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The *Canadian Review of Comparative Literature/Revue Canadienne de Littérature Comparée* is sponsored by the Canadian Comparative Literature Association and supported by grants from the Social Sciences and Humanities Research Council of Canada, and the University of Alberta. The review is published four times each year, in Winter, Spring, Summer, and Fall. Single copies \$11.00, one-year individual subscriptions \$31.00 (\$41.00 for foreign subscribers) and institutional subscriptions \$60.00 (\$70.00 for foreign subscribers). Members of the CCLA receive the review as part of their membership; 1988 dues are \$38.00 for regular members and \$19.00 for students; life memberships are \$350.00. Subscriptions and all related correspondence should be addressed to: Academic Printing & Publishing, P.O. Box 4834, South Edmonton, Alberta, Canada T6C 5C7. Members of the Canadian Comparative Literature Association and our Canadian and foreign colleagues are invited to submit papers, notes and queries, reviews of research ('Forschungsberichte'), review articles, and suggestions about possible contributions to the editor (M.V. Dimić, Department of Comparative Literature, The University of Alberta, Edmonton, Alberta, Canada T6C 2E6).

The *Canadian Review of Comparative Literature/Revue Canadienne de Littérature Comparée* est l'organe de l'Association Canadienne de Littérature Comparée; elle est publiée avec le concours du Conseil de recherches en sciences humaines du Canada et de l'Université de l'Alberta. La revue paraît quatre fois par an, en hiver, au printemps, en été, et en automne. Le prix du numéro est de \$11.00, l'abonnement individuel par année est de \$31.00 (\$41.00 pour les abonnés étrangers) et de \$60.00 (\$70.00 pour les abonnés étrangers) pour les institutions. Les membres de l'ACLC reçoivent la revue comme partie de leur cotisation; les droits pour 1988 s'élèvent à \$38.00 par an pour les membres réguliers et à \$19.00 pour les étudiants; les membres à vie devront payer \$350.00. Veuillez adresser toute correspondance concernant l'abonnement à: Academic Printing & Publishing, P.O. Box 4834, South Edmonton, Alberta, Canada T6C 5C7.

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Published quarterly/publiée trimestriellement

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Logical Foundations for Comparatist Concepts of Parallel: Or the Intrinsic Relationship between Literary Criticism and History

1 AN UNRECOGNIZED DUALITY OF MATERIAL, OR CONCRETE MODES IN WHICH TO WRITE HISTORY

Since Voltaire, history has not been written solely exteriorly, upon the changes of boundaries of separated, nation states – but culturally. In the most modern, scientific and biological terms, of anthropology (where culture became a scientific concept extensively defined), anthropological genetics especially points materially to the possibility of writing some truly *world* history – one unified in itself, or interiorly, because anthropological (genetic) theorists teach that mankind is one species, whose gene flows¹ need be studied among all men; in preference to past, supposed, surface 'racial' differences, which in reality were not any definite barrier to these flows. Such a new, 'genetic history' of gene flows or material, human intercourse, would be highly interior or in nature to human phenomena but physically palpable – they would be physically interior to men but still in the realm of what can be scientifically demonstrated, seen. (The genes are the *inner matter* of human, historical evolution. They are both physical and organizational – phenomenal but ordering.) A new science of human history could easily arise through genetics thus. Taking this lead of evolutionary biology, one here will seek to begin to demark evolving lines of men's material history to some still higher, interior degree² than even genetics could delimit: through literary phenomena compared across space and time.

1 In time.

2 I mean degree in a purely 'dimensional' sense, or in the most precise, natural-scientific concepts of space and time. The degree would be higher than that of genetics.

That is, the self-organizing³ nature (cybernetically), of literary texts, through time, will show them in some specific instances to be *closer* still to the most global unfolding of human order, upon the outer world. (Beyond psychological 'influence,' they construct themselves in their own, internal order – self-imaging as well as world-imaging – as author reads and reflects author. A system which so orders itself is termed 'self-organizing' in cybernetic information theory.) A text can be still more intimate (close) to our whole world, which is social, in recording directions of change than genetics even: in other words. The text can both phenomenally *overlie* genetic order (a people) and *underlie* it in showing its latent possibilities where they were never realized. Many other, physical forms could have been produced in the world an author faced, while his text can delve some of these directions, unsummed, of possibility (especially of uncovered human desires).

(If genetics draws the brute, material lines, routes, of palpable, human interaction in the production of new human forms – a system of lineage that lies in a sense interior to our more psychological world of exterior senses; literary interactions also have a material side to them and are interior to our outer world as well. Whereas genetics becomes the residue of mass, human, physical interactions, literary relationships remain still more individual, in their material intercourse, to embed themselves more precisely yet in the world's human, phenomenal flow of events. In other words, a literary chronicle will fill gaps or interstices within relatively mass, human genetic events that continue mankind so that the literary may continue more individual moments. The literary will mark the deepest interrelationships which did not necessarily have immediate, material progeny. It will complement, often fulfil any scientific, genetic history by completing it where there was libidinal exchange of energy without apparent, physical birth. The greatest intuition of this state of affairs may have been Goethe's story wherein a married couple had children resembling the true loves they held in mind when their children were physically conceived. Of course, Goethe's insight lies still too literal for us here or critically needs to be abstracted; its irony is not meant to be a scientifically accurate correspondence with real events.)

It is obvious that human beings interact en masse, more or less indefinitely continuously (purely interiorly as some 'movement-in-themselves') – in an ongoing manner – not only in terms of 'genetic

pools'⁴ of reproduction: sexual, physical reproduction. On some highly singular and everyday basis, men can be imaged interacting in fluxing, intertwining groups phenomenal, of indefinitely growing dimension,⁵ through literature, or other temporal arts. The most individualized, social event embedding itself in some greater mass (phenomenon) can be recorded truly physically here in a text.

Men do not only materially image themselves genetically, through bearing physical children, but also by literature's concrete language.

Some reflection (if not some mirror image) of men interacting not only as individually as possible, but in groups of any size can be shown literarily then. In chain, a man may either reflect or affect another man, multiple men, in or through the text. Outside a text, even a whole language of readers (and beyond) may be given some ordering or directive impulse through the artistic word, at least indirectly (for readers will touch upon nonreaders in many ways). Some image of men in their most minute, immediate, social interaction (interior to larger events) experienced phenomenally or reflectively by an author can be presented, while this interaction may be so intimate or interior as to represent maybe the closest approximation of life's total, local flow, covering anew phenomenally the physical world of forms close to us – the outer world we build society upon.

More precisely in logical terms now, or less informally intuitively, at this point it becomes possible to introduce some of the most fundamental, logical concepts – of *sets*, into these views.

Abstract 'sets,' and 'groups,' are among our most fundamental concepts, but these easily become applicable to comparative studies, to give such studies new and rigorous foundations, in the following manner (of next paragraphs). A set is the *objective extension* or parallel of any purely logical form. It is the pure parallel of such forms logical (their measurable, most basic, extended counterpart). A set could be said to be a highly accurate quantitative correspondence to, or translation of, what seems purely qualitative. It is the objective and realizing counterpart of what is ordering in the world – what one has viewed here more purely 'internal,' intrinsic of phenomena. Comparative criticism will begin to become in the following some fundamental founding, if not yet detailed construction, of higher sets.⁶

⁴ This pool is a breeding population.

⁵ Dimension expanding upon their outside world.

⁶ Which sets prove to be basically infinite mathematically.

³ Many authors in many lands have expressed the self-moving, self-constructing nature of the work of art after it was begun. Gide is especially conscious of this, for example, throughout '*Les Faux-monnayeurs*.'

Critics herein, then, begin to demark the most basic parallels (i.e. matching functions) between internal self-ordering in our world (like the relatively independent world-imaging of literature), and historical, objective events realizing externally any such pure order – events which thus especially include specific texts, the greatly complex reflections, both internally and externally, of their world in time, so often. Or in the text lies some whole (world) image, remaining physically outwardly of, and among, other things.

That is, the text can be some 'deep' or high-dimensional reflection of our living, continuing matrix of culture, within which we highly accurately reflect scientifically the world we therewith cover⁷ and remake, socially. Critics re-exteriorize such texts or societal reflections functionally; in the highest, extended precision.

(A function is some matching – an image of one set of things by another, objective. The text is an intrinsic imaging, that critics further objectify, exteriorize, to aid in the world's new, social making which artistic texts may motivate, or inspire.)

Men reflect their world obviously in the highest degree. (They can locally be viewed as 'reflexive sets' [technically],⁸ infinite mathematically, in their knowledge of the world. For men reflect the world's own temporal infinity in their showing natural laws, always repeatable.) They amply appear to be able to show its very boundaries in space and time, for they can calculate cosmological movements of the stars even to seeming world-end and cataclysmic rebirth (cosmological theory of the collapsing universe). What is more, individual men like Planck and Einstein can present total breakthroughs in such knowledge or reflection of the world – toward new, total synthesis, of higher approximation in accuracy to the world in some whole. Therefore, it is easily demonstrated scientifically that individuals, and individuals in multiplicity, can rise to higher dimensional (wider) reflection of their world sometimes than groups of men. (Upon this matter, the philosopher, Frege, often quipped that everybody or the great mass could be wrong upon a subject.) In this sense, it is shown that some highly interior, *individual* reflection of the world, like the literary, may at times be our highest approximation of totality or the larger cosmos. In purely logical or set-theoretic terms, that will become yet more applicable later in our examination of criticism and history, one can state

7 Many of the terms seeming to be used literarily here, like 'cover,' can also be given their exact, mathematical meaning – in this case topological.

8 'Reflexive set' is a technical term of abstract set theory.

that an individual set can attain to higher dimension (or number of potential objects or members) *than an exteriorly assembled collection*. That is, the interior of one set (in this case the reflecting agent in the world – of author) may sometimes attain to higher (greater-dimensional) views of the world outside than exterior workers who essay to review phenomena in their outwardness purely. (One easy proof of this even in science is that mathematical methods developed purely 'out-of-the-head,' without immediate or even any thought of practical use, by Lebesgue or Dirac for example, later became widely and highly applicable in describing the most elementary and common, physical phenomena.) To restate succinctly, the most individual reflection of the world, like the artistic, may yet be the most universal in opening (showing) its possibilities, of recombination or reconstruction in terms of new orderings – configurations. This set-theoretically couched statement will be of continued use later.

For now, though, it should become obvious that such great, possible, interior reflection of the outer world's flow of events can make individually reflecting men's visions (like authors) approximations of the physical world's total flows in local direction. That is, in the physicist's pure, scientific terms, men can become so interior to the world as to see the direction of 'world-lines' (a relativity theory concept) into the distant future. They can interiorly demark the direction of world changes for whole courses of the outer cosmos where they are closest to it – where they both observe and conceptually reflect it. Now, it is possible to begin to show the 'raison d'être' of comparatist studies through this real, relativity concept concerning time: what will be, humanly, history for us as comparatists.

Purely mathematically or logically, such world-lines are termed 'geodesics.' But geodesics can initially be constructed, purely logically, as mathematically *parallel* lines; which are also shortest (therefore most interior) distances between outer points of the world.⁹ In relationship to pure geometry, or intuitively (readily) demonstrable logic, then, it can and will be shown that the ubiquitous use of the concept, 'parallel,' in comparatist studies, as devalued and even pejorative it has become in recent decades, still is intuitively a highly fundamentally logical, precise concept, underlying apparent vagaries of its past usage (not entirely systematic yet). If perceptive writers can sometimes ap-

9 For both geometric and analytic renditions of this mathematically, one can consult the classical lectures of Levi-Civita upon absolute calculus. See Levi-Civita's *The Absolute Differential Calculus* (New York: Dover 1977).

proximate closely the interior movement of things in any time, place, and language, it is then obvious that true, *world parallels* exist to be shown in these at first apparently separated, literary, textual events. These authors have reflected purely new or creative movements of their world mediated by men: they have shown its closest, most interior movement, by geodesic parallels. Critics could truly 'collect' such parallels materially among diverse authors anywhere. (For example, Tolstoj has long been admired on an intuitive level for rendering a sense of the very extent of objects descriptively, while Sartre would later delimit their inertia to such a high degree of consciousness as to render some 'nausea' derived from them, or their ordering burden on man.) It is part of the work of comparatist critics to bring such strands of world-reflection – as personal, singular, and humble they may first seem – into some new unity outwardly – just as the larger world continues its own unity out of past and separate events.

One may move here now a little too fast, though. So that the reader does not lose any breath, we can return a little to reassemble observations on literary and also more exterior events.

The intimate, close, or intrinsic relationship between criticism and the (re)founding or new demarking of 'parallels' is easily demonstrated in and through the most exact concepts – of mathematics – and the history of mathematics. Such mathematicians as Marston Morse,¹⁰ Petrovsky, and Smale established the close relationship between geodesics (basically parallels) and what are termed, mathematically, 'critical points.' In mathematics, one can state (here) a little naively that critical points show a change of direction, and the founding of parallels is closely associated with them (closely corresponds to them). In a world view of literature, more than analogously, one can state that broader, critical activity, across space and time of individual texts, follows our closest, literary image of events as the world turns 'inside-out' (in direction) or reflects itself in various, textual places. That is, if an author becomes interior to his world, we as critics look into that interior and reexternalize it. When we look in different places (texts), we bring out parallel lines of the world's self-reflection to some high degree. We work parallel to the world, as an author has delved to reflect its own, self-moving (internal) order. Thus the prejudice among many critics that the text has only its own order (almost no rapport with reality) and

absolute independence. (The reflection therein can be so interior to events that it appears absolutely independent, yet nothing could be so independent and known because it would be metaphysical entirely in some other world. Therefore, we here show contact points of the text elementarily with the real, physical world; rather than such an absolute independence.)

What one can prove then is that criticism *on its exterior boundaries*, when it rises outside the text in some way, must eventually become comparatist, since texts lie so basically imaginings of themselves and other objects. (They thus rearise fundamentally as matchings, comparing – and really functions logically.) Comparative criticism in fact will tend to demark the very boundaries between text and a necessary, exterior world the text lives in again. Comparatist criticism becomes a set of instrumentalities with which to begin to exteriorize wholly the text. It is a world-view itself. Thus, Goethe's term 'Weltliteratur' becomes finally vindicated. The text has greatly interiorized its world reflectively, while critics will bring out the new world-lines (or parallels) founded in multiple, textual places before them.

Next, the close relationship between comparative studies and history (literarily) should become evident. (One can begin to bring entirely together again various 'schools' of comparatist criticism by these next considerations, or historical modes can be brought into close relationship with more purely textual criticism.)

Literary writers can bring us through any and all phenomena in some image so that these writers' whole visions live again with new men or new readers. Therefore, they bring us through time *reversibly* to some degree really beyond the natural sciences' current images (since reversibility is only part of scientists' vision of the world).¹¹ In the highest probability, purely creative or imaginative texts (which seem to be material thought experiments with the world's possibilities) appear to touch upon some continuity – world history – of higher order than cosmologically seen in physics. (By 'higher order' is meant some greater opening of dimensions spatially, in purely logical or mathematical terms.) Humans scientifically can reflect the order of their outer, physical world in totality, but creative texts can delve dimensionally still deeper at times, to prod and delineate human ordering itself – scientifically already interior to the world: 'beyond' its apparent, physical nature exterior. Human ordering is the new ordering of the local world, and texts can show the lines (geodesics or parallels) of this *new history*

¹⁰ See his *Introduction to Analysis in the Large* (Princeton: Institute for Advanced Studies 1951) and *Critical Point Theory in Global Analysis and Differential Topology* (New York: Academic Press 1969); also Abraham Fraenkel, *Abstract Set Theory* (Amsterdam: North Holland 1961).

¹¹ See René Étiemble, *Comparaison n'est pas raison* (Paris: Gallimard 1963).

of nature largely humanly created. Such evolutionary facts, of man's wholly covering or greatly changing his neighboring (continuous) world, confront us with the logic or mathematics of relativity (theory) now. (For reversibility has largely been explained heretofore more exactly in relativity theory terms.)

It is easily shown next that the concepts of parallel in comparative criticism have naturally extended themselves logically, in the very manner of relativity theory and its higher mathematics. This will be true for the following reasons.

'History' in terms of relativity theory is the delineating of world paths or 'world-lines' which are geodesics mathematically (*parallels* geometrically), but such paths technically came to be termed by physicists 'eons.' This term has evolved naturally in comparatist studies as some extension of hitherto not truly defined, parallel concepts. That is, some pure 'overlap' logically in terminology has taken place, 'completely parallel' to the evolution of physical science. The comparatist's 'eon' has arisen as high intuition of the truly world nature of the historical lines of development he follows. Through the inner logic or pure forms of their seemingly diverse studies, physicists and comparatists have converged at some loci. Those places could be viewed as new creations of the local world by man — his reflection of the whole world with his local, great transformation of it.

A highly purely internal, artistic creator (or re-creator of things) perceives objects on some new course in possibility. He rises above their configurations in part to create matter (subatomic and atomic particles), where they appear only linearly (one) dimensionally often (by scientific, experimental purpose), to see through some higher-dimensional self-ordering symbolically. His symbols are not those of mathematics, but they can be as dense or even more succinct when viewed in all their depth, dimensionality, or potential viewpoints (visions). Science, that is, can be included in its own activities in the broader set of all social activities which art reflects in the latter efforts' greater, growing changes. The history of larger society includes that of sciences, and art opens greatly in possibility or potential this new span of the world in time.¹²

The highly human overlay artists perceive, upon their world in its self-creation, critics renew in more rational language. (Criticism functionally 'resurrects' the original, artistic world-views, in the direction

of contemporary matter¹³ more mathematically demarked scientifically. It realizes again, out of art, more purely imaginative, reflective, and temporal — internal — order, in the real world of things as they become newly now materially.) Critics can 'compare,' or *make* bridging *correspondences*, across space and time to found new, common world-lines deriving out of the *past* into the present, or real world. In the comparatist sense then, they become the real, continuing part of the original creation, reflective system — or highly purely human, social self-ordering seen in texts.

Just as physicists in the realm of complex numbers (of relativity theory), critics can speak of an *imaginary* part (originally textual) to things in their pure informational ordering, along with a *real* part — supplemented now by criticism.¹⁴ Highly internal, human history will consist of these two, on-going parts; the text and its criticism will move in the world hand-in-hand thus, largely continuously, to carry on our past more specifically than any other records.

The science of complex numbers, taught greatly by such minds as Weierstrass (in turn the preceptor of Cantor¹⁵ who founded set theory), is fully a subject for some other place, because it will lead us into more exact infinity construction, or the vastest object in scientific philosophy deserving more space really.

What then does it mean to 'compare' critically literarily? What does it mean, as logically fundamentally as possible? To compare is to make *correspondences* — it consists most succinctly in the mathematical science of *image* coming from some preimage. Then, it is also some deep step into the theory of functions, because these derive from imaging. Ironically, critical activity is often viewed by so many as some practically useless endeavor (especially since even art is often viewed psychologically as being beyond practical necessities), yet upon the grounds one has begun to build here, criticism, in a comparative sense, becomes as trenchantly functional work as any technological effort, exploiting temporally more limited regions of space-time. Comparative criticism becomes some high reopening of man's *global* past where a work of

13 The simple, cybernetic opposition of information to matter is made here. The original text is more a matter of information — pure ordering — which critics act to exteriorize. A text could be said the greatest limitation of matter — matter in its most succinct form.

14 Complex numbers consist of both an imaginary and real part.

15 Notice the physically international or comparative aspect of even such scientific matters, though. Cantor was a Russian Jew whose family moved to Germany, where he received his later training.

12 Higher sets are termed greater in potential, technically.

art had already universally opened its local (specific) world's possibilities. (What was local newly creates the global, through comparatists.) Criticism then is some new, real expansion¹⁶ of those possibilities, of recombination of all things, by the most active human imagination or ordering artistic. It is imaging in its greatest play of reordering continued, but such a new science of image, also, is too vast for the space of this article — it too must await another, future place for fuller development.

Rather than expand the subject into new branches, it is preferable now to return toward our beginning to envision more psychological questions and objections that likely were made from the start. The views herein will have seemed exotic — more than new. They begin seemingly distantly from present habits and preoccupations. That they are not entirely out of place is proved by the fact that, as recently as 1983, Pichois could produce a book, *Qu'est-ce que la littérature comparée?*¹⁷ It appears one still only begins to grasp globally in this field the object one is dealing with. The truth of the matter is that this object is so intrinsically vast, in human evolution and ordering (totally reflecting its world cosmologically and completely changing the local world externally), that it reaches beyond the present boundaries¹⁸ of scientific knowledge seemingly completely objective. New, whole objects with a wholly new, human world, or order, arise here — some history beyond (purely internal in ordering to) natural history, and not solely explained by those past, physical events before man. That such views are not really so exotic though, in synthesizing the relationships between art and criticism, can be shown through the following passage, written by a great poet (T.S. Eliot) facing criticism as a whole — long before comparative criticism exploded in activity.¹⁹

Eliot is already a comparative, international story: a figure historical in the highest sense. Physically, he will move to work, back to the homeland of the mother tongue. He literally becomes some physical return in terms of language, back across space and time (reversibility

¹⁶ An expansion of some infinite sequence (like a rich text's potential views) is termed a 'series' logically.

¹⁷ P. Brunel, C. Pichois and A.-M. Rousseau, *Qu'est-ce que la littérature comparée?* (Paris: Colin 1983)

¹⁸ The acute, Polish logician — Chwistek — tried to conceive such boundaries more abstractly (than we have here).

¹⁹ T.S. Eliot, *The Use of Poetry and the Use of Criticism* (Cambridge, MA: Harvard 1933) 18-19

and harmonics). Likewise, his sense of poetry and its natural relationship to criticism, as shown in the following passage, will be one global — in reference to some whole, world movement. Parallel to his real, physical need to traverse the globe largely and move his life wholly, his views of literature and criticism perceive the whole, global movements of these two activities in their complementarity. Long before us here, he intuitively sensed the basic function of critically comparing:

It is only the *exceptional* reader, certainly, who in the course of time comes to classify and compare his experiences, to see one in the light of others; and who, as his poetic experiences multiply, will be able to understand each *more accurately*. The element of enjoyment is *enlarged* into appreciation, which brings a more intellectual addition to the original intensity of feeling. It is a *second stage* in our understanding of poetry when we no longer *merely select* and reject, but *organize*. We may even speak of a third stage, one of *reorganization*; a stage at which a person already educated in poetry meets with *something new* in his own time, and finds a *new pattern of poetry arranging itself in consequence*. (my emphases)

These innocuous lines, seemingly not revolutionary on the surface, contain much of the same logical scheme that we began above. For example: note that the comparative reader is 'exceptional' or follows a singular (highly specific) path. In more logical terms, one would state that his following the highly internal self-reflection in texts, vis-à-vis the world, puts him on a new organizational level over and above the regularities in everyday life and common, natural, physical laws. This new order will be more purely reflective, derived of itself, and 'intellectual.' Poetically, this self-situating in the world is not unlike the neoplatonic ladder of a higher world — in Petrarca and others — in which higher realms of self-creation or pure self-ordering can arise. (Nietzsche's evolutionary 'Übermensch,' more of a physical vision, would be closer still to our own, internal position here. In Nietzsche's conception, ordering was on-going and over-going, also physically.) To analyze the view of Eliot in absolutely logical terms, one could even pursue singularities explicitly as infinities in relationship to (mathematically) regular functions: considerations too detailed for an introductory essay. Notice though that the singular position of the comparatist reader is also one *newly specific* — it rises in and through the 'course of time.' It creates itself as some new ordering, or its historical trajectory appears to be relatively independent: highly self-founded.

What is more, poetic life vies with ordinary life in terms of truth and higher reality — it equally (and more) provides 'experiences.' In fact, the multiple nature of such experiences makes them appear reproduc-

tive of some purer order — the world is carried on to some higher level. The future tense used with the word 'able,' designates possibility through time in purely human terms (of re-creation of things). Entirely new combinations will be carried on in human terms. It is men who re-create the world now.

If one continues to look at this passage more and more closely, its scientifically precise view of the world stands out, and amazes a little. Notice for example that the increase of knowledge is some process of *successive and increasing approximation*²⁰ ('each more accurately'). Beyond naive exactitude — pure 'right' versus 'wrong' — reside higher approximations to things as they now exist. That is some engineering point of view: one of highest practicality. With this approximation-theory viewpoint, as one looks inwardly at things: and in the opposite view, one looks out again to larger events in probability here. But since the writing of this passage, probability has more and more supplanted other methods in (the history of) science. Externally, then, to such ever increasing approximation (internally to natural configurations), lies *possibility*; new self-combination; 'yes-and-no' answers to all questions ('yes' and 'no' in combination; in probability, one cannot answer purely 'true,' or 'false,' to questions). The standpoint within this passage could not be more realistic. Natural scientists of this era — the early 30s — had not yet fully inculcated such relativistic attitudes as are expounded here.²¹

To find our own position still more exactly, in material approximation (of evidence) here, it is obvious that internal self-ordering, derived from artistic experiences, expands itself ('is enlarged') upon our outer world. It creates new sums or orders ('intellectual addition') — entirely new configurations are possible to our views.

In this higher world of self-order derived of art, one is beyond mere 'selection' — separating phenomena as objects, or basic opposition to outer things made objective: to be known on their own paths, scientifically. (Cybernetically, alternance, like 0 or 1, true or false etc., is basic to any knowledge transfer²² — one 'selects' one of these alternatives

²⁰ The mathematical method of successive approximation was largely developed by the great Dutch mathematician, Brouwer, and is central to economics theory, for example.

²¹ I mean 'relativistic' literally because the great probabilist, Borel (for example) intuited upon occasions that probability theory was some extension of relativity. A book might be needed to elucidate this, so I do not cite specific quotes by him now.

²² See Norbert Wiener's book, *Cybernetics: Or, Control and Communication in the Animal and the Machine*, throughout for discussions of alternance.

in transfer, to correspond with outward things thereby quantified. Of course, on higher levels of organization like Eliot's, one could use numbers far beyond 0 or 1. One can also be more functionally mathematically 'qualitative,' in that one can use more purely numerical ordering with much greater numbers.) One is then beyond an 'either-or' — true/false — stance wherein he may be objective, opposed to subjective.

Rather, he 'organizes' phenomena on some higher level ('stage') and may even entirely change lower orders or configurations of things ('reorganization'). Notice that the emitted word orders itself in the very midst or heart of all creation — 'we may even speak ... of reorganization.' Art itself founds its 'own time,' harmonics, reversibility (to reach the past) and history. That new self-ordering is not only, or even largely, chaos, or ambiguity, but it 'arranges itself in consequence.' (Poetic thought is not some confused, psychological vision.) It is some highly pure order opposite the logical one of sciences — a more 'concrete' or material counterpart (in knowledge-transfer by language) of logic and science, in our complete remaking of the world's covering surface, near us.

This text is not a unique example. Any text of any time could have approximated our views. Any text can be used. Seeming counterexamples will especially be useful from those opposing our basic views.²³

The more exterior and psychological (less logical) proof that comparative, critical writing can be some delving, opening to high degree of greater (purer) spaces of self-ordering in our cultural world — our world more purely human or humanly created — is found in something obvious of comparatist texts themselves. Very often, these are *overloaded*, supercharged with information: with facts, with associations (both psychological and analogical), and with real, logical relationships. So many comparative texts are so greatly charged that their reading is sometimes painful, cumbersome — though not without reward. It is obvious that one is dealing here with information itself (self-ordering) to some high degree. One deals with *quantity of information*, that is (scientifically) substituted for quantity of (physical) matter; or one is purely in an organizational realm dimensionally above matter's forms, often depicted more linearly — in single dimensions — in natural sciences, phenomenally. (This is more purely a cybernetic realm of information flow directing natural flows.) The history that extends itself here then will be highly new and partially created by the critic him-

²³ Apparent contradictions to our reading could be found in ensuing passages of Eliot himself, for example. One evidently must read critically to a high degree of abstraction.

self. It will rise with all the growing possibilities of men's transformations of their physical world. The critic will rejoin the original, creative artist in vast recombination of things in reflective vision, to open some purely inner and ordering path through the world. He is to some degree *more internal to the world* than atomic physical phenomena; the phenomena he can reverse in time historically are wholly of another order — one more purely for the future, and of possibility, one could say. This is a new world barely begun; one that cosmologists do not yet know, one of which palaeontologists will have no record now.

II FIRST ELEMENTS OF GENETIC, PHENOMENAL HISTORY

Genetic history can be greatly more economical in showing the fundamental interrelationships between cultures (and more exterior states) than previous, historical science, because the most fundamental, material flow between nations and areas of the globe is neither commercial nor military — it is gene flow. Pure, physical communication in terms of the biological genes will show parallels in the configurations of states and in interpenetrating boundaries of cultures in such a manner as to introduce an 'unlimited simplicity' into history — overriding unity deriving from the unity of the species along with its great dominance of its world over other living forms. Such simplicity only proves itself through practice (application of thought), so that some schematization of how such a history could be begun must be given. (On more purely logical grounds, it should be remembered that ultimate simplicity, in correspondence or image more abstractly, is some matter of infinity construction.²⁴ That more purely mathematical path will be pursued in another place or writing. Here, one will remain with the human phenomenological wherein mathematics, after other languages, first constructs itself.)

To 'simplify,' that is, is to imbue more of the factual configuration of things (in some real, ongoing, greater whole of their movement). Hegel and Tolstoi viewed such a whole more religiously, while we here try to found a necessary, alternate point of materialist view — as a bridge to the sciences.

In beginning genetic history on a phenomenal level of society (beyond physical chemistry), it should be equally possible to write forward or backward in time. In other words, one can begin now or at

any time in the past. Already, ordinary history appears to make cuts in time at any place, but beyond this one can maintain the existence of some *indefinite* continuity, and reversibility — again for reasons given above. Men in their social and especially scientific activity reflect the world's own unity in laws physical, while they tend to transform their local (neighboring, continuous) world entirely in their growing, genetic unity — and spread over other, natural forms.

For easier, more rapid evidence — more at hand for all — one will begin history here closer to the present time. From then on though, it will rapidly become evident that it is easy to reach almost immediately (continuously) any other period and space by the scheme we begin to put in place.

If one attends to past and potential genetic flows, it is no mystery at all why the present world has its current, political configurations and state centers. The Soviet Union and United States are not revolutionarily 'superpowers,' or powers beyond all previous powers, solely by their military and economic strength. In basic, genetic flows, these states are naturally emerging phenomena. The Soviet state has emerged upon those lines of genetic communication uniting the main bodies of world population in the past — Europe, China, India. It is not a preponderant state only because no nation has ever held centralized such military or final power (along with all other powers internally brought together), but because these are basic lifelines, for all of humanity in its fundamental unity — the great masses of mankind have physically genetically communicated across these territories. It is the same region (considered in expansion across Eastern Europe) from which state-generating or new-civilization creating migrations evolved into India, Persia, Greece and elsewhere in the historical past. Great facilitation in information, communication, transportation flows of the last century had some necessary parallel then in erection, maintenance, and cultivation of the first state mechanism methodically built against racism and for the preservation of indigenous but sometimes vastly different cultures. (Even racists recognized in these territories a world generating 'heartland' for new cultures to be built upon.) The history of the United States can be viewed complementarily.

Here too lies — in large migrations — a primal, genetic flow, but to show it more internally one must first consider the population of Europe. The population of Europe (including the Russias) has enjoyed historically relatively good physical communications facilities, vis-à-vis the rest of the world, that created a great degree of internal, genetic balance, and relative homogeneity. That is, Europe is easily marked in its genetic history by its own, great unity — the great affinity be-

²⁴ That is, the infinite set, in extension, is fundamentally simpler than any finite set or mere collection. See for example the set-theoretic discussions of Hermann Weyl in *Philosophy of Mathematics and Natural Sciences*.

tween Italian, Englishman, Spaniard, Russian or any other European (despite its external history of fratricidal war). Indubitably this latent, great balance across Europe – from high, internal, genetic flow – was some basis for higher social mechanisms of unity – state structures – which brought modern, state mechanisms and other, social organizations (religious, commercial, military etc.) to be spread to the rest of the world. If Europe is so marked by its high genetic unity (and flow) over and above general, human unity, it is obvious that the acceleration of such flows, in mass migrations to America, created an especially explosive genetic realization of latent potentialities. Even before America was anything of a political, outward power, it was long considered the technological forefront of mankind, even from the last century. (America began to surpass Germany as an industrial power by 1900, although it was an insignificant military power at that time in comparison with Germany.) It should be no surprise that especially rapid yet balanced genetic 'experimentation' socially would have some physical, instrumental parallel in the most rapid, technological manipulation and exploitation of the world in space and time. In short, the potentialities (or genetic combinations) within basic, European population unity were realized most rapidly here.

By building from these first, elemental observations, it would be possible in some more purely historical essay to show necessary complementarities between the United States and the Soviet Union. (It is not for no reason that many in the so-called 'third world' see them as 'two peas in a pod'.) Likewise, interlocking, historical relationships are easily shown to exist across Europe through time: across the whole world really. A few more examples from arbitrary, past periods will show some of the potentiality in such new, genetic methods historically. These will be closer to literature or art to appear more relevant now.

If one remembers our previous, elementary, set-theoretic considerations above, it becomes possible to elucidate, logically, one critical mode of comparison of artists that was long popular (if much less used now) – 'representative men.' Upon our introduction of sets, it was evident that even one man sometimes may open dimensional vistas of perception, beyond that preexisting in his own people, to lead upon that genetic group's development, at least in infinitesimal ways, minute or precise (directionally; dimensionally). It is not that a Voltaire, Goethe, Dostoyevskij stands necessarily 'above' his whole people (and genetic interaction is largely facilitated by common language so that we may here look at peoples in terms of language blocks), but that the many, new creative paths of association – or possible recombina-

tions of elements of our world – they found put them often a little more interiorly into the world: into its very order, or closer to its greater-dimensional self-ordering man partakes of. Interior to the world, they are part of the world's self-formation and men's universal visions. That such an interior set can be greater in *potentiality*, *possible dimension*, or *possible members (configurations)* than the set it is part of (writers are part of mankind and the physical world) was proved long ago logically and numerically, for example, by the fact that all the decimal numbers between 0 and 1, alone, are greater in number than all the integers we could count exteriorly (for all time if one could count eternally). Therefore, it is possible to take artists as individuals and oppose these to the history of their own people, or even to all mankind, to 'interiorize' more greatly our sense of history – to unify history sometimes in some greater whole, more purely interior to things. (Artists cannot only 'represent' peoples but sometimes expand mass transformations of the world.)

Examples abound, but only a few can be chosen as an introduction.

Rousseau and Kant can be chosen in relationship to their largest, cultural ambience (especially in near proximity in time). Rousseau opened the full consciousness – reflection – of man's interior possibilities – that all order may be found and derived through him in some way. For he made all social, moral, organizing judgment to rely upon personal conscience in *Émile*. Although Kant's philosophy shows little exterior 'influence,' in its formal construction, to Rousseau's far more popular rhetoric, more immediately moving the masses to social action, it is well-known that Rousseau was a great historical figure and inspiration for him. These two minds became pivotal to the revolutionary movements (of whole peoples erupting in new organization) of their times, and they can be seen as 'counter-reflections,' opposite reflections of their world's own movement. They reflect the world dually, in a common, historical period of growing European (and world) unification.

Opposed greatly by the other 'philosophes,' Rousseau still became the critical, intellectual path of opening the popular revolution organizationally in France, because his works were often carried physically like the Bible by the state's new organizers in their primary gatherings.²⁵ Here in his writings lay the mold of their expression in beginning to reorganize totally the state, and all human affairs after. On the other

²⁵ I owe this perception of Rousseau's work as a Bible to conversations with the great scholar Jean Seznec.

hand, it is well-known that Kant held a reactionary attitude towards the new events in France, despite his admiration of Rousseau's work. Genetic history can put these matters of seeming divergence more in perspective.

It could be argued forever what exact 'influence' Rousseau had upon the primary revolution, in France, while it could not be exteriorly measured. What can be stated though is that Rousseau represented the extreme 'extension' (most extended set) of what had been more covered, revolutionary, philosophical thought in France – especially in his own war with the other 'philosophes' (he viewed this as a dire struggle). It cannot be denied, in turn, that literary-philosophical writing greatly facilitated verbalizing the revolution and set up internal directions, within which a truly mass revolution and (first) universal army would sweep Europe, to begin to reorder completely social institutions and to write new laws. Europe began to realize its own greater (genetic) unity more exteriorly through this revolution, to break the institutions of local place-privilege (owning space, or property, individually, apart from the masses, indefinitely; impossibly), and philosophical and artistic writers would found the most internal, precise forms of continuity (consistency) in thought, concretely parallel to whole new movements of society, where it appeared almost everything usual could be changed into new patterns, upon an earth filled with social contradictions. Rousseau did not personally cause the revolution, but he could construct his life, with writings, so as to become his world's most internal movement or movement, so revolutionary itself that counter to it, exteriorly, some mass social movement of complete change necessarily (in systemic balance) would realize itself – truly parallel. Kant then in reaction would represent the reification of such wholly new (social) spaces forming in France, and all Europe, through that revolution.

Kant's own place in new, world history may be, at first strangely, best seen in terms of societal and genetic developments in (and through) England. The great wave of change, that humanly faltered (as a dual – Napoleonic – French-German army besieging Russia) in the vast plains of Eurasia, had its genetic ebb in entirely other places; it is better seen in England's genetic history in face of the world. Genetic history, that is, would be completed now more through England as Europe's active extension throughout the world, rather than upon the European continent that would fragment into nationalisms in its human, surface aspects, after the Napoleonic wars.

The British would literally fill the world's empty places in greatly expanding themselves genetically. From their partial, insular closure (semi-closure), they would expand enormously physically – spatially

– and in reduplicating their genes by population growth, throughout the world. Such a play of relative closure against great opening is reflected more formally logically and individually in Kant's dominance in philosophy in the nineteenth century. (Kant often appeared closed – except to a few, German philosophers – yet had large progeny in pure science opening entirely the universe.) Kant in no way affected English political history exteriorly, but his work is some individual and reflective opposition (opposing image) in our world, to this world's genetic history as English-speaking peoples began such active play in it. This again attests to the fact that no exterior 'influences' need take place for one to make parallels critically in terms of writing and history. No evident, exterior relationship need exist for one's real, internal founding.

Kant may have had no direct, popular effect upon the movements of masses, for, upon seeing the vast need and amount of scholarly commentary upon his works, it sometimes appears that only Hegel absorbed these (works) as a living system economically to re-create them fully. Even so, Hegel's philosophical opposition to him (after Hegel's education in him), Hegel's logical 'training' of Marx, and Lenin's practical as well as theoretical extension of Marx's thought leave fully a third of mankind (negatively or abstractly) enfolded upon a logical system it largely ignores popularly – one which has often, for example, appeared opaque to English-speaking readers little used to dialectic. Here then is some purely negative (conceptual or ideational) opening of the world following upon that of Rousseau – some high inverse, incisive revolutionary overturning of its common thought (patterns): formally now in an abstraction really so singular and personal that it has few 'copies,' beyond its directing Hegel. (If Rousseau had asserted he was 'different,'²⁶ individual, Kant was abstractly so.) Major, modern, formalist logicians, like Lukaszewicz,²⁷ have entirely repudiated Kant's forms as too psychological or personal – too difficult still for universal, mathematical conveyance, or logical transparency. That Kant, however, was formally perceiving fundamental (human), spatial opening in his world lies proved by the fact that such a great, creative mathematician of this century, as Hermann Weyl, so very often turns back to him for intuitions.

26 The first words of Rousseau's *Confessions*.

27 See his harsh references to Kant, for example, in his monograph, *Aristotle's Syllogistic*.

Weyl (along with the French geometer, Cartan) greatly wrote basic, affine vector geometry – the basic analysis of spaces; while Kant was so perceptively or interiorly close to humanity's final, spatial, complete covering of its world opposite him – especially in England's spreading empire and genetic flow (into empty spaces of America, Australia, Africa and elsewhere) – that he imaginatively approximated (purely abstractly) the very bounding of his world humanly by our individual species through an unbounded nature of human reason.

(Remember those three key terms of *Kritik der reinen Vernunft's* introduction: universality, necessity, unity. One could informally say man was a universal phenomenon creating a new unity of his world by the necessity of his imaging or knowledge-functioning – man's information transfers.)

Rousseau and his human revolutionary parallels in mass had fully opened men's power and energy in their ability to unify newly and wholly change the world, while Kant still more personally²⁸ (than a Rousseau) – even reactionarily – would preach, quietly (apart), the potential 'infinite worth' of almost any individual man. The new spaces of the world were highly human in both cases, and the empirical proof of man's final dominance or whole (practically infinite) remaking of the globe lay in the first true world empire – British: especially in the great, explosive expansion of the British Isles' genetic pool, vis-à-vis the rest of the globe.

That is, if the revolution in France did not yet finally politically unite Europe's already greatly united genetic pool, the ebb of the revolution's flow was for part of Europe to fill humanly (genetically, physically) that part of the world humanity had not yet spatially filled. In Kant's vision, man was of infinite worth – equal to a world in itself – while physically, oppositely, or in parallel, men would now cover their entire, habitable world in finality: establish states throughout it in populating it more intensely. In this new (British) empire, mankind

²⁸ Rousseau classically (critically) refounds the 'moi' ('I') or justifies its social existence, while his rhetoric easily reaches the masses. Kant's form does not directly reach the many, if he respects their intuitive sense over the philosophic science of what he calls 'schoolmen' in his time. By his form, Kant is more personally closed to reach new, individual spaces of possibility.

Rousseau constantly laments fame; Kant shows some initial will to 'popularity' or writing for men universally. The effect is opposite, though, what each may have 'intended.' What was personal in Rousseau was also universal, while what is universal in Kant was also newly personal (individual). This is a play of sets again wherein one (set) may become greater, as a member, than the collection it partook of.

would truly rule its whole world (would establish legal and economic regularity throughout it). Within this new, human expansion, new, human extension – new human beings – would fill the physical space of the world literally. The English-speaking peoples would increase genetically or expand their own, human 'spaces' enormously. This is a major fact of recent, genetic history. (In Germany, the new, unified state would later emulate such genetic expansion, if in other, geographic directions.²⁹)

The world would become physically human in the genetic spread of man, but Kant had already abstractly greatly placed the universe in human proportions; he had considered the possibility, for example, of religion 'within the limits of reason alone.' The larger world then might be expressed in purely human, logical terms from these times on. The consciousness, reflection of evolution, in Darwin, would arise enfolded in this very (British) genetic experience (experience unfolding most fully opposite Kant in the outer, social world). Man would reflect the evolution of the whole world. To some new degree, he would cover the world more intensely (i.e. in higher dimension) than life forms that had spread over it before.

The early (genetic) history of Britain, as some series of invasions with migrations, plus its independence, would have to be gone into more fully to elucidate further its later, genetic and political spread through the world.

What is more critical for us here is the fact that some highly individual reflection in writing may be exhibited within the same time as broader, genetic events of the larger world, historically. Not only Kant would reflect, negatively and abstractly, his world of course, but numerous writers and artists would show directions of its changes more positively ('concretely') – in more material language, more immediately evident to us. Such will specifically be the history of comparatists.

What is individual in our own text here – what may have seemed especially strange – is the enlarged usage of parentheses, for one thing. That was necessitated by an approximation of purely functional notation (and also set notation). It was not consciously forced or exaggerated but befell our task – sometimes only partly consciously – in that one schematized the high, potential functionality of criticism, in a global sense; by its opening some of the most purely internal self-reflections

²⁹ The German Empire's bureaucrats futilely attended to the differential, Polish-German birthrate in its eastern regions (a rate not in the German-speaking population's favor), and of course Hitler later took more fatal steps, into Russia (for a downfall like Napoleon's).

the world has constructed of itself through man's art. Neither art nor criticism is an impractical activity. Rather, they dimensionally rise vastly beyond our trivial, psychological comforts attended to through economics – they rise into our very *self-reproduction of form*, with some possible 'eternity' (infinity) of potentialities there. (Poets have long sought the immortal through their imagination: pure imaging.)

That is, man reflects his cosmos wholly, and art reflects *secondly* on some *higher plane*, in some higher order human, the self-organizing properties of this world (materially eternal temporally).

Art is 'negatively eternal,' to some higher degree than the phenomena of physics even, in their greatest analysis, and mathematical representation. That could have been³⁰ some material foundation of Kant's 'science of metaphysics' if he could have written more openly in his own time; that might have been the beginning of his precise cultivation of some self-realizing 'immortality' – infinity, in the world (physical), upon his inspiration by the resonant, material words of Rousseau. (Kant at times alluded to more direct visions or perceptions he held that would startle too much: he probably feared ridicule upon their enunciation. It is evident, however, that he revived the mythical idea of philosopher's stone in its association with the Second Coming, Resurrection of the body, for he explicitly writes of the coming of *The Philosopher*,³¹ or what one might call philosophy in some explicitly eternal form of material knowledge – material reflection of eternal forms.³²) What Kant did not dare yet to speak can begin to be stated then in some way purely critical now, not entirely fantastic or irrational.

For evolutionary order still rises and is greater dimensionally than that simple infinity³³ of natural laws (adding) repetition, in physical sciences. Its greater infinities open themselves still in possibility, or potential construction, for all intelligent beings reflecting the world's higher-ordered self-formation. Physical laws have opened that eternity of their repetition to simple (first) infinity, but humanly evolved mathematics proves the existence of more powerful infinities (higher, potential self-configuration, of order in the world). And, up to our times, the highest, phenomenal play of such greater possibilities of re-

³⁰ If he had been able to evolve it.

³¹ At the beginning of *Kritik der reinen Vernunft*.

³² The objective nature of such knowledge is shown by use of the definite article before philosopher. Frege observed such designation by this article, opposed to indefinite articles, more indicative of concepts (versus objects).

³³ The first and lowest infinity in power.

formation of the world may well have often been opened in art. Such pure cultivation of form itself, with reproduction (textual), approaches ever – in its progress – the very (self-ordering) nexus of the world. Its purely 'imaginative' nature is not only one impossible, psychological fantasy, but rises beyond that most restricted, psychological root infinitesimally into that 'imaginary' one (imaginary mathematical root and numbers) of time itself: world-reversal and also pure, new history upon it (repeated laws), remolded to higher levels (orders). Artistic imaging – self-reflection – materially ('concretely') in language opens over upon the world's own self-reflections (scientific), artificially or freely duplicated in man. In addition, by collecting so many social activities beyond physical experiments, art is more interior still to all empirical things than that scientific self-reflection (human) of the material world, just as it is more immediately material or external than mathematical language. It most closely resembles the internal, and external world, forming in (the direction of) new unity. Then art sometimes becomes the highest order, with the newest boundary to our world so greatly (even infinitely) interior to the physical world, we are built upon, and above really – our universe building in newest creation.

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