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Economics, the Structures of Knowledge, and the Quest for a More Substantively Rational World

Richard E. Lee

Abstract: The “structures of knowledge” designates the long-term intellectual and institutional division in knowledge production, the arena of cognition and intentionality (the “socio-cultural”) that we recognize as the relational hierarchy between the sciences and the humanities, or the “two cultures”, and it is just as integral to the development of the modern world as the realms of material production and distribution (the “economic”) or of decision making and coercion (the “political”). The modern discipline of economics emerged from a medium-term restructuring of the structures of knowledge in the late nineteenth century along with the other, multiple, social sciences between the sciences and the humanities each with proprietary subject matters, theoretical frameworks and methodological approaches. The contemporary crisis in the field of knowledge production is part of the overall exhaustion of the processes reproducing the structures of the modern world-system. Contemporary economics in this “far-from-equilibrium” world should be well placed to contribute to an understanding of the alternative futures available today. But this would entail a reexamination of its inherited theoretical approaches and methodological practices.

Keywords: structures of knowledge, social sciences, economics, *Methodenstreit*, complexity studies, cultural studies

The “structures of knowledge” or the arena of cognition and intentionality (the “socio-cultural”) is just as integral to the development of the modern world as the realms of material production and distribution (the “economic”) or of decision making and coercion (the “political”). The construction of the structures of knowledge has been an uneven but continuing process, with an observable

trajectory beginning in the “long” sixteenth century, that produced and reproduced a *longue durée* hierarchy privileging authoritative knowledge, in the form of “facts,” over societal/moral values. Facts have been associated particularly with “nature” and were to be uncovered by those disciplines that would come to be called the “sciences.” They could be presented either as observations or as theories and came to be respected as the most authoritative form of knowledge. Values, on the other hand were considered characteristic of the domain of the “human.” They were particularistic, situated and relative to their historical context. At best they were amenable to interpretation in those disciplines that would come to comprise the “humanities.” Coextensive over time and space with the modern world-system, this relational structure, the “two cultures,” became the dominant organizational model “disciplining” human cognition and thereby shaping intentionality, and consequently what concrete action could be legitimately and effectively undertaken, or even imagined, by social actors. [1]

The contemporary discipline of economics emerged from a specific historical conjuncture that played out over the second half of the nineteenth century. During this period, the structures of knowledge underwent a restructuring from which the social sciences, in the plural, were consolidated in an intellectual space between the natural sciences and the humanities. Eventually the social sciences would include those disciplines for the study of specific aspects of the modern or developed world in the present or synchronic dimension. Economics would study the market, political science, government; and sociology, whatever was left over. History would concern itself with the past, or the diachronic dimension. Two further disciplines were associated with the non-modern world: anthropology would be particularly concerned with the “people without history” to use Eric Wolf’s phrase, and oriental studies with the great civilizations whose history was regarded as frozen and could therefore be studied through their classic texts.

The importance of this restructuring should not be regarded simply from the point of view of the history of ideas, however. There is a specifically material dimension associated with this sea-change in the study of human reality with implications for the present conjuncture. This material dimension is manifested in the way the consolidation of economics and the other disciplines of the social sciences with claims to specific subject matters, theoretical frameworks and methodological approaches was articulated with the trajectory of British hegemony in the nineteenth century and the politics of labor force control that assured accumulation in the wake of the French Revolution.

Great Britain emerged in the position of hegemon in the interstate system at the end of war in 1815. That meant not only that it was the single greatest geopolitical power, but that it was also the most commercially and financially competitive component of the world-economy and accounts for the eventual passage of a series of British free trade initiatives. It has also been typical of hegemons (this was true of the Dutch hegemony previously and of U.S. hegemony after 1945) to secure the moral high ground as a way of reinforcing the legitimacy of or consensus around existing power relations in the world-system. This has typically meant relative freedom of ideas and of expression, for instance, religious, artistic, or political. In Great Britain over the nineteenth century, this was also apparent in the abolitionist, or philanthropist campaigns.

One of the legacies of the French Revolution was the idea that the social world was one of change, not of stasis; indeed, if change was the norm, the question became the direction of change and how this question was answered depended on mutually exclusive value orientations. Modes of interpreting social change in the human world, as marked off from the natural world, made contradictory appeals to values. The alternatives were either order achieved through the authority of tradition or chaos arising from unfettered democracy. Neither offered a solution, on which any consensus could be reached, to the political confrontations between radicalism and conservatism. Either the world-wide extrapolation of the ideals of *liberté, égalité, and fraternité* or a return to the *ancien régime* threatened capital accumulation dramatically. Both would have resulted in the raising of the lowest wages and a flattening of differential wage scales worldwide.

In the most general sense, the question was one of grounding the legitimacy of world-scale class differentials. Eventually, from the late nineteenth century, the objective, value-neutral, problem-solving spirit of science was advanced to resolve the stand-off in the English-speaking world and the connection between meaning or values and systematic knowledge was argued rigorously in the *Methodenstreit*, especially in the Germanies. The result was the institutionalization of that set of disciplines, the social sciences, which would function to guarantee ordered change in the name of "progress" through "scientific" control, exercised by "experts" and based on "hard facts"; in practice, this amounted to liberal incrementalism maximizing accumulation and minimizing class struggle.

The events of the 1860's, rebellion in Jamaica and Ireland, agitation for franchise reform, and the critique of *laissez faire* associated with them, precipitated a

transformation of liberalism in Great Britain and eventually the world. Both the black and the Irish experiences, dosed with Victorian representations of the feminine as irrational, sentimental, childish, unrestrained, and overly-sexualized, contributed to the redefinition of "freedom" as freedom from confinement (conceived from the position of slavery and impressment) to "liberty" as political liberty sustained in rights (understood as the prerogative of the rational, disciplined, and self-sufficient subject— read middle-class male, individual). Served by the new social sciences, this new liberalism of exclusive nationalism absorbed both the conservative critique of *laissez faire* and assimilated the radical challenge.

In between the scientific and literary modes, in between the order of universal laws and the chaos of unrestricted freedom, T.H. Huxley discerned that

if the evils which are inseparable from the good of political liberty are to be checked, if the perpetual oscillation of nations between anarchy and despotism is to be replaced by the steady march of self-restraining freedom; it will be because men will gradually bring themselves to deal with political, as they now deal with scientific questions (Huxley 1881: 158-9).

In place of the conservative rear-guard action and radical anarchy, both of which appealed to values, Huxley called for the objective, value-neutral, problem-solving spirit of science to be applied to social reality. The practical question was the replacement of the opposition of order through the authority of tradition to chaos inherent in radicalism with the benign synthesis of ordered change channeled by scientific control.

The solution offered, an expanded state apparatus ready to intervene in the previously sacrosanct arena of "private" affairs, even contractual relations—the beginnings of the twentieth-century welfare state— and an expanded but still restricted electorate, was built on a series of cultural mechanisms of race/ethnic and gender exclusions that limited access to social goods and political participation to specific socio-economic strata. As argued in Parliament in 1866, invoking the freed slave population of Jamaica one

could hardly conceive that the most sanguine democrat who would be ready to compose the constituency of the House of Commons chiefly of working men, or of those who could barely read and write, would defend the sudden introduction of that half-civilized, and but recently emancipated antagonistic population into a constituency of old representatives (3 *Hansard* 1866: CLXXXI 1174).

This consensus functioned to maintain a precarious balance between free trade and empire, capital accumulation and human needs with the objective of insuring order with minimum use of force and was eventually extrapolated world-wide as Wilsonian "self-determination of nations" and Rooseveltian "economic development" that were the structural equivalents of national-level universal suffrage and the welfare state (Wallerstein 1995: 137).

Over the nineteenth century, a consensus around the hierarchical structure of the world division of labor found legitimation in the authority of science. By the second half of the nineteenth century, costs of every sort were rising to contain what seemed to be increasingly frequent and serious outbursts of struggle. The key to containing the cost of class struggle has been the maintenance of status arrangements, consensually, at the bottom. Analysis of social change via the present-oriented social sciences erased the historical construction of the contingent relations of inequality that were based on value scales associated with distinguishable attributes, such as race and ethnicity or gender, and established these group characteristics as causal categories. However, along with the cultural particularisms that figured in the law-like, putatively unbiased, explanations of these correlations and gave them causal validation, the universalistic premises of "scientific rationality" on which the social sciences were built necessitated the extension of the liberal promise of (at least future) progress to all groups, including the disadvantaged strata. This worked for over half a century; but eventually the recognition that the pledge had gone, and would go, unfulfilled, culminated in the world revolution of 1968.

Today, the nineteenth-century solution to the pressures of popular struggles has become structurally unsustainable and has been overtly challenged. The structures of knowledge approach makes plain the crisis, the secular crisis of the modern world-system, as well as the end of the third logistic in the arena of the structures of knowledge. [2]

Let us now return to the Germanies where the great movement of reform and rejuvenation of the university, both as a teaching and a research structure, was taking place during the nineteenth century. As the German historical school developed the criteria of objectivity and critical use of archival documents into a "science of history", *Geschichtswissenschaft*, the universality of Ranke's vision grounded in the timeless "holy hieroglyphic"—God with his plan and his will" (Breisach 1983: 233), balanced the picture of uniqueness and ceaseless change

historians envisioned. However, with the rise of the Prussian state and its expansionist agenda, idealism gave way to the construction of a (particularist) *Volksgeist* as a foundation for an inclusive German nationalism underwriting unification and grounding the competition for hegemony in the world-system with Great Britain. The decline of the (universalist) transcendent element left historicism, as science, open to positivist challenge and charges of relativism. In the first instance, it could preserve its objectivity only at the loss of its ethical orientation; in the second, it would cease to qualify as a producer of systematic knowledge. Consequently, in an especially sustained way in the German-speaking world efforts were made to rethink theory and method in social research.

The *Methodenstreit* was a controversy over the purpose, properties, method and domain of sociocultural knowledge (Oakes 1975: 19-20). Its central theme, the construction of a philosophical defense of a connection between meaning and values, *Wert*, and systematic knowledge of reality, *Wissen* constituted a response to positivism in the Germanies. In 1883, Wilhelm Dilthey began to make his case for an interpretative or hermeneutic approach to historically oriented human studies, the *Geisteswissenschaften*. This field was composed, more or less, of all of the humanities and the social sciences including history taken as a group and was distinguished from the *Naturwissenschaften*, the natural sciences. Dilthey considered it the task of philosophy "to provide an epistemology that can show that the *Geisteswissenschaften*, although not as clearly definable in their first principles as the *Naturwissenschaften*, are no less fundamental, comprehensive, and objective in their results" (Makkreel 1992: 38). The original experiential foundation in descriptive psychology Dilthey proposed, denied "Ranke's claim that to see history objectively one must 'efface the self'" (Makkreel 1992: 54). In debate with the Baden neo-Kantians, Wilhelm Windelband and his student Heinrich Rickert, Dilthey rejected the impersonal and abstract *Kulturwissenschaften*, with its neglect of conflict and its unstated postulate of progress.

Although Windelband also refused the positivists claim for a single logical unity among the sciences, his strategy was methodological and taxonomical. He classified all the empirical sciences by their autonomous logical form rather than substantive content as either nomothetic (sciences of law, *Gesetzeswissenschaften*) or idiographic (sciences of event, *Ereigniswissenschaften*). In order to preserve both certitude and human freedom, he relegated psychology to the natural sciences, thus rejecting "the contingencies of the historical and psychological subject in favor of the timelessly valid, transcendental subject of logic" (Bambach 1995: 63).

Rickert extended Windelband's project with the explicit purpose of restoring meaning to history as science. He argued, however, that the difference between *Natur-* and *Geisteswissenschaften* was not one of classification, but one of concept formation—that is, the universal concept of similarity operational in the natural sciences and the particular concept of difference implicated in history. "Value" served as a formal, transcendental, a priori principle, "valid (*geltend*) rather than real (*seiend*)": "Rickert rejected the relevance of temporality and historicity and insisted that values are transhistorical and transcultural, as well as absolute and unchanging in their validity" (Bambach 1995: 106). Ethical imperatives guide both natural scientists and historians according to Rickert. He states that we

must see all the theories that believe they can reject the idea of freedom as being theoretically invalid. The crucial reason for this is that science itself needs freedom even when investigating causal connections. Only a theoretical (transcendental) subject who is not dependent on causality can take a position on the value of truth. Only when we grant the possibility of such a subject can we recognize something as being true and meaningful (Rickert in Bambach 1995: 117).

Dilthey repudiated this argument, along with the Kantian mathematical concept of time without concrete duration and factuality without historicity, in favor of a science of history whose ground was the reality of temporal history itself to which all human beings belonged.

Dilthey aspired to overcome the extremes of both idealism (he was empirical) and positivism (he posited no general laws, since "consciousness can institute changes, human life cannot be viewed as totally determined by nature" (Makkreel 1992: 61)). For Dilthey, the original connectedness of life is directly available through lived experience (*Erlebnis*) and historical reason is replaced with reflective understanding (*Verstehen*) which articulates potential human significance provided by *Erlebnis* into "definite and exclusive possibilities" to "find meaning in history without positing a final goal (Makkreel 1992: 257, 243). Thus, Dilthey could assert confidently that "Historical life is creative. It is constantly active in the productions of goods and values" (quoted in Makkreel 1992: 315). Any appeal to an idealized concept of value, such as in Rickert, denied the historicity of values and the value of historicity itself, including the historicity of knowledge or truth. In order to maintain the scientific status of human studies and respond to charges of relativism while maintaining the roots of inquiry in actual historical existence, Dilthey advanced a hermeneutic approach based on the study of "typical" individuals as "a human deliberation about the possibilities and limits of

an individual's existence within a specific historical-cultural milieu." Dilthey had tried to fuse subject and object by arguing that both consciousness and the world shared the same temporality and historicity. But in the end, his effort to secure rigorous certitude without sacrificing human finitude was undermined by the project itself. Occupying as he did an intellectual space between the historicists and the neo-Kantians, he partook of the same fundamental commitment to the Cartesian *Fragestellung* in which truth was grounded in the scientific objectivity of the self-knowing subject (Bambach 1995: 170, 181-2).

In the same year of the appearance of Dilthey's *Einleitung in die Geisteswissenschaften*, 1883, the *Methodenstreit* erupted in another sphere. The "historical school" of economics challenged the universality of deductive theory in the classical approach in favor of inductive history. As Ernst Breisach explains, this was

really a far-reaching dispute over the structure of reality. ... [As] Menger's followers opened the doors of economics even wider to psychology and mathematics ... economists preferred to theorize on the timeless and typical processes of the market and thereby moved ever closer to the ideals of the ahistorical natural sciences (1983: 299).

The historical approach of Schmoller emphasized the concrete, price history, actual past behavior, and description, while Menger's neoclassical, "pure", theory stressed the abstract, price theory, typical economic behavior, and universal theoretical models.

The marginalist revolution soon overcame the historicists position and established economics as a value-free discipline displacing political economy and Dilthey's project of finding a *via media* between the chaotic events of human affairs and the deterministic laws of the natural world without positing a new disciplinary sphere was finally put to rest in the medium term by Max Weber. Weber argued against both the positivists and their opponents. On the one hand, he held fast to the axiological dimension and identified interpretation or understanding as the goal of human studies. At the same time, he emphasized the verifiability of knowledge in the sense of "sufficient ground": "A historical 'interpretative' inquiry into motives is *causal* explanation in absolutely the same *logical* sense as the causal interpretation of any concrete natural process" (1975: 194), he wrote. Operationally, however, he lifted his "ideal type" out of time and context and "historians [were] separated completely from the world of values they investigated.

They [became] totally detached observers who objectively created islands of explained actions in a landscape of total obscurity" (Breisach 1983: 284)— again the choice was either order or chaos.

The importance of Dilthey's project was that it had been based on ontological rather than epistemological concerns; he had made a bid to reclaim phenomenological time for both the natural and the human sciences. His failure was contingent on the Cartesian principles (the subjective reality of history versus the objective ideal of science) from which he was unable to dissociate himself. The eventual consequence was the grounding by epistemological default of a scientific third culture, the social sciences which included the modern discipline of economics, between *Wert* and *Wissen* based on the "scientific" criteria of value-neutrality and a neutral or absolute time. In the real world of structured inequalities, the consequence was the shift from a set of social categories that underwrote the coercion of labor from some groups to a new set of social categories based on essentialist, ahistorical, putatively scientifically verifiable group characteristics (race/ethnic, gender, national and others) that legitimated a predetermined positioning of such groups on a world hierarchy of differential labor remuneration and access to political decision making. If the emerging "ideological" control mechanism did not immediately, could not ever, totally replace more expensive, directly coercive, modes of labor force control, it did constitute a medium-term solution to the pressures of class struggle so costly to capital. As expansion and incorporation in the world-system began to approach asymptotes in the second half of the nineteenth century, elites increasingly became concerned with maintaining the consensus around the status hierarchy which authorized the differential exploitation that allowed capital accumulation to continue by lowering the cost of labor force control. A fundamental ingredient of this action was the invention of the social sciences that guaranteed the empirical and theoretical foundations of the new liberal consensus and certified the institutional practices of policy determination.

The universal laws characteristic of the natural sciences depend on a Newtonian or reversible time associated with absolute determinism and therefore predictive certainty. Human studies, by contrast, are eminently historical; past and future are not interchangeable. But the scientific study of society is exactly what Huxley and so many others advanced as grounding for a separate, that is a third, disciplinary domain between the sciences and the humanities to be occupied by the social sciences. For to the extent that one could uncover social laws, one could

predict and thus control the future. And here lies the functional link between the social sciences and the reformist liberalism of incremental progress.

By the end of the 1960's, as the intellectual trajectory of what has come to be known as cultural studies (see Lee 2003, 2007), situated on the interface between the humanities and the social sciences, moved out from the original consideration for working-class culture, the abiding concerns for values, agency, and historical time came into conflict with the anti-humanist and a-temporal tendencies of structuralism which seemed to announce the demise of any possibility of constructing totalizing narratives. The most skeptical assessment has been that this amounts to a particularistic low, of a localist relativism and political paralysis, in the disconnected stories we tell. However, the anti-essentialism, the anti-foundationalism, and the demise of the subject as theorized by poststructuralism, have also nullified the Cartesian dualities on which Dilthey's project collapsed.

During the same period from the late 1960's, the "new sciences" (see Lee 1992, 2004), emphasizing complexity, irreversibility, and self-organization, have effectively abdicated a role of guarantor of truth in knowledge and reintroduced the arrow-of-time into the natural sciences. The world of nature, like the human world, has now been shown to bring order out of chaos— it is creative. The future is an open future, rather than a predictable Newtonian one, determined only by creative choices and contingent circumstances at unstable moments of transition. This has the effect of freeing knowledge production from the blind alley of uncovering infinite disconnected particulars in search of impossible universals. In a world recognized as creative in all its aspects, values and knowledge, *Wert* and *Wissen*, are necessarily fused.

These discussions are especially relevant today when destabilizing structural pressures are forcing change, but unlike the situation a century ago, those of us searching for a way out of the contemporary intellectual, political, and institutional quandaries have been liberated from the Cartesian/Newtonian constraints. The structural sequestration of the spheres of knowledge no longer appears as an unquestioned given. The study of government need not necessarily be isolated from the study of language, or analyses of market operation automatically separated from considerations of culture in departments like Political Science, English, Economics, Sociology or Art History. Indeed, it has become a legitimate proposition to say that they should not be isolated or separated. Defensible,

intersubjective interpretations of relationships among constituent parts of concrete wholes on the other hand suggest a realizable mode of scholarly participation in the creation of a world where "social" is no longer forced to serve as the qualifying adjective for a dubious branch of "science."

The crisis in the field of knowledge, that is, in the structures of cognition and intentionality, is part of the overall exhaustion of the processes reproducing the structures of production and distribution in the economic sphere, and those of coercion and decision-making in the political arena. Since this is a secular, or structural crisis, change does not depend on our normatively motivated action for its initiation. By the same token, the direction of change will, as complexity studies show, be exquisitely dependent on small fluctuations in the form of our value-laden decisions and actions.

Contemporary economics in this "far-from-equilibrium" world, despite its allegiance to the principles of formal rationality, [3] should be well placed to contribute to an understanding of the alternatives available today. But this would entail a reexamination of the inherited theoretical approaches and methodological practices—such as the primacy given to the short term in a world of competing "economies," quantification, and model-building and the premises of *ceteris paribus* and individualistic decision-making—that currently underpin the discipline. Some alternatives seem evident. Certainly, the idea that we now live in one world should not surprise. But should we not realize also that that world has been an expanding one for the past five centuries, defined by a single world division of labor and only recently has come to encompass the entire globe? Associated with the reality of such a world would be the idea that if such a "historical system" came into existence, it could also very well cease to exist when the processes of its reproduction ran up against asymptotes that no longer allowed its internal contradictions to be overcome. Thus, a historical perspective would permit distinguishing between medium-term conjunctural crises, downturns and eventual upturns, and the exhaustion of long-term trends portending a systemic transformation. All of the above, however, will only be possible if we allow that the study of production and distribution, coercion and decision making, as well as cognition and intentionality, are part of a single historical social science. Finally, human values no longer need be construed simply as a matter of individual ethics or morality in the creation of authoritative knowledge of human reality, but must hereafter be conceived as an integral part of such a historical social science for our time, for our time in the sense of imagining and evaluating possible futures

and modes for their attainment. As I have argued before, the ivory tower of “who, what, when, where, why” and the “view from nowhere” is giving way and we would all be well advised to turn our attention to “for whom, for what, for when, for where” and “from whose point-of-view”— and thus to the possibility of a substantively more rational world.

Endnotes

[1] For work bearing on the emergence, development, and consequences of the structures of knowledge approach in more detail, see Gulbenkian Commission (1996); Lee (1996; 2001; 2002; 2003); Lee and Wallerstein (2001); Wallerstein (1991).

[2] I have argued elsewhere that the exhaustion of economic processes insuring endless accumulation while containing class struggle and the collapse of their intellectual foundations suggest that the upper bound of the trajectory of historical capitalism is not a point of arrival but a frontier of transition (see Lee 2001). See also, Lee (2007) for the role complexity studies in the sciences and cultural studies in the humanities and the social sciences have played in the exhaustion of possibilities for the reproduction of the structures of knowledge of the modern world-system.

[3] According to Max Weber, formal rationality designates “the extent of quantitative calculation or accounting which is technically possible and which is actually applied” and substantive rationality “is the degree to which the provisioning of given groups of persons (no matter how delimited) with goods is shaped by economically oriented social action under some criterion (past, present, or potential) of ultimate values (*wertende Postulate*), regardless of the nature of these ends,” e.g., “ethical, political, utilitarian, hedonistic, feudal (*ständisch*), egalitarian” with results measured “against these scales of ‘value rationality’ or ‘substantive goal rationality’” (Weber 1978: 85-6).

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Works Cited

- Bambach, Charles R. (1995) *Heidegger, Dilthey, and the Crisis of Historicism*, Ithaca: Cornell University Press
- Breisach, Ernst (1983) *Historiography: Ancient, Medieval, and Modern*, Chicago: University of Chicago Press
- Gulbenkian Commission on the Restructuring of the Social Sciences (1996) *Open the Social Sciences: Report of the Gulbenkian Commission on the Restructuring of the Social Sciences*, Stanford: Stanford Univ. Press
- Hansard's Parliamentary Debates, Third Series, Commencing with the Accession of William IV* (1866), London: Cornelius Buck
- Huxley, Thomas H. (1881) "Science and Culture", in *Science and Education*, Vol. 3 of *Collected Essays*, New York: Greenwood Press, pp. 134-59 (1968)
- Lee, Richard E. (1992) "Readings in the 'New Science': A Selective Annotated Bibliography", *Review*, XV, 1, Winter, pp. 113-71
- (1996) "Structures of Knowledge", in Hopkins, T. K. et al., eds., *The Age of Transition: Trajectory of the World-System, 1945-2025*, London: Zed, pp. 178-206
- (2001) "After History? The Last Frontier of Historical Capitalism", *Protozoologie*, XV, pp. 87-104
- (2002) "The 'Third' Arena: Trends and Logistics in the Geoculture of the Modern World-System", in Dunaway, Wilma, ed., *New Theoretical Directions for the 2nd Century World-System*, Westport, CT: Greenwood, pp. 120-27
- (2003) *Life and Times of Cultural Studies: The Politics and Transformation of the Structures of Knowledge*, Durham, NC: Duke Univ. Press
- (2004) "Complexity Studies", in Lee, Richard E. and Immanuel Wallerstein, coords., *Overcoming the Two Cultures: Science versus the Humanities in the Modern World-System*, Boulder, CO: Paradigm, pp. 107-17
- (2007) "Cultural Studies, Complexity Studies and the Transformation of the Structures of Knowledge", *International Journal of Cultural Studies*, X, 1, 2007, pp. 11-20

Lee, Richard E. (2007) 'Economics, the Structures of Knowledge, and the Quest for a More Substantively Rational World', *The Journal of Philosophical Economics*, 1:1 , 9-22

Lee, Richard E. & Wallerstein, Immanuel (2001) "Structures of Knowledge", in Blau, Judith, ed., *The Blackwell Companion to Sociology*, London: Blackwell, pp. 227–35

Makkreel, Rudolf A. (1992) *Dilthey: Philosopher of the Human Studies*, Princeton: Princeton University Press

Oakes, Guy (1975) "Introduction", in Weber, Max, *Roscher and Knies: The Logical Problems of Historical Economics*, New York: Free Press, pp. 1-49

Wallerstein, Immanuel (1991) *Unthinking Social Science: The Limits of Nineteenth-Century Paradigms*, Cambridge, MA: Polity Press

--- (1995) *After Liberalism*, New York: New Press

Weber, Max (1975) *Roscher and Knies: The Logical Problems of Historical Economics*. New York: Free Press

--- (1978) *Economy and Society: An Outline of Interpretive Sociology*, Berkeley: University of California Press

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