

***The Telos of the Good Life:
Reflections on Interdisciplinarity and Models of Knowledge***

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Given that the question of interdisciplinarity refers us back to disciplines, and that the disciplinary organization of knowledge is an institutional phenomenon, it seems evident that one's approach to interdisciplinarity is cogently related to one's institutional position. Not to say that it is a simple reflection of that position, nor that one's position is solely determined by one's ideas about disciplines, but that thinking about interdisciplinarity centrally pertains to current institutional priorities and the possibilities for alternative forms of production of knowledge.

While the question of interdisciplinarity puts into question one's institutional position, it may do so in several ways. Interdisciplinarity may refer to individual work of an interdisciplinary investigative character, collaborative work between members of different disciplines, or an analysis of the university as an institution—its normally disciplinary character and the potential of interdisciplinary institutional initiatives. There are two main barriers to individual interdisciplinary work. The first is that hiring is done in universities almost exclusively by departments organized on disciplinary lines. All the faculty have in common is their disciplinary education, which is reinforced by their departmental practice, such that they tend to hire new faculty in a way that continues in much the same fashion. This hiring practice has not altered in many years and shows no sign of doing so. The second barrier is based on the method for enforcing the disciplinary character of individual research through the recognition of valid publication only if it occurs in established disciplinary journals (often reinforced by ranking journals). This practice seems to be lessening over time alongside a growing recognition of the value of interdisciplinary and public contributions by university faculty. But, however this actually may be in practice, it can be fairly estimated by the degree to which publication in disciplinary venues is mandated for tenure, promotion and merit awards. Collaborative work between members of disciplines is on the rise though, as I will outline, it can take several forms. My approach will primarily take the form of an institutional analysis, though it is nevertheless the case that these different meanings of interdisciplinarity do overlap, not least since changing institutional structures allow the recognition of new forms of collaboration and publication. An important institutional issue is the impact of new structures on students and teachers, particularly on what they can expect from the learning process and what it demands of them.

Pertinent to the institutional position from which I speak, perhaps I may begin with a confession. After finishing a Master's degree in philosophy, I was drawn to undertake my Ph.D. studies in an interdisciplinary programme both because of the limitations of analytically-dominated departments of philosophy and due to the positive allure of roaming beyond boundaries that seemed artificially imposed.¹ The attraction to interdisciplinary studies was entwined with my interest in phenomenology and Marxism, especially the Frankfurt School—two approaches that attempted the coordination of knowledge in the fragmented conditions of the 20th century—and a political orientation toward the relevance of knowledge to a project of self-emancipation that goes beyond the university. As the expectation of far-reaching social change that underlay this orientation began to recede, the

practical consequences of obtaining an interdisciplinary Ph.D. while the university environment remained dominated by disciplinary organization were driven home to me through the difficulties encountered in finding work. Then as now, universities talk a better game of interdisciplinarity than they support organizationally and financially. Thus, my position on disciplines tends to be that of a child in front of a candy store window. I see all the sweets laid out in front of me but they seem forever beyond my reach. While others have turned to interdisciplinarity as a way to transgress boundaries and overstep limitations, I have tended to focus on the keys with which the disciplines lock up the goodies. Similarly, my work is often assumed to belong elsewhere, no one seems to know where exactly, but it certainly isn't here because no one does that sort of thing here. Thus, my interest in the institutional determinants that recognize certain forms of research to the detriment of others. I have found that interdisciplinary institutional formations have been most receptive to the interdisciplinary writing in which I have engaged.

Approximately a decade ago I wrote a book on Canada called *A Border Within*. To address issues of identity and difference, English Canada, globalization and the nation-state, I needed to venture into areas of history, political science, political economy, literary theory, etc. where I was often less than sure of the conventional maps.² In such a situation one has to navigate on a case-by-case basis what is enough contextual knowledge and specific information to ground one's argument sufficiently. One is in the realm of judgments and not of rules, thus it is impossible to give a general account of when enough is enough.³ When one chooses to write about a problem that does not have a definite location within a discipline, one has to re-contextualize the knowledge upon which one draws within the integrity of the developing inquiry. One has to risk a defence of that inquiry on grounds that one shares with others outside the institutional division of knowledge—with fellow citizens, activists, neighbours, or friends—and thereby enter the terrain where the system of knowledge production scrapes up against the traditional or emergent non-disciplinary knowledges imbedded in everyday life.⁴ In this case, I wanted to sum up, rethink and extend the project of left-nationalism that had been a significant emancipatory tendency specific to English Canada and national politics coming from the 1970s. Strangely enough, this is not too far from what I had meant by philosophy, based on my own engagement with that practice, when I had succumbed to the allure of interdisciplinarity—thinking that perhaps genuine philosophy could be found there. Interdisciplinarity refers us to the plurality of disciplines and the institution that enforces them, but it refers the practitioner also to the socio-historical lifeworld outside the university. The construction of knowledge and its social role becomes an unavoidable issue.

If the question of interdisciplinarity implies this complex of problems, it is difficult to formulate an approach that is neither too narrow nor too general. I will attempt to track a path from the institutional determinants of the social role of knowledge, to the modern form of knowledge, and thus to the structure of disciplinary, topical and interdisciplinary studies. This investigation is based primarily on my experience in universities structured in this fashion. I am trying to

think what I have been doing in the hope that it might aid those who are doing something similar. It is intended that this path will ground sufficiently the final two sections in which I will address the question of interdisciplinarity through its contemporaneity—*why now?*—and its method—*how?*

1. University Structure and Interdisciplinarity

We live in a society that is structurally committed to scientific and technological development and the perpetual introduction of new scientific-technical innovations into social life. The role of knowledge in such a society is not a peripheral question but pertains to its basic organization and possibilities. Questioning the social construction and organization of knowledge refers us to the university, which is the major institution of advanced learning and research in contemporary society. It is not, however, the only such institution. There are also corporate and government research and development institutions. In these sites multidisciplinary cooperation is driven by a fairly definite purpose, which is based upon the exigencies of profit or policy. The fight against the Nazis in World War Two was a watershed for organized science in this respect. One may think of the research work on German institutions and people undertaken by the Office of Strategic Services (the forerunner of the CIA) or the Manhattan Project that constructed the first atomic bombs. Coordination of multidisciplinary research toward a definite goal by corporate or government interests poses many practical issues no doubt. However, because the goal of such research and development is decided prior to and apart from its organization and execution, the social, historical and natural environment enters only minimally into multidisciplinary research through this goal or set of goals.⁵ University-based interdisciplinary research is more complex in this sense due to the heterogeneous, incipient and conflicting social goals that enter into its formation. Moreover, the impact of such social goals is mediated by the university structure itself. Most important are the disciplinary structure of the university and the freedom of university-based researchers to choose the subject of their research themselves.⁶ This is a major reason why both corporate and government research institutions do not attempt to replace universities but rely on them for teaching and basic research. Even in the current environment in which corporate forces have invaded the university to an unprecedented extent, they do not attempt to replace non-profitable teaching and basic research functions but rather to influence and monopolize through the allocation of research funds the profitable technological applications that derive from the basic functions specific to the university.

The university occupies a crucial location in the changing constellation of industry, government and social interests or goals. The question of interdisciplinarity invokes a position toward that organization of the university oriented toward its specific functions of teaching and basic research. This question also requires that the university's disciplinary division of knowledge be examined in relation to the traditional and emergent non-disciplinary knowledges in the extra-university environment. The question of interdisciplinarity takes us to the centre of

the mutations in the social construction and organization of knowledge in the contemporary lifeworld.

There are many reasons to suppose that the practical issues in such a mutation have become widely perceived in recent years. For example, there is a permanent tendency for disciplinary research to replace the questions which students and faculty bring to the university themselves by issues already recognized within a discipline or to cut and massage the original questions into a partial, domesticated form in which they can be addressed within the prevailing assumptions of the discipline. This leads to disaffection with the learning that the university proffers as its main virtue. The experiments in interdisciplinary research and organization over the last 40 years or so give us reason to believe that there is already established a certain dissatisfaction with disciplinary structure. Moreover, overlaps have emerged through the sub-divisions within disciplines that mitigate the original division. Does it matter, for example, whether contemporary social movements are studied under the rubric of democratic politics in Political Science or Political Sociology? Can the political theory, sociological theory and social and political philosophy sections of their departments be effectively sealed off from each other? Conferences and journals have sprung up in which specific issues are discussed by researchers from different disciplines. Such common interests often make for stronger affiliation than the traditional annual meetings of the disciplines. They often allow discussion more genuinely and effectively related to the extra-university knowledges and practices with which they interact. Moreover, new approaches such as cultural studies and complexity theory transgress disciplinary boundaries and suggest a possible reunification of knowledge in a manner reminiscent of phenomenology and Frankfurt School Critical Theory. Nevertheless, there are dangers of interdisciplinarity: the lack of a canon often leaves one without clear, or sufficiently theoretically developed, points of orientation leading to the permanent temptation of mere eclecticism. The lack of a broad disciplinary intellectual formation often leads interdisciplinary research to become narrower in focus despite its rhetoric of widening by 'crossing arbitrary boundaries and limits.'

Accumulation of these experiences leads us now to ask the question of interdisciplinarity in the basic sense of the formation of knowledge and the challenges that it faces in our contemporary world. We must ask about the destiny of thought, and its institutional formation in the university, within the changing temper of corporate and government forces and the challenges posed by social movements in proposing non-disciplinary traditional and emergent knowledges. To address this question I will reflect on three models of knowledge practiced in the contemporary university—disciplinary, topical and interdisciplinary—against the background of the modern form of knowledge that has enabled them and whose limits they test.

2. The Form of Modern Knowledge

Explication of the form of modern knowledge is a task well beyond the present essay. Nonetheless, some of its key features need to be recalled in order to address the challenge of contemporary interdisciplinarity. Galileo can be taken as exemplary for the modern form of knowledge that was instituted in the 17th century. The new physical science was at once mathematical and experimental. Its mathematical aspect involved abstraction from experienced objects toward a teleology of formal systematicity. Its experimental aspect re-established the pertinence of a formal-mathematical system of knowledge to a material domain of objects through a correlative abstracting, and therefore standardizing, of experimental conditions from ordinary experience.⁷ The new science was at once formally systematic and inherently tied to technological development through its experimental dimension. As a consequence, the ground-plan of the new science could be applied to an increasing number of new domains. This “infinite task” of progressive scientific development projected the unprecedented idea of “the idea of a rational infinite totality of being with a rational science systematically mastering it.”⁸ The architectonic of modern knowledge thus required specialization of domains in order for scientific knowledge divide the totality of being into specific domains amenable to methodical research. Cumulative research within domains could be expected to add up to general scientific progress toward infinity. Due to the necessity of specialization in the modern form of knowledge, we encounter here one of the most basic and influential rhetorical figures of interdisciplinarity: that the numerous specialized domains of knowledge must be synthesized. Such a new unity of knowledge would re-establish in a modern form the totality of knowledge that pre-modern science accomplished under the umbrella of religion. To anticipate, my defence of interdisciplinarity will not rest upon such a figure of unification.

The progress of modern knowledge could be obtained by the human subject only insofar as it stood apart from nature and applied its intelligence to the domination of nature. To this extent, modern knowledge is based upon a Cartesian separation between mind and matter, or un-extended spirit and extended nature. The value-laden issues of the good and the beautiful in the domain of spirit were thus separated from scientific research. The human subject was similarly split within itself insofar as it inhabits both of these domains. Domination of nature thus requires the domination of the extended, material part of the human by its un-extended, spiritual part. This division is also written onto social classes since the labouring classes function as material to be ‘spiritually’ directed by the ruling class.

The social dimension of the modern form of knowledge involved the separation of a class of scientists practicing scientific methodology from the Church authorities that based themselves on religious postulations of the structure of nature and spirit. It is the specific contribution of the 18th century Enlightenment to draw the conclusion that amelioration of human suffering could be achieved by the technological capacity inherent in modern science if it were applied in the social realm without restriction by religion. Thus a social science built on the same

theoretical and methodological foundation as the earlier natural science could be expected to contribute to social enlightenment. Note that this extension of modern science carries forward within itself the two fundamental separations that characterize the earlier formation of modern knowledge: first, the separation between scientific knowledge and ordinary experience which, when socially applied, means the separation between the class of scientists and the unschooled population; second, the separation between value-laden domains of the spirit—which were left aside to the discredited form of knowledge entwined with religion—and the search for truth understood as distinct from the value-judgments inherent in practical action. It is these two lingering issues which have come intensely into question in our time and which have posed irrevocable problems for the model of social enlightenment dominant since the 18th century.

How to connect the search for truth to the value-laden searches for the good and the beautiful? How to pursue this combined goodness and truth, if it is possible, in a way that promotes social enlightenment? Or, in more contemporary terms, what is the relation between the methodical inquiry into empirical knowledge and the hermeneutical interpretation of meaningful texts? What is the relation between the pursuit of knowledge and values such as democracy? My all-too-brief recollection of the institution of modern knowledge is intended to show that these issues, which are generally perceived as real and pressing issues today, are not passing ones but are rooted in a fundamental questioning of the theoretical and social form of modern knowledge.⁹ The role of disciplines, as the form that the necessary specialization of research in modern knowledge takes within the university, indicates the continuing institutional weight of this form. The question of interdisciplinarity indicates the extent to which it has already come under criticism and is undergoing transformation.

3. Disciplinary Knowledge

A discipline enables new knowledge to be fitted into the ground-plan, or conceptual field, laid out as a domain of objects open to systematic investigation.¹⁰ This ground-plan is prior to current research since it provides the framework in which the questions that guide such research are meaningful. But it is also reformed by the cumulative effect of current researches such that the ground-plan at any given point is the product of a previous history of specialized inquiry. I do not mean to suggest that a clear and consistent ground-plan commands assent by all researchers working in a given field. Indeed, that much clarity and consistency would demand a ground-plan of such simplicity that it would be unlikely to generate anything interesting in the way of new problems or perspectives. A ground-plan of a discipline allows for sufficient disagreement over its major features and sufficient unclarity of certain problem-areas that there remains much to argue and to do. This flexibility is kept within manageable limits by the narration of the history of the science—an account that selects certain heroes, sketches their contribution to the field as a whole, and sets out certain traditions of inquiry within the discipline. The

narration describes a canon and debates about the classic texts occur at fundamental turning points in the history of a discipline. Marx, Weber and Durkheim constitute the classic texts of sociology and it is hard to claim as respectable a department of sociology in ignorance of them. Even a specialized empirical science has recourse to narration in communicating its ground-plan sufficiently to provoke new research within its domain.

The historical interplay between ground-plan and research is what allows a discipline to distinguish and define itself by three exclusions. One, for reasons inherent in modern knowledge itself, as explained above, a discipline distinguishes itself from the non-disciplinary accounts of the general population. The off-hand social observations of non-specialists are at most the subject-matter of sociology, never generalizations worthy of scientific testing, nor are their proponents interlocutors of equal credibility. Two, the historical account of the development of a specialized science will draw upon precursors in philosophy, religion and myth, but it will necessarily draw a distinction between scientific research and the generalized thinking that is what defines precursors as precursors: such precursors operated the totalizing framework within which individual observations and claims were linked to a total world-view incorporating conceptions of the true, the good and the beautiful that define a form of life. The onset of science in the disciplinary sense is defined precisely through this distinction.¹¹ Even if it remains controversial where to draw this line within the discipline, some such line will have to be drawn by every scientific tradition. The distinction of religion from the sociology of religion is a case in point. Sociology of religion requires that research exclude the question of what is the true, good and beautiful religion precisely in order to open up the domain of the social consequences of belief in a given religion. Yet it is precisely the evaluative question that draws most people to the study of religion in the first place. Three, certain questions are defined as outside the methodological inquiry of the specialized science because they do not conform to the domain of objects that it investigates. In principle, they have or could become the topics of neighbouring specialized sciences. Physics concerns itself with simply material objects, whereas biology focuses on material objects that are internally unified to constitute life. Psychology concerns itself with the structure of the mind considered individually, whereas sociology deals with the institutions that mould and reflect the mental character of humans as social beings. The productivity of research within a discipline is made possible by this double exclusion—of pre-scientific, totalizing precursors and of other specialized sciences. After all, a specialized science of the whole of reality is a contradiction in terms.

This model of a discipline could be fleshed out considerably with proper attention to the issue of combined and uneven development. Social science disciplines, because of the claim to scientific status, insist on the rupture with non-specialists and precursors to a greater degree. For humanities disciplines, however, this insistence is less strident. History, philosophy and literatures tend to claim some continuity with precursors, even while noting the break that university studies introduce. Thucydides, Socrates and Shakespeare are not only the subject-

matter of these disciplines but still, in a muted sense, carry forward a content into what the discipline itself is. Often this is a way of capturing the prestige of reflected glory. How many milquetoast philosophy professors have proclaimed the dangerousness of philosophy with reference to Socrates' fate? Even so, the break is still there: the polemical side of classical, pre-disciplinary historical writing, the existential and combative side of philosophy, the focus of pre-disciplinary literatures on the subject of their writing to the detriment of its textuality, all indicate the difference in practice of the disciplinary versions such as analytic or philological philosophy, history as other than the narrative of victors, and literary theory, which provide examples of scientific status entering the humanities. One has only to look at the mingled disdain and envy directed by professional historians at Pierre Berton, for example, or by professional philosophers at Ayn Rand. The separation of a discipline from its precursors and non-specialists is a historical phenomenon that is in its specifics distinct from other disciplines, that occurs with a distinct accent on the relation between break and continuity which defines the discipline's claim to relevance to the socio-historical lifeworld but, despite these specific features, aims at a model of disciplinary closure rooted in the modern form of knowledge.

One meaning of interdisciplinarity emerges directly in relation to the constitution of disciplines. At any given stage of inquiry, the totality of being is divided into various specialized sciences that, taken together, do not exhaust that totality. It is this current insufficiency that motivates both further research within specialized domains and the *telos* of rational knowledge of the whole. The incompleteness of scientific knowledge when it is considered at any actual historical stage means that the map of knowledge contains certain blank spots not covered by any existing methodical inquiry. Interdisciplinary inquiry can enter at this point to open up these blind spots through collaborative research that may eventually lead to the fixing of a new domain within the totality of scientific knowledge.¹² Disciplinarity and interdisciplinarity in this sense are co-constituted; one is not prior to the other—though I want to push on to a conception of interdisciplinarity that is more fundamental than both due to its reference beyond university-based knowledge-structures to those based in the socio-historical lifeworld.

Even so, again, a qualification regarding this 'blind-spot' conception of interdisciplinarity is in order. Issues from the wider world do make their way into specialized disciplines and often contribute to the interplay of research and ground-plan. The persistent and worsening environmental crisis has had its effect in almost all the disciplines but, notice, that however one might address that crisis as an engaged citizen or simply as a human being, it is not taken up into disciplines in this form but in a revised form consistent with the disciplinary ground-plan. We now have environmental sociology, the politics of the environmental movement, environmental economics, environmental ethics and environmental philosophy, etc., etc., but in each case the lifeworld situation that gave rise to this development is sliced up and addressed piece-meal through the creation of new sub-disciplines. There seems to be something necessary in this development. First, this seems to be

the only fashion in which a pervasive problem can influence disciplinary research. Moreover, one cannot address an issue, however crucial, without making some divisions, separations and simplifications. Nonetheless, this necessity is not the same as the re-configuration of lifeworld issues within disciplines based on their inherited sense of valid research issues and we can begin to glimpse here that things could be divided up differently altogether.

Perhaps this account of a discipline seems somewhat antiquated and inadequate to contemporary practice. If so, it is because belief in the unquestioned viability of disciplinary research has been waning for at least a generation and several other forms of knowledge have come into being that not only challenge the disciplinary past but also propose alternatives for the future. It is to these that I now turn. As in the previous case, I will draw upon two forms of knowledge and study with which I have experience: communication, which I would call a *topic* of study, and the humanities, which I would call an *interdisciplinary* study. A topical study is unified by its thematic focus and draws widely upon whatever literature or research pertains to that topic. While studies within humanities are often topical—one can study communication, friendship or power—in an interdisciplinary study the topic must itself be justified, which means that it takes its unity from certain classical questions about ‘the good life.’ The unity of humanities is in the tradition of the humanities and it is within this tradition, including its critique and reformation, that the validity of a topic is addressed.

4. Topical and Interdisciplinary Studies

Communications studies has been constructed as a contemporary form of inquiry through a synthesis between studies in the social sciences provoked by the growing influence of mass media on society, the classical tradition of rhetoric, and studies of interpersonal communication that for reasons both endemic and ideological are pervasive in contemporary liberal-democratic capitalism.¹³ It is topical in the classical Greek sense that it focuses on a ‘place’ which allows debate, disagreement or agreement about ‘the same thing.’ One may ask ‘is advertising propaganda?’ for example. Such a question allows one to define various standpoints toward the contemporary role of advertising and to argue for a developed perspective that is one’s own. The advantages of organizing inquiry in this way is that the questions that motivate it are widely perceived as important social questions so that the inquiry retains a relevance to social action and may even be a form of social action itself. The perspective of agenda-setting in media studies, for example, studies the way in which social issues are framed and organized by the media such that certain perspectives on social issues are preferred. In the well-known tag, ‘the media do not tell the public what to think but what to think *about*.’ Insofar as communication studies take this general form, they constitute a contemporary re-invention of classical rhetoric. As Aristotle claimed, rhetoric is concerned with “the means of persuasion on almost any subject presented to us,”¹⁴ a practice which is not science but is nevertheless indispensable to science. A doctor

needs not only medical knowledge but also what used to be called ‘a bedside manner,’ that is to say, a capacity to interact adequately with human beings, in order to be a good doctor. To repeat a classical example, the best medicine in the world is no good if the patient can’t be persuaded to take it. Understood in this way, the contemporary rediscovery and re-invention of rhetoric corresponds to the need of a scientific and technological civilization for a thoughtful interface between specialized knowledge and public belief. In addition to scientific knowledge of whether 770 parts per million of symfonisticus whatsoeveride has this-or-that effect on a lake, there is the issue of persuading the public that such a level is safe, or not safe, a problem or not a problem. For this reason, rhetorical issues and studies, both theoretical and practical, while they are fundamentally distinct from science, are called forth to an increasing degree by a society permeated by specialized knowledges. They inhabit the realm of where politics, argument and decision about the good life, is recovered and re-invented. Truth can never displace opinion entirely, not even as an object of study, since scientific knowledge is limited to that which has already been studied, whereas the layperson must make judgments that necessarily implicate new, not-yet-studied, issues. The question of what needs to be studied is not a scientific, but a political, question in which the rhetoric of science and technology plays a key role.

In stressing the rhetorical vocation of communication studies, I am suggesting that the larger optic of the topical studies selected—such as advertising, political speeches, expert discourses, etc.—is that of the humanities. Rhetoric is one of the classical approaches to the study of the humanities and, when one raises the question of why a topical study is important or useful, it is necessary to engage the classical tradition of the humanities in which one of the central defining questions is ‘what is the good life for humans?’ Humanities is an inter-discipline because it takes as its common field of inquiry the outstanding texts, which puts it into dialogue with the totalizing philosophical, religious and mythical approaches, as well as the formation of founding scientific texts that have emerged from these traditions. It is perhaps nothing other than a name for the Western intellectual tradition as such, with an emphasis on those texts that have played a formative role within it. For that reason, humanities studies are drawn toward a very classical canon, but this tendency is not uncontested. Insofar as the classical tradition is centrally organized around the question of the good life, when properly understood it provokes and allows contemporary questions about the adequacy of the received tradition and opens to new and non-canonical texts which speak to this question in our own time.

The tradition of great humanities texts is not a tradition containing the truth but is a tradition in which the search for truth is centrally organizing. Some texts in the tradition claim religious, metaphysical or scientific truth but the tradition as a whole asks us to analyze how these claims are constructed, to whom they speak, and to put them alongside other such claims. The model of rhetoric is thus a key approach to the humanities tradition and it has only one real competitor—philosophy. Human passions and will permeate persuasion at least as much as the search for truth. Whether the dominating pole in the study of the humanities is rhetoric or

philosophy depends on whether human passion and will should be yoked fundamentally to the search for truth about the way for humans to live or whether it can be justly pursued without such a yoke. If one judges for philosophy, there is still a place for a subordinated rhetoric to reach the passions, to form them to serve the exorbitant desire for truth. This approach to the humanities can be called Socratic. The debate between philosophy and rhetoric reaches back into the foundation of the humanities and is rediscovered daily within interdisciplinary studies through the manner that one justifies one's topics in relation to what are the demands of the good life now. This debate provides a central locus for interdisciplinary studies that does not rest on an expectation of the unification of knowledge. Modern knowledge could not be thus unified without shedding precisely those features that distinguish it from the all-embracing totality dominated by religion that characterizes pre-modern forms.

5. Why Interdisciplinarity Now?

After sketching the institutional determinants of the question of interdisciplinarity, it was suggested that we must ask about the destiny of thought, and its institutional formation in the university, within the changing temper of corporate and government forces and the challenges posed by social movements in proposing non-disciplinary traditional and emergent knowledges. With the previous reflections of forms of knowledge within the contemporary university in mind, I will attempt to track the tensions involved in the *now* of the question of interdisciplinarity.

Let us begin by acknowledging that the previous stage of the interdisciplinary project, which we might associate with the great attempts of phenomenology and the Frankfurt School to unify knowledge under the banner of 'critique,' is finished. The grand attempts to synthesize specialized knowledges under an encompassing architectonic are over. Similarly, the correlative attempt to decide the role of knowledge in social enlightenment directly through an inquiry into the structure of knowledge itself is finished. Any knowledge that an individual, or a group of individuals, might possess in our contemporary context is both *partial* and *political*. I mean that we have become aware of the limits of the knowledge that we possess and sensitive to the complex role that it might play in social conflicts. This does not mean, as some have extravagantly claimed, that there is no knowledge. It means rather that we are drawn in our time toward an awareness of both the limits and the social pertinence of any inquiry. Insofar as interdisciplinarity is constructed through its rhetoric of 'overcoming arbitrary boundaries,' it signifies that the edges, or boundaries, of knowledge have now become essential to the ongoing inquiry itself. Disciplinary studies could hope to accumulate results in a manner that postponed the question of social relevance and conflict by justifying an individual inquiry within the accumulation of disciplinary knowledge rather than directly with reference to its practical import. No longer. These questions now arise in the course

of each specific inquiry. Each inquiry must address within itself the question of how its particular results are relevant to the good life.

I think that there are two issues here that every researcher must confront: one to do with the larger constellation of government, corporate economic forces, and the university and another within the practice of inquiry itself. Both of these are crucially confronted with the changed, and changing, relation between specific inquiry and the large context of good life that has become visible with the unsettling of disciplinary boundaries. These two issues can be focused with reference to two leading questions: Knowledge for what, and whom? How much is enough knowledge?

Industry and government will continue to promote multidisciplinary cooperation on topics in which they take an interest. This will often provide the context and opportunity for interdisciplinary studies in the sense in which I am discussing them here. While it is in principle possible that such studies could coalesce into new disciplines such as cybernetics, systems theory, complexity theory or cultural studies, it is more likely that their interdisciplinary focus will remain restrained by the prior definition of the goals of research within these institutions. As long as the goals of inquiry are defined outside the process of inquiry itself, not subject to radical revision, then the prior institutional definition of the topic and the reasons for interest in it remain fundamentally static. The 'what' and 'for whom' of knowledge remain statically defined by these institutions. The question of how much knowledge is sufficient is essentially answered by whether further funding is forthcoming and this question is answered by the exigencies of profit and political legitimacy (in Weber's sense). University-based researchers will have to take into account this poor cousin of interdisciplinary studies, especially since the corporate model of research and its attempt to reorganize the university through funding priorities may be expected to continue apace. It is here that the remaining freedom of university-based researchers to choose their topics and methods of study is a crucial element of realizing the radical potential of interdisciplinary studies.

It seems to me that this radical potential is most evident when university studies, especially in their interdisciplinary form, come into contact with non-disciplinary knowledges. By non-disciplinary knowledges I mean those knowledges active in the lifeworld that contain a totalizing character comparable to those of religion, myth and philosophy that preceded the modern form of knowledge and its disciplinary specification. Traditional aboriginal knowledges and the emergent knowledges motivated by critical social movements are most important here. Linking interdisciplinary research to such lifeworld knowledges is the most important nexus through which the potential of interdisciplinary research might be realized. To call such knowledges 'non-disciplinary' is to define them negatively through comparison to university disciplines and is therefore not, in the final analysis, sufficient. Their most salient critical characteristic is that they are knowledges *constitutive* of a way of life, not simply ideas that one may take or leave

without measuring them, and being measured by them, by reference to the standard of 'what is the good life for humans?'

Here, 'knowledge for whom' must mean for those who are engaged in the way of life within which this non-disciplinary form of knowledge operates. The 'of what' and 'when is enough?' questions must be answered by the participants themselves. Students inevitably confront these questions and seek to understand the reasoned but provisional answers that teachers have come to in their own practice. Interdisciplinary inquiry is thus 'existential' in the sense that it engages with and educates the life-practice of those who undertake it. For this reason, the radical potential of interdisciplinary studies revealed by its contact with non-disciplinary knowledges is the revival in contemporary form of the classical role of knowledge as enlightenment, thinking for oneself, as a component of a good life. It must encounter the classical debate between rhetoric and philosophy in grounding the practice of enlightenment. There will always be a tension with university-based knowledge, but, especially in the intentions and practices of learners, university-based knowledge is pulled toward its true root in thinking as an essential activity of humans insofar as they are humans. Knowledge is not, and cannot be, unified under a grand value-laden umbrella such as predominated in pre-modern religious forms, nor in the architectonic through which German Idealism attempted to synthesize modern knowledge, but is focused through the life-decisions made by learners, recalling that teachers remain learners, as they reflect on the 'for whom' and 'how much' issues in a practical context.

Self-reflection in the construction of a good way of life is the *telos* of interdisciplinary studies. The fundamental division between rhetoric and philosophy in defining this *telos* can be illustrated with a reference to Plato. In the *Apology*, after Socrates has been found guilty as charged, but prior to his proposal that he be punished, or rather rewarded, by being given free maintenance by the state for his services, he explains his disinterest in politics and the other activities recognized in Athens in order to remark that

I set myself to do you individually in private what I hold to be the greatest possible service: I tried to persuade each one of you not to think more of practical advantages than of his mental and moral well-being, or in general to think more of advantage than of well-being, in the case of the state or anything else.¹⁵

The key phrase here, I think, is "each one." Philosophy persuades each one through appeal to the recognition of *logos* by the individual soul. It is not limited to the persuasion of one, of course, but persuades as many as it persuades one by one. Philosophy thus eventually may affect the political order, may even be the most needful thing for the political order, but it does not aim at affecting the political order directly. To directly aim at the political order one must persuade all, ideally, or as many as possible, to do what one thinks is best. It is in the difference between persuading one and all that the difference between philosophy and rhetoric consists. The *telos* of interdisciplinary studies, understood to be self-reflection in the

construction of the good life for humans, encounters and incorporates this difference in its teaching practice. I will not here attempt to resolve this issue. I argue only that our teaching encounters it, students encounter it, and thus clarity about this issue is crucial to interdisciplinary education.

6. Reflections on Method

After sketching the form of modern knowledge, we asked about the relation between the methodical inquiry that produces empirical knowledge and the hermeneutical interpretation of meaningful texts? Or, what is the relation between the pursuit of knowledge and values such as democracy?

Empirical science produces data and information that is potentially useful but it does not necessarily inquire into the uses to which it might be put. It does not enter the discourse of justification of ends. It is thus a form of persuasion pertinent to a scientific-technological society cut off from the question of the good life— intrinsically, though its best researchers may enter the discourse on their own responsibility. Hermeneutical interpretation of texts must encounter the question of the good life, though it is also possible that this question be tamed by considering it ‘objectively,’ that is to say, by considering only what the text says and not what the reader says and lives. Such a tendency is a crucial consequence of the development of hermeneutic method within the modern form of knowledge. The crucial difference here is that for empirical inquiry the text is assumed to be transparent in order that knowledge can speak directly of the states of the world. For hermeneutic inquiry the text requires interpretation as the world is present, insofar as it is present, within the text as the inscription of a way of life in the world. The transparency or non-transparency of the text thus condenses the issue of the relation between text and world.

I take it that we have learned not to counter-pose these two as if they were simple opposites, but neither are they identical. Let me thus propose a way of understanding textual (non)transparency as the key lynch-pin between hermeneutical and empirical sciences. A fundamental either-or relationship, rather like a gestalt picture in which figure and background are reversible, underlies all interdisciplinary knowledge that attempts to fulfill its potential: the tendency to convert the value-laden inquiry into the true, the good and the beautiful into empirical data and the countervailing tendency to interrogate empirical data regarding their usefulness for the good life. Each one appears insofar as the text is superseded toward the world or the world is figured within a text. (Non)transparency defines an inquiry as either hermeneutic or empirical. This is not a matter of disciplines, as the pluralism and eclecticism of methodologies of the last several decades should show us, but of fundamental tendencies in contemporary interdisciplinary studies. These fundamental tendencies are rooted in the debate between rhetoric and philosophy, a debate which is classical but which has taken on new and more radical forms today.

Humanities, understood as the history of texts recognized within the tradition of the humanities, converts the founding texts of empirical traditions back into classic texts of the humanistic tradition. One reads Freud not as the founder of psychoanalysis but as crafting new approaches and responses to questions that also animated Plato and Hegel. One reads Marx, Durkheim or Weber as classic commentators on the social condition and not as founders of research traditions. But, given some provisional answers to these classic issues, one can read these, and indeed any, of the classic texts as founders of traditions of empirical inquiry. It is not fundamentally a question of disciplines but of forms of reading, of inquiry in which any text can be read either way. To the extent that one animates this either-or relationship of entry/exit from value-laden hermeneutic reading to research domains, one enters into dialogue with the forms of the good life proposed by non-disciplinary knowledges.

Research-domains provide resources for rhetorical argument that seek to reach all, or nearly all, actors in the political order. Value-laden hermeneutic readings provide orientation for the individual soul. Interdisciplinary education provides both the means for public argument and for each one to tend to the proper organization of his, or her, own life. These are somehow related, of course, but how? Again, we should not design the curriculum, or the method, to produce an answer to this question, but rather to provide the resources from out of which the learner will come to an answer sufficient for his or her practice—such that this practice will define when the text is sufficiently transparent to found an empirical inquiry or sufficiently opaque to demand hermeneutic interpretation.

7. Final Word

Interdisciplinary studies require us to situate our university studies in relation to the government and corporate forces that promote monopolies of knowledge in the neo-liberal political and economic climate. They entail a critique of university structure that poses basic questions for the modern form of knowledge. They require that we encounter non-disciplinary, extra-university knowledges—either the emergent knowledges based in social movements or the traditional knowledges based in forms of life—without beginning from their in-principle denigration. In so doing, we encounter the classical question of the good life for humans. We must be able to discuss this question intelligently in a contemporary context. Such discussion will encounter, in a contemporary form, the classic opposition between rhetoric and philosophy, between the ‘all’ of the political order and the ‘one-by-one’ of philosophy. Interdisciplinary learners often feel adrift because they cannot locate their studies within contemporary recognized forms. One remains adrift but garners essential points of orientation through this classical debate. This debate must be re-encountered through contemporary materials and issues but it also gains clarity from sufficient exposure to classic texts. The focus, or ‘unity,’ if one wishes, of interdisciplinary studies is in the learner’s grappling with living the good life. The teacher only properly teaches when this grappling is made evident to the student

not as model but as example. What one needs to live well is not available by prescription.

Notes:

¹ I do not mean to imply by recounting this story that my understanding of the issues was at that time sufficient nor that I had adequately investigated existing possibilities within the discipline. Nonetheless, thought is often usefully provoked by such decisions taken without complete, or even sufficient, knowledge

² Later, I was asked to write an essay on interdisciplinarity based on my experience in writing that book. I was surprised and chastened to find that I had nothing to say on the matter. Filling this absence was a large motive in not declining a second time when I was asked to give a lecture on the topic by Richard Ericson at Green College, University of British Columbia which was called “Models of Knowledge in a Disciplinary World: Research, Rhetoric, Socratism” (6 November 2001). I have used this lecture as a starting point in this essay and remain grateful to Richard for provoking me to say something on the topic. It is not easy to say what one does, as opposed to what one hopes or expects to do, but it is a failure not to be able to do so. I hope that my response to the current invitation by Raphael Foshay has taken me further in this direction.

³ The need for judgment, rather than the application of a rule, puts the matter in the realm of rhetoric according to Aristotle. “The duty of rhetoric is to deal with such matters as we deliberate upon without arts or systems to guide us.” Aristotle, *Rhetoric*, trans. W. Rhys Roberts (New York: The Modern Library, 1984) p. 27, 1357a. This realm was also what Hannah Arendt thought was central to politics. Her concept of judgment was derived from a reading of Kant’s *Critique of Judgment*. See Hannah Arendt, “The Crisis in Culture” in *Between Past and Future* (New York: Viking, 1968) esp. pp. 219-23; Hannah Arendt, *Lectures on Kant’s Political Philosophy* (Chicago: University of Chicago Press, 1982); and Ian H. Angus, *Technique and Enlightenment: Limits of Instrumental Reason* (Washington: Center for Advanced Research in Phenomenology and University Press of America, 1984) chapter 5.

⁴ I have extended Harold Innis’s concept of monopolies of knowledge to describe the conflict between knowledges and the emergent knowledges of social movements in *A Border Within: National Identity, Cultural Plurality and Wilderness* (Montreal and

Kingston: McGill-Queen's Press, 1997) pp. 68-71 and *Emergent Publics: An Essay on Social Movements and Democracy* (Winnipeg: Arbeiter Ring, 2001) especially chapter 3.

⁵ This additive concept of interdisciplinarity—which is more descriptively called multidisciplinary—that assumes the distinct validity of each specialized discipline, is discussed in Immanuel Wallerstein, “The Rise and Future Demise of World-Systems Analysis” in *The End of the World as We Know It* (Minneapolis: University of Minnesota Press, 1999) p. 246.

⁶ See Ian Angus, “Academic Freedom in the Corporate University” in Mark Côté, Richard J.F. Day and Greig de Peuter (eds.), *Utopian Pedagogy: Radical Experiments Against Neoliberal Globalization* (Toronto: University of Toronto Press, 2007).

⁷ Before one jumps to the common conclusion that the new physics was Platonic, in distinction from the Aristotelian science of the Middle Ages, it must be noted that mathematics had undergone a significant reformation since late antiquity such that it was based on a “symbol-generating abstraction” without direct reference to experienced objects. Unlike the ancient *arithmos*, which referred to “a definite number of definite things,” the mathematics taken over by Galileo “intends another concept and not a being.” Jacob Klein, *Greek Mathematical Thought and the Origin of Algebra*, trans. Eva Brann (New York: Dover, 1968) pp. 46, 174. The severing of concept from intention of experienced objects grounds the two other major characteristics of this form of knowledge. It is only the symbol-system *as a whole* that can be brought to refer to a domain of objects and that the symbol-system, by virtue of its abstraction from experience, becomes *systematic* in the sense of postulating an internally consistent and transparent relation between concepts.

⁸ Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology*, trans. David Carr (Evanston: Northwestern University Press, 1970) pp. 21-2.

⁹ Though his historical reconstruction differs somewhat from mine, this evaluation is shared by Immanuel Wallerstein. “I believe we are living in a moment in which the Cartesian schema that has undergirded our entire university system, and therefore our entire edifice of specialization, is being challenged seriously for the first time since the late eighteenth century.” “Differentiation and Reconstruction in the Social Sciences” in *The End of the World as We Know It* (Minneapolis: University of Minnesota Press, 1999) p. 163.

¹⁰ The notion of a ground-plan (*Grundriss*) is taken from Martin Heidegger, “The Age of the World Picture” in *The Question Concerning Technology and other essays*, trans. William Lovitt (New York: Harper and Row, 1977). Heidegger brings out the manner in which “through the projecting of the ground plan and the prescribing of rigor, procedure makes secure for itself its sphere of objects within the realm of Being” (p. 118). But Heidegger's conception of the ground-plan severs this clearing from the ongoing research that it makes possible, missing the “interplay” between the two which I describe in the text, and therefore also missing the disagreement that occurs within scientific debates within the ground-plan, and the narration of the history of the discipline which recovers disciplinary unity despite debates. Heidegger's failing

in this regard is based on his more fundamental severing of ontological from ontic dimensions of the ontological difference. See Ian Angus, "In Praise of Fire: Responsibility, Manifestation, Polemos, Circumspection" *The New Yearbook for Phenomenology and Phenomenological Philosophy*, Vol. 4 – 2004.

¹¹ Characteristically, one author dates the onset of the scientific study of society in the 1860s-70s and defines it precisely through its break with common sense observation. See Bruce Mazlish, *A New Science: The Breakdown of Connections and the Birth of Sociology* (New York: Oxford, 1989) p. 130, 243. However, according to the Gulbenkian Commission, institutionalization of the separated social sciences occurred mainly between the 1880s and 1945 and was fully implemented in many places only in the 1950s and 1960s. See *Open the Social Sciences: Report of the Gulbenkian Commission on the Restructuring of the Social Sciences* (Stanford: Stanford University Press, 1996) especially chapters 1 and 2.

¹² This is the meaning of interdisciplinarity used by Ivan Havel and distinguished from multidisciplinary and transdisciplinarity. Havel cites cybernetics as an example of a new science emerging from the interdisciplinary combination of established disciplines. He reserves the term multidisciplinary for the study of a common theme with a plurality of methods drawn from different disciplines. Transdisciplinarity, in Havel's terminology, refers to the study of a concrete idea or phenomenon that occurs in a plurality of different sciences—such as catastrophe, chaos, cooperation, etc. See his papers "Artificial Intelligence and Connectionism: Some Philosophical Implications" (available from his web site at <http://www.cts.cuni.cz/~havel/work/ai-cvut.html>) and "Sixty Years of Cybernetics: Cybernetics Still Alive" in *Kyberneticka*, Vol. 44, 2008. My characterization of his views is also based on his talk "The Universe of Knowledge: On Interdisciplinarity and Transdisciplinarity," given at the founding conference of the IDEAZ Institute in Vienna on 2 October 2005.

¹³ See, for example, W. Barnett Pearce, *Communication and the Human Condition* (Carbondale: Southern Illinois University Press, 1989) chapter 1 and John Durham Peters, *Speaking into the Air: A History of the Idea of Communication* (Chicago: University of Chicago Press, 1999) introduction.

¹⁴ Aristotle, *Rhetoric*, p. 22, 1355b.

¹⁵ Plato, *Apology*, trans. Hugh Tredennick and Harold Tarrant (London: Penguin, 1993) p. 61, 36c.