens his sons with an apparent need, not to avenge so much as to further inhabit the world of global finance and ecological destruction their father opposed with violence; his daughter will marry the very man who was hired to kill Webb; the one Traverse, Kit, who finds love, keeps her by not asking about her past and probable current courtesanships).

Characters in Pynchon are never reducible to (or much interested in developing) a single racial, gendered, or cultural identity – least of all one connected with a particular nation state. (At the same time, characters move through unmarked territories within Mexico, Eastern Europe, Central Asia, the open seas, the skies, and the intergalaxies, much as they move through their native United States.) If Pynchon’s studied resistance to the modernist aesthetic tradition was not yet clear by the time of *Gravity’s Rainbow*, it is now with *Against the Day*, whose anti-narrative is unabashedly grounded in models from boyhood adventure- and family-narratives that modernists (and post-modern experimentalists too) thought they had left behind. As Steffan Hantke writes in his account of the genre after Kipling and Wells, “Whatever has survived of adventure to the present days appears as a repository of historically obsolete, chauvinist, reactionary thought. By and large, adventure has become a political embarrassment.”

Not for Pynchon. The obsolete and the sub-literary consort with progressive, regressive, anarchistic, entrepreneurial, and avowedly terrorist ideologies alike.3 Without notice, Pynchon’s predominantly lyrical prose is prone to break out into song, and a

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3 Only for one class, the monied tourist or “recreational visitor,” does Pynchon reserve explicit ethical condemnation, or perhaps the objection is more a matter of aesthetics: We last see Fleetwood Vibe, a tolerated presence among explorers and exploiters of a central Asian territory, anticipating a social life conducted largely in restaurants with “bad food and worse music…” (Pynchon 47)
rather tasteless sort of singing at that: Vaudeville, as has been shown, is a mode originating in America that helps to account for this particular national culture’s eventual world-wide expansion through Hollywood movies. (cf. Fluck) At least as compelling as the multi-cultural appeal of Vaudeville, is a “multi-sensory” environment in the United States, which struck Oscar Wilde as one of the noisiest countries on earth. In support of his claim, the distinguished visitor from Ireland cites a notice in a Leadville, Colorado saloon: “Please Don’t Shoot the Piano Player, He Is Doing His Best” – and this citation would be cited in turn by William Gaddis in an early systems novel, JR (1975), as part of an extended empirical reflection on the displacement of the arts by American entertainment and an emerging mass culture. This culture, inevitably, keeps literary consciousness at a distance from the event, repels studied reflection, and keeps a spirit of adventure alive (even if the territories to be explored are no longer primarily geographical but – as we shall see – time-based and largely cognitive).

IV

_The project is therefore one of the ideological analysis, not so much of a concept, as of a word._

Fredric Jameson on the word “modernity” (A Singular Modernity 13)

When readers encounter familiar words with outdated meanings, the materiality of language can add a level of resistance to present usage. A world language such as English is especially rich in professional terms and technical vocabularies carried over as a result of business, pop cultural, and, less widely, scientific exchange. Objects of technology especially – the computers and typewriters, the “texts” we send and receive throughout the day – are denied an aura of inevitability when we encounter an earlier usage. Not that any technology, even one so liberating as Tesla’s World-System, has ever realized its progressive potential: witness the Internet, where forms reproducible endlessly at a negligible additional cost have been turned largely, today, into controlled commodities. We hear about Tesla’s scheme for wireless energy transmission, appropriately, from Scarsdale Vibe, a financier whose interest is precisely to prevent its realization. Vibe is commissioning a Yale scientist, Heino Vanderjuice, to create a counter-system that will cancel out the effects of the Tesla
World-System. Vanderjuice, with his talk of singularities, continuities, and breaks, and with his feeling of having “taken a wrong turn in the Labyrinth of time,” (Pynchon 33) employs a conceptual vocabulary closer to the literary theorist Hanjo Berressem than any nineteenth-century scientist, even Willard Gibbs whose own “grand system” is admired by all the mathematicians and scientists in Against the Day. (319) At the same time, Vibe in his quasi-religious devotion to free market ideology is clearly meant to evoke another seeker of nonexistent weapons of mass destruction:

. . . It is a weapon, Professor, surely you see that – the most terrible weapon the world has seen, designed to destroy not armies or material, but the very nature of exchange. . . . the rational systems of control whose blessings we enjoy at present. (34)

An “economic system [that] has shifted its bases of security from property and reliable debtors (such as states or large corporations) to speculation itself” – that is Luhmann’s characterization of our current “global system” (Luhmann, Globalization 67). Similarly, Immanuel Wallerstein describes current economic development (as distinguished from earlier forms of capitalism across the world), as giving “priority to the endless accumulation of capital”. That constitutive endlessness moreover, in duration and in the creation of new, increasingly mental or “virtual,” markets, is what makes the current world-system unique:

. . . only the modern world-system has been a capitalist system. Endless accumulation is a quite simple concept: it means that people and firms are

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4 Berressem, a professor of literature at the University of Cologne, had played the part, in a Pynchon documentary, of Pointsman the behavioral scientist from Gravity’s Rainbow. Berressem’s presumed appearance as a German scientist in Against the Day, though not ascertainable, has a kind of near-rhyming resonance, as do most of Pynchon’s conflations of fictive historical exploration and contemporary actuality. Later on, Pynchon discovers in “the devout Aetherist a propensity of character” and modes of discussion consonant with an abstract theoretical discourse inclined “ever toward the continuous as against the discrete. Not to mention a vast patience with all those tiny whirlpools the theory has come to require.” (Pynchon 58)

5 Pynchon makes a practice, early and prominently in his novels, of referencing sitting presidents. In Against the Day, President George W. Bush is clearly the eponymous character of an adventure novel set in “Our Nation’s Capital”: The Chums of Chance and the Evil Halfwit. The U.S. War on Terror is referenced, by anticipation, in the heightened concern to develop “Antiterrorist security now more than ever” for the World Fair, but in fact, even then, the goal arguably was to make the security state permanent and privately controlled. (Pynchon 43)
accumulating capital in order to accumulate still more capital, a process that is continual and endless. (Wallerstein 24)

Wallerstein’s formulation might conflate the “modern world-system” with modern capitalism – where, for Luhmann, capitalism is just one of the intersecting function systems that together form a “world society”. That reduction is not incidental, because (as Luhmann’s essay title suggests: “Globalization or World Society”), there needs to be some separation between economies or peoples if a “world society” is to be possible. The attempted commodification of all exchanges, social and cognitive no less than economic or computational, is precisely what threatens to tilt world society toward a system of instrumental exchange in which “some human beings will be persons and others only individuals” (Luhmann, Globalization 75).

Despite this important difference, Wallerstein is consistent with Luhmann in presenting the global expansion of capital not as an end to history but (in Luhmann’s words) “a phase of turbulent evolution without predictable outcome” (Globalization 75). Wallerstein locates the origin of this peculiarly modern form of capitalism in the French Revolution and its propagation of “two quite revolutionary ideas. One was that political change was not exceptional or bizarre but normal and thus constant.” (Wallerstein 4-5) The second idea, that a state’s sovereignty and legitimacy resided not in a monarch or legislature but in the “people,” may have done more than anything to engender a global culture and world-system based on a proliferation of singularities, enclosed consciousnesses whose inaccessibility, if not always officially respected, would be increasingly operative. Given the “right” to contractual freedoms (equality and fraternity under the French slogan; pursuit of “property” in an early formulation of the U.S. constitution, eventually replaced by the word “happiness”), subjective participation eventually would become less important than demographics to the development of the Western political system. The ecological influence of “the people,” their biopolitical flows, and a new, secular mass psychology would in time become the preferred media for an emerging global culture.

And the terms for describing these movements – not least the contentious and ever-changing referent for “modernity” itself, for “globalization,” or the “world system” – would become important not so much for their conceptual content as for their power to deploy resources and channel flows of population and capital. The contention
over terminology, and the project of unsettling meanings that have attached to these keywords, is itself a function of a presumptive world-narrative.

V

Pynchon in Against the Day sustains a counter-narrative to the terms and conditions of late modernity distinguished by a capitalist economy based, like Tesla’s perpetual motion machine, on an apparently endless process of production, accumulation, and cultural exchange. The system is powered not by ideas, but rather by movements of population whose regulation across national borders has hardened as the expression of peoples’ beliefs has become, for the state, less and less consequential: cash holdings are investigated at borders, not the books carried in a traveler’s baggage (unless the book is in Arabic, and the holder is profiled first by appearance or fingerprint). Sound bites and other media currencies are easier to track than the social, political, or spiritual convictions of individuals (not even the Pope’s, whose one remark on Muslims is all that’s discussed, in an hour-long speech whose context might matter to the faithful of both denominations). The advantage, then, of removing subjectivity and consciousness from descriptions of society, is that the failure of any one consciousness to cognize the system is not a fault to be overcome; rather, this exclusion is precisely what constitutes the unity of society according to Luhmann: society is a self-regulating system, while “we” are not society’s members, but part of its environment. Only aspects of “us,” defined not by people but by individuals, are brought in selectively and at particular times. Only those parts of “us” that conform to distinctions within the system can be included functionally (though there are may be other activities, professional and recreational, that allow inclusion by virtue of qualities defined against the system’s instrumentality).

Tesla’s machine is presented in Against the Day as a “giant resonant circuit” whose ground is the planet itself in motion around the Sun. Its basis in physical theory is not what concerns Vibe, who at present is concerned only with ways of disposing “this huge mountain of wealth unspent piling higher every day, and dear oh dear, whatever’s a business man to do with it, you see” (Pynchon 32). A capitalist such as Vibe needs a large market, but he also needs a multiplicity of states and a collection of many institutions and
markets, and these need to be protected. “In principle,” Wallerstein writes, “in a capitalist world-economy the virtual market exists in the world as a whole. But . . . there are often interferences with these boundaries, creating narrower and more ‘protected’ markets.” (25) Like all perpetual-motion machines, the totally free market functions only “as an ideology, a myth, a constraining influence, but never as a day-to-day reality” (Wallerstein 25). As any actual, performing engine requires differentials of energy to go on running, markets require inequalities to maintain “an endless accumulation of capital” (Wallerstein 25). To eliminate inequalities globally is not only an unrealistic political promise. Doing so would eliminate the basis for a capitalist economy since, according to Wallerstein, the “low level of profit would make the capitalist game entirely uninteresting to producers, removing the basic social underpinnings of such a system.” (25-26)

Although Wallerstein, Luhmann, and Pynchon express quite different political commitments, the novelist and both theorists approach the World-System similarly as a formal problem – specifically, a problem of perceiving boundaries and imagining social or political transformation where there is only, as far as those living inside the system can know, change for its own sake and all obstacles are met with further operations of differentiation, further markers of identity and further margins for creating profits. With the accumulation of capital comes a need, for those with a stake in the system, for ever more innovative ways of protecting the individuality of subjects, the security of possessions, and the autonomy of social and professional life. It makes little sense, as far as the world-system goes, to try changing current arrangements by altering subjectivity, by raising consciousness (which in practice would amount to coordinating the consciousness and convictions of five billion

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6 Luhmann’s project for a unified social theory is distinguished from the Marxist program by his explicit, and consistent, replacement of conceptions of “class” by the concept of “functional differentiation” among professions: The Marxist vocabulary of “exploitation” and “suppression,” Luhmann believes, expresses “outdated mythologies…. The predominant relation is no longer a hierarchical one, but one of inclusion and exclusion; and this relates not to stratification but to functional differentiation.” (Globalization 70) Wallerstein by contrast remains within a Marxist framework of economic determinism, whereas Pynchon, as far as might be determined, advocates anarchy and a politics of everyday resistance that is never absolute, but always negotiated with the terms of “the day”.

individuals). One can instead describe a social system that, of necessity and by design, excludes consciousness from the operative world system (much as, until quite recently and perhaps wisely, consciousness was excluded from the scientific study of the brain).

This latter process of subjectivity’s separation from the world system is, in its many variations, contained in Luhmann’s conception of functional differentiation. As a theoretical assumption made by Luhman necessary to explain the reproduction of modern societies, this separation of subjectivity (and the placement of “us,” we the people, in the “environment” and never in the social system) has advantages and disadvantages. One advantage is that no external support is sought or needed for society to recognize itself as a unity; and there is no need either for this unity to be cognized, even as an ideal, by any single mind:

The concept of ‘man’ (in the singular!) as a designation of the bearer and guarantor of the unity of knowledge, must be renounced. The reality of cognition is to be found in the current operations of the various autopoietic systems,

that is, in systems whose self-reproduction is not controlled externally. (Luhmann, Cognitive Program 147) More generally, the removal of subjectivity as a unifying principle opens Luhmann’s description to languages conversant with science and mathematics, and less dependent on the founding myths of Western social and political theory:

Issues such as system formation and system boundaries, function, medium and forms, operative closure, autopoiesis, first- and second-order observation, and coding and programming can be investigated with regard to any functional system. As these investigations take shape and yield answers, a theory of society emerges that does not depend on discovering a unified meaning behind society – for example, by deriving societies from the nature of man, from a founding contract, or from an ultimate moral consensus. (Luhmann, Art As a Social System 134)

The disadvantage of this description, however, is that a society without consensus, consciousness, or subjectivity has no way of accommodating or projecting system-wide change, the “breaks or leaps” from one organization to another. (Jameson 88) Like an economy based on endless accumulation and universal flexibility, a social theory based on endless differentiation is incapable of resistance
or change from within. It is this disappearing alternative, “of a break and a beginning,” that particularly troubles Frederic Jameson about Luhmann’s signature “notion of differentiation”:

What is gained in the multiple possibilities for allegorical transfers onto all kinds of varying material – the state, subjective feelings like love, social groups, the market, sociological theories themselves, et cetera – is paid for by the effacement of the place of a cause or a beginning, or even a dialectical or structural reorganization. Differentiation – like Galilean or Newtonian movement – simply continues until it meets some external obstacle: yet the nature of the process is such that (like capital) it cannot reproduce itself without constant expansion. Differentiation tends towards ever greater differentiation, without any end in sight. (88-89)

Jameson’s own theory of a break is based, not surprisingly, on the dialectic, “whereby at any given moment the increase [in differentiation] triggers a leap from quantity to quality and produces a radically new kind of differentiation.” (90) What Jameson seems to have in mind, though his imagined transition is couched in the language of emergence, is framed not with reference to any research in cognition or chaotics but more likely involves some more centrally directed, socialist alternative to capitalism. Nowhere, for example, does Jameson himself offer an account of the transition in time from material to immaterial realms (from “quantity to quality”). The lack, in Luhmann, of a theory of change is not, it seems, a conceptual failing that Jameson intends to make up in some way. What Jameson’s critique amounts to is more a difference in political outlook than an alternative description of society. Jameson however does point us, helpfully, to the “now ancient category of self-consciousness – which [Luhmann] depersonalizes in the form of some ‘reflexivity of the system’ itself.” (90) But reflexivity remains, for Jameson, really just another way of bringing subjectivity back to one’s description, as “a kind of ghost in the machine for all theories of the modern” (90). For Luhmann, as for cognitive theorists, reflexivity belongs not to a single human consciousness but to an arrangement of things: the organization of the room and the chair one sits in, as much as what one thinks while inhabiting the room. This distributed notion of reflexivity, embodied in narratives like Pynchon’s that assign planetary consciousness to rocks, clocks, light bulbs, mechanical ducks, and balls of cheese as well as to persons, is another way of
distinguishing Pynchon’s narrative from those developed within a modernist conception of reflexive consciousness.

I think Luhmann’s theory, drawn from contemporary cognitive models, can offer at least a socially and scientifically grounded language to approach the transitions that dialectical criticism does not so much describe as invoke. As a shorthand, we might regard differentiation in Luhmann not as “Galilean or Newtonian” so much as Batesonian (the material “difference that makes a difference” because the distinction is available as meaningful information to an observer). (Bateson) To stay with our example from *Against the Day*, the production of differences in world-systems theory is Teslan: its range and connective power arises, as if electrically, from material arrangements in a consciousness distributed in things no less than in minds. Also important, in Luhmann’s redescription of reflexivity, is how the play of quantity and quality is expressed as a formal arrangement of different temporalities: the time of perception and the much longer, reflective time of consciousness. But, before giving the outlines of Luhmann’s theory, I’d like to return to Pynchon for a description of its enactment in narrative.

VI

[Homer] shows... in the Odyssey ... that, when a great genius is declining, the special token of old age is the love of marvelous tales.

Longinus, *On the Sublime*

If Longinus likened Homer in the Odyssey to “a sinking sun, whose grandeur remains without its intensity,” we might note a similar alteration in the “pitch” of Pynchon’s writing after *Gravity’s Rainbow*. As Aristotle associated tragedy and “serious” art with the depiction of heroic figures (those who are “better” than the norm), Longinus assigns to depictions of war, conflict, Sapphic sensuality, and noble passions the “elevated” rhetoric of the sublime. Narrative as such by contrast is associated with the (markedly feminine) category of the beautiful. We might appreciate feminine beauty in nature and in the arts, but a listener is “overwhelmed” only by the sublime rhetorician. The orator’s impassioned yet selective and restrained speech is capable not of merely rational or instrumental persuasion but of taking his hearers “outside themselves”. The alignment of the most elevated aesthetic with war in Longinus implies a longstanding expectation that
what moves us, aesthetically, must needs participate in the transfer of power in the world. In Longinus, however, change was never conceived as the creation of a new historical period: the concept of periodization, as Jameson has argued, is itself an invention and defining aspect of modernity, and sure enough, the production of something new in Longinus is presented not in historicist terms at all, but in terms of war and birth, alterations that either overturn past arrangements or reproduce the same under conditions of peace and stability. The sublime poet “engenders,” he is “as if made pregnant” with another person’s thought, he comes to feel as if he himself has “created that which he has only heard”. What is new is brought into the world not by history, but by biology (a continuity) or by military decisiveness (a break, with little that is dialectical about it, or historical in any modern sense of the term).

In Pynchon, for the most part, scenes of death, birth, and war itself are rarely foregrounded. Notably, Against the Day is his first book in which death by violence is staged, albeit in the manner of the Western that is but one of the adventure-narrative modes developed in the novel. More typical is the studied absence of military operations in Gravity’s Rainbow, a book ostensibly about the closing months and aftermath of World War II where violence in the form of air strikes and decimated populations always comes from “Them,” a power that resides, always, elsewhere. The Paxton killing of an entire Indian settlement in Mason & Dixon is similarly presented off-stage, and the mass violence of the first World War is given synecdochally with the presence of spinoff surgical technologies, cosmetic and prosthetic, and through scenes of racial oppression and sexual domination (in V.) by the German troops stationed in South West Africa during the time of the Fashoda crisis.

Problems of power, particularly domination, play out through an indeterminate mixture of “neutered” technocracy and personal subjectivity (“Some specific somebody” in Gravity’s Rainbow who wants a bomb to fall on a specific person or population). What is

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7 The presence of such gendered and militaristic rhetoric, like later, romantic rhetorics of authenticity, tend to mark a discourse as non-modern. In Luhmann’s terms, they signal not a development from one system to another and never a “break or leap” (Jameson), but simply a breakdown of a given system. For Luhmann, the barbarians are always at the door.

8 Against the Day is also however the first Pynchon novel in which torture is enacted by Americans. (Pynchon 197-198)
unrepresentable as a unified and controllable world-system, what is unimaginable as one’s own death (the always “not-yet”), is approached (and “avoided,” in the slogan from V) through a variety of psychic, narcotic, and sexual excursions – with a marked preference in Pynchon for the sado-masochistic. Those intensities and singularities help to account for the unprecedented power of Gravity’s Rainbow and its short-lived counter-cultural influence. What was ground-breaking in 1973, however, became banal as politics in the U.S. increasingly became cultural politics and “war” would be waged publicly, not on sovereign nations but on cultural abstractions (“drugs,” “terror,” and numerous newly named deviancies and disabilities in home and target populations alike, and increasingly in populations targeted internally in the U.S. itself). Once expressive taboos were broken, practices of subjective, sexual, and bodily management could be taken over by methods of bureaucratic domination and mass mediation. These were also areas that Pynchon fully inhabited from within the language of systems themselves, when his U.S. contemporaries were still trying to distance themselves with humor (Joseph Heller), masculine self-assertion (Norman Mailer), fantasies of gender and racial otherness (Tony Morrison, Maxine Hong Kingston), old-world high culture in its American circumstance (Saul Bellow), and so forth. Against the literary mainstream Don DeLillo was able, like Pynchon, to catch the spirit of systems in the character of Nicholas Branch whose files, once opened, tended to grow and grow, monitoring transformations in all areas of cultural life without touching the system itself, or his subject: the assassination of President Kennedy. Against the mainstream William Gaddis, in his pre-adolescent character J R, caught the genius of capitalism that has been its perpetual, energetic innocence, its innocence of consequences outside its own operations, its incapacity to conceive of its own end (in death or sexual fulfillment or transformation to adulthood). Against the mainstream Robert Coover, in his character John in John’s Wife, similarly understood the tendency of capital to grow, and the necessity to replace narrative development (and the technology of print itself) with a networked, hypertextual arrangement of alternating, minimally communicating subjectivities.

The alteration in “pitch” or tone, so marked in Pynchon’s late period novels, can indicate more than a shift in the author’s temperament, whether due to age or his having lived through an era of accelerated ecological destruction, socio-political marginalization, and the twilight of the literary itself in a culture dominated by
Instead of the apocalyptic presence of the V-2 rocket (circa 1945) at the start of *Gravity’s Rainbow* and the atomic bomb (circa 1973) at the book’s end, we have in the later novels a history of “loose beginnings and loose ends,” hundreds of small acts of “local transcendence” completed precisely because they fall beneath the notice of its controlling powers. By the last page of *Against the Day*, a system-wide change is still imagined though far less decisively, an approach more ecological than military, “like an approaching rainstorm, but invisible” (Pynchon 1085). The novel gestures at rebirth, but more in terms of system reproduction than transformation, expressing continuities rather than a break: “One day Heartsease discovers that she’s expecting a baby, and then, like a canonical part-song, the other girls one by one announce that they are, too.” (Pynchon 1084) The ship, having located an energy-free orbit (in a torroidal shaped region of the atmosphere, reminiscent of the topological figures that concern Tesla and the convention of “Aetherists”), proceeds to expand and differentiate in much the same ways as the terrestrial system:

And on they fly. The ship by now has grown as large as a small city. There are neighborhoods, there are parks. There are slum conditions. It is so big that when people on the ground see it in the sky, they are struck with selective hysterical blindness and end up not seeing it at all. (1084)

Throughout the novel the Chums had entertained “the chance, in this day and age, of sailing off the surface of the World, drawn into another, torroidal dispensation more up-to-date topologically than any simple disk or spheroid” (128; cf. 113 and 126). In the event, their dispensation is “against” the day not in the sense of an opposition, but a sidelong co-existence, “up-to-date topologically” and unseen in broad daylight but in all other respects, entirely ordinary. The alternative resides, in other words, within the terms of the world-system itself, in the constitutional blindnesses, emergent

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9 The change in Pynchon’s own media presence, over the years from Salinger-like withdrawal to a cartoon character with a bag over his head in an episode of *The Simpsons*, indicates the changing terms even of an author’s studied withdrawal from the promotional culture of the modern book business.

10 See Liu, whose “history of the new millennium” is written out of “a sense of loose beginnings and loose ends”, (Liu 1)
characteristics, fleeting perceptions, and never fulfilled consciousness of the enduring present.

It is perhaps worth pursuing the presentation of beginnings, endings, breaks, and continuities in Pynchon’s world-fiction. Readers of Gravity’s Rainbow are sure to catch how, with each new book, the writing becomes ever more inward-looking even as its historical and global range expands. Even as his books elaborate styles, local references, and speech rhythms from earlier periods in American literature, Pynchon continually works variations on, or perhaps deviations from, his own writings. (His preferred term, excursions, suggests a model not so much of repetition as a continuing sideways movement or declination.) The opening line of Against the Day is a spoken command, releasing the “lines” that anchor the skyship:

“Now single up all lines!”

The spoken line is a controlling order in the immediate, referential world of the novel – although this world is recognized, almost immediately, to be itself a fiction since the Inconvenience and its colorful crew, the Chums of Chance, turn out to be the topic of an adventure story series, with settings ranging from “the Great Kahuna,” “the Kremlin,” in world-historical encounters in the North Sea with “the Ice Pirates” and with “the Evil Halfwit” who resides in “the nation’s Capital,” a not-so-veiled allusion to the sitting U.S. president as we have noted. (Pynchon 5-6; 15; 123) Beyond the implied reference to “lines” of the text itself, there is an intertextual reference to Pynchon’s earlier work – namely, the final line of Gravity’s Rainbow, “Now everybody – “ with its implied injunction to all readers, that they should “sing” the lines of the song that Pynchon has included at the end of that earlier book.  

The ability to hear, in the present text, “lines” taken from canonical literature, has an effect that is as much cognitive as it is allusive. In the later novels, Pynchon follows John Barth in The Sot-Weed Factor by presenting formative eras in U.S. history using past vocabularies and what would of course only later be recognized as

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11 A similar overwriting is accomplished with the snowballs flying in an arc at the beginning of Mason & Dixon, instead of the “screaming” of a presumed rocket “across the sky” at the start of Gravity’s Rainbow (itself an echo of the Book of Revelation).
period styles. The recovery of outdated meanings in familiar words is not just a way of presenting historical information or imagining lifeways: words have their own history and development separate from intended significations at any given period, and the presencing of past usage puts the materiality of language first, as something that communicates in its own right. In this way, and only in this way, subjective processes, those actually felt at least by the literate among earlier peoples, can be as palpable to modern readers as they were to past authors. As William Paulson has noted, in his argument for continued literary study in a modern media environment, “everyone can use language to speak, to think, and to play” (23).

There is, in other words, a universal to be found in such literary laminations – limited of course to readers of the same language, the author’s corpus, and the enabling tradition that the author has entered. Those limitations do nothing to limit the universality of literary art, since any language, and any tradition, is available to anyone who takes a notion to learn them. The universality of literature in no way means that everyone participates, and neither does the unity of the world system require the participation of everyone in the world. “A world-system is not a system of the world, but a system that is a world and that can be, most often has been, located in an area less than the entire globe.” (Wallerstein 98) The world-system requires only that centers of communication are established, populated, and reproduced globally, while the literary universal requires only a small group of authors who attend to one another and the materiality of their own communications, and generations of readers over a long enough period to be able to mark differences in usage. Words are perceived not only subjectively but also sensually through a style that captures the era’s speech and thought rhythms in a written language. That presencing of past languages, against the “daylit consciousness” of everyday speech today, can suggest a way of maintaining the unity of the aesthetic practice as well as the world system, consistent with the interaction between perception and consciousness in Luhmann that in closing we should consider in some detail.

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12 Or maybe not so familiar, or not for long. Novelist David Markson, in his late seventies, speaks of a conversation with a woman in her twenties who asked if he still used a ‘typing machine’ for writing his novels.
VII

The novel as a genre, given over largely to the representation of individuals, though favoring linear narratives and gravitating toward localities, has also from its beginnings (that is, the beginnings of modernity itself) been the most self-conscious and recursive of genres. In the world of novels we find, from the start, novels, including often enough references to the novel we are presently reading. If every reference to the globe we inhabit must be reflexive, since the world we reference or observe can include us only on reflection, then the global novel or what I’ve been calling a world-fiction is in the first place a novel of reflexivity.

To be sure, self-reference and intertextuality in the wake of poststructuralist theory is now considered not as the ground for any global, universalizing ambition, but rather as one literary technique among many available to writers in various traditions since Laurence Sterne, to be avoided by “realists” and embraced by fabulists and “experimentalists”. That’s now an old story in literary criticism, reinforced by the institutions of a mostly commercial realism and a measured tolerance for innovation in graduate writing programs. But there are other ways, surely, to view reflexivity and intertextuality, as a kind of material counterforce to the headlong “movement in straight lines and at right angles” – which Pynchon cites when depicting for example the stock yards of Chicago: “a progressive reduction of choices, until the final turn through the final gate that led to the killing-floor” (Pynchon 10). For Pynchon, death or global breakdown is the only imaginable end to a system built along straight lines and an ideology of progressive rationalism. (For Luhmann, too, change – fundamental change – can only come through the breakdown of a system’s autopoietic functioning, although Luhmann does not attempt to imagine breakdown, and in his system progressive rationalism is not demonized so much as it’s an inconsequential misrecognition of what is actually the case.)

When change comes, it arrives (like the Tarahumares biplane over the Mexican city of Aztlán) “as if emerging from the resolute blankness of history”:

It might be bringing anything, to a degree of unpleasantness unknown so far in modern warfare, which was already unpleasant enough. Townsfolk would
reckon events for years to come as occurring before or after the airplane came. (Pynchon 927)

The breaks that institute a new historical period inevitably, in Pynchon and in Luhmann, emerge out of a “blankness” unmarked by the modern system that made its invention possible, and the consequence is never transformation but rather disturbance. Its potential is always seeded in the past, and it is known, and can only be known by the “Townsfolk” within the system, against the backdrop of familiar distinctions. This is the meaning of the autopoietic closure of systems: what we seek to change, consciously, is already known to us in terms given by the system. That is why disturbance is likely to come when we are looking elsewhere, inhabiting realms that feel strange – like the heterotopian spaces that Pynchon consciously constructs, while at the same time letting the narrative range among hints and suggestions that come from what he’s learned about his chosen topics. Attentive to the meanings of scientific and cultural terms, Pynchon projects this mostly abstract discourse (the singularities, the delta-t’s, the world-systems) onto realms of lived experience in ways never meant by the specialists who devised the terms.

Very often in Against the Day, Pynchon presents a break as a series of deviations against the line, notably in the scene where Lew Basnight finds himself in disrepute professionally and abandoned categorically by friends and wife for no reason he can fathom or no action he can recall. Departing from the fairgrounds, Lew happens into a new life and residence in a Northwest Chicago neighborhood whose angled streets interrupt the city grid and whose informal economies and self-sustaining social networks thrive independently of the official economy.

Lew Looked around. Was it still Chicago? As he began to walk, the first thing he noticed was how few of the streets here followed the familiar grid pattern of the rest of town – everything was on the skew, narrow lanes radiating starwise from small plazas. Tramlines with hairpin turns that carried passengers abruptly back the way they’d been coming, increasing chances for traffic collisions, and not a name he could recognize on any of the street-signs, even those of better-traveled thoroughfares … foreign languages, it seemed. Not for the first time, he experienced a kind of waking swoon, which not so much propelled as allowed him entry into an urban setting, like the world he had left but differing in particulars which were slow to reveal themselves. (38)
The ‘waking swoon,’ is one of many ways that Pynchon sets an individual, human consciousness “against the day” in this novel. Indeed, conditions of forgetfulness, “fugue,” even “delirium” have characterized Pynchon’s work at least since his undergraduate story “Entropy,” set in a forgetful Washington, D.C. in the month of February, or the delirium tremens of a dying sailor discovered by Oedipa Maas in San Francisco in *The Crying of Lot 49*, a condition that Pynchon (again characteristically) conflates with the ‘dt’ or delta-t, a unit of change in calculus that indicates neither a quantity nor an operation but an approach to zero in the space between known quantities. The dimensions of this unit are, literally, imaginary – it is not a countable number, not reducible to ones or zero, not a dimension at all, but instead the disappearance of dimension which can only be imagined as a process, a convergence of parallel lines at infinity (which is to say, outside our perceptual horizon). The status of the delta-t precisely as imaginary (whether or not the word means the same thing in mathematics and aesthetics) allows the mathematical symbol to perform very real work in calculations which have consequences – indeed, without this symbol we would not have the constructed world of buildings, bridges, and streets that we inhabit, thoughtlessly for the most part but occasionally, at times of emotional disorientation for example, with a sense of estrangement.

Luhmann’s *Art As a Social System* gets at the peculiar, swoon-like character of such moments with a key distinction, one that he asserts can “affect and radically alter the concept of world” in its aesthetic representation. (Luhmann, *Art As a Social System* 26) The result not of Gestalt nor information nor chance nor divine inspiration nor sudden insight nor any other formal arrangement that would unify elements or disrupt that unity, the “world” instead comes to us in the form of a distinction. Moreover, as Pynchon uses the delta-t, Luhmann also derives his operative language from mathematics, specifically the formal calculus of George Spencer-Brown:

On the surface, the *Laws of Form* appear to reconstruct Boolean algebra under the condition that only a single operator may be used for arithmetic and algebra. This operator is introduced by the injunction: “Draw a distinction!” Without distinction, one would encounter the world only as unmarked state. Each operation creates a difference, and each discriminates. This does or does not happen – there is no other possibility. (Luhmann, *Art As a Social System* 31)
I am not qualified to comment on the (surely too hasty and obscure) initial characterization of Boolean algebra and operators: such undefined formulations are repulsive to the non-specialist and unlikely to earn the respect of mathematicians. But clearly (from my own position in the field of literary criticism) the mathematics is understood by Luhmann to support a constructivist position that, unlike most recognitions of the social and cognitive construction of the world, goes all the way down. The arbitrariness of the originating distinction – it “does or does not happen” and it does or does not support further construction – is Luhmann’s implicit answer to any of the more tendentious theories of modernity that would seek meaningful, system-wide change on the basis of some novelty or epiphany or revolutionary program. The preference for novelty for example can be recognized as necessary indeed to “the historical differentiation of art in modernity,” but the gesture toward the new is only a “symbolic function”:

The impression of novelty immediately signals the passing over from the unmarked to the marked state, as well as the simultaneous creation of a marked space in which the work of art can unfold. But the work’s context must be familiar enough to support and highlight the marking of novelty. A novel and striking work thus always has a double function: one of its sides is always overdetermined by the opposition marked/unmarked, the other by a combination of forms that incorporate familiar experiences (redundancies). (Luhmann, Art As a Social System 31)

Jameson himself recognizes novelty’s “double function” when he remarks that Rimbaud’s call to be “absolutely modern” is an implicit recognition that neither the world nor the subject is ever made over completely in the modern image, and the “modern world” itself is so recognized always in the eyes of some pre- or anti-modern “other”. This recognition has persisted, oddly enough, through the thorough-going modernization of all regions in what was once called the “third world,” and a production of formerly third-world conditions within Europe and the United States, where people are increasingly reduced to the condition of individuals struggling for daily existence. Absent access to the codes and blueprints for innovation, the majority of people today experience the “new” as only a compulsion to keep up with technologies, products, and also arts whose innovative power is largely symbolic or expressive, and whose market availability is in any case quite limited. (The actual, operative innovations remain
available almost exclusively for development by the military, or by commercial enterprises large enough to maintain the secrecy of their source code.)

But we are still left with Jameson’s contention that Luhmann’s world-system lacks a theory of global change. If the founding distinctions of modernity are largely expressive and all beginnings are arbitrary, what then constitutes operative change in a system? The answer must lie in the time it takes, to draw distinctions and make a series of observations that allow one to see, not the “unattainable” world but the boundary that separates the system we are in from other systems. The world remains unmarked and “invisible even when, and precisely when, it is laced with forms” (Luhmann, Art As a Social System 33). But the forms are observable, and it is possible to describe how a work of art directs their observation. A modern work, essentially by definition, will direct us toward what is new about it – although the demand for novelty, as we’ve seen, has a limited future to the point where, as Luhmann says, “the claim is made and refuted daily that art has no future in the posthistoire” (Art As a Social System 44).

In narrative, or what Luhmann calls “the public description of time,” the present itself is conceived as a boundary, “the differential of the past and the future, ”that is, as the time for decision, and this leads to new, highly organized forms of recursivity. Memory and oscillation, selectivity of reconfirmations and uncertainty of the future, are now unavoidable facts of social life.” If not a break or a leap to another system, there is time for “decision,” albeit one that leads not away but back into the system, in new forms of organization and “recursivity”. Typically, the time of decision in Luhmann is always now and “unavoidable”. Art cannot change this, it cannot set a direction or point the way to an alternative future. But art can participate in society “by differentiating itself as a system, which subjects art to a logic of operative closure – just like any other functional system” (Art As a Social System 134).

The autonomy of the work of art, and of the art system itself, does not need to be defended, though it does depend on the operative closure of other systems (such as finance, or education, or fashion) so as to avoid interference with its own distinctive operations, “a special kind of communication that draws on the capacity to perceive or on the imagination” (distinct from the world we normally perceive) (Art As a Social System 26). An artist’s encounter with the world is in the
first place, formal, not primarily a series of signs “referring to something other” in the world but instead a mark or setting off of differences. The differential process is always self-referential, and while it never acts directly or materially on the world, the aesthetic form, in Luhmann (who follows Deleuze at this juncture) “opens up the possibility of transgression” (Art As a Social System 28\textsuperscript{13}).

As long as we remain within the sphere of language, communication, and consciousness it is hard to see how such a “transgression” can be other than expressive. But there are, as we have seen repeatedly in this essay, material dimensions within language and over time that communicate differently. The difference between perception and communication is key and becomes for Luhmann the one difference finally that defines artistic communication:

> Whenever there is any conscious activity, perception goes along with it. This parallelism results in a unique combination of redundancy and information. We are always dealing with recognizable objects, but always with different ones. Images succeed one another. Only momentarily and with great effort can we fix on a distinct object…. Perception (in contrast to thought and communication) can decide quickly, whereas art aims to retard perception and render it reflexive – lingering upon the object in visual art (in striking contrast to everyday perception) and slowing down reading in literature… (Art As a Social System 13-14)

The primacy of perception, as experienced in literature, differs from that of the musical or visual arts in that the medium perceived (and made strange over time through changes in style and meaning) is also the medium of thought and communication.

> Reading texts is also a process that takes time – whether in narrative one reads the sequence that unfolds in the succession of sentences, or whether, as in poetry, one misses what matters if one thinks that reading must begin at the beginning and end at the ending, and one will then have understood it all. (Art As a Social System 21)

That readers of print texts have always been free to make observations in any order, that they indeed must do so if the text is to be read as literature, was often overlooked in early celebrations of hypertext (which turns out to offer less freedom and a greater resistance to narrative understanding when signifying elements in the text can

\textsuperscript{13} Citing Deleuze’s \textit{Logique du Sens}. 
themselves change with each reading.) Reflexivity is impossible when there is nothing materially stable for a reader to go back to, for more.

We can see now, why the continuity of print – and its functional separation from non-verbal media – is so important to the specificity and perpetuation of the literary system over time: without it, or with too many other sensual activities directing attention (to the world and into “the day”), readers could not sense the continuities and differences of current thought with the thought that reached written expression in past eras. In systems terms, the superposition of current and past languages can evoke the “unique combination of redundancy and information” that defines both human consciousness and the act of reflection in the literary arts (Luhmann, Art As a Social System 13). Reflexivity, so far from being an exclusively literary affectation, is fundamental to a literary realism based not on verisimilitude but on a participation in the forms and processes of cognition so far as these are understood by science. Both processes, the literary and the cognitive, require selection in time from a perceptual realm that is “intrinsically restless” and always, inevitably, larger than conscious thought (Luhmann, Art As a Social System 13). Both processes, though constantly refreshed by information (a sense perception, a historical reference or a term drawn from science, law, or other non-literary spheres), can make meaning of the information only when it is placed against forms that are already known. Meaning is differential and depends on how a given item, meaningful in its own time and functionally differentiated sphere, differs from the meanings it can take when it is brought into (and against) the day of contemporary consciousness.

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