

RETHINKING INTEGRATION IN INTERDISCIPLINARY STUDIES

by

Ken Fuchsman

University of Connecticut

Abstract: The Klein and Newell definition of interdisciplinarity centers on integration when a problem is beyond the competency of a single discipline. Disciplines can be wildly flourishing jungles fragmented by insular sub-fields and competing research programs. When issues go beyond the sub-fields, disciplines can be faced with similar problems of integration as happens in interdisciplinarity. Seeking integration is essential to interdisciplinary efforts. Interdisciplinary attempts to integrate disciplinary ideas and methods can result in full, partial, incomplete, and multiple integrations. Determining if single integrations are reliable and confronting multiple integrations over the same issue raise epistemological questions for interdisciplinarity that have not yet been fully addressed. Interdisciplinary studies needs to understand the disciplinary and interdisciplinary conditions that both promote and retard integration.

Introduction: Defining Interdisciplinary Studies

“Everything put together. Sooner or later falls apart,” Paul Simon sang in 1971 (Simon, 1971). Steely Dan answered in 1974 with: “Any minor world that breaks apart falls together again” (Steely Dan, 1974). In the contemporary academic world, disciplines come together in new and exciting syntheses and break up into disconnected specialties. The intellectual currents of our time simultaneously move in contradictory directions. If the disciplines are going back and forth between integration and fragmentation, should we expect that interdisciplinary inquiries would be immune from these patterns? This paper discusses how the conditions of academic dis-

ciplines and the range of possible results of interdisciplinary projects raise questions about the place of integration within interdisciplinary studies.

In 1997, Julie Thompson Klein and William H. Newell wrote: “*interdisciplinary studies* may be defined as a process of answering a question, solving a problem, or addressing a topic that is too broad or complex to be dealt with adequately by a single discipline or profession.” Interdisciplinary studies “draws on disciplinary perspectives and integrates their insights through construction of a more comprehensive perspective. In this manner, interdisciplinary study is ... complementary to and corrective of the disciplines” (Klein & Newell, 1997, pp. 393-394). Finding the common vocabulary or common ground between the disciplines helps lead towards interdisciplinary integration (Klein, 1990, p. 189; Newell, 2001, p. 15).

The definition just cited has garnered much support. Tanya Augsborg in the first edition of *Becoming Interdisciplinary* writes: “Klein and Newell’s definition will serve as this textbook’s definition of interdisciplinary studies” (Augsburg, 2005, p. 8). The definition given by the National Academies in 2004 has echoes of Klein and Newell’s. “Interdisciplinary research,” their report states, “is a mode of research ... that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline. ... Research is truly interdisciplinary when it ... is an integration and synthesis of ideas and methods” (Committee on Facilitating Interdisciplinary Research, 2004, pp. 26-27). Harvard’s Veronica Boix Mansilla: “Interdisciplinary understanding ... involves the *integration* of disciplinary views” (Boix Mansilla, 2005, p. 17). In *Interdisciplinary Research: Process and Theory*, when Allen Repko gives a complete definition of interdisciplinary studies, he quotes many phrases from Klein and Newell then substitutes “a more comprehensive understanding or cognitive advancement” for Klein and Newell’s “more comprehensive perspective” (Repko, 2008, p. 12).

Some writers have reservations about the prospects for interdisciplinary integration. Lisa Lattuca believes that “interdisciplinarity ... has outgrown its own definitions.” She says: “Most definitions specify the integration of different disciplines as the litmus test for interdisciplinarity,” while to her it is important to leave “the question of integration open” (Lattuca, 2001, pp. 4, 78). Philosopher Neil Roughley is concerned with “the difficulty of integrative theory” and of those who are “committed to some kind of epistemological coherentism” (Roughley, 2000, p. 38). “Interdisciplinary groups,” Angela O’Donnell and Sharon Derry write, “are ones that consciously try to

integrate knowledge from the different disciplines included. Few groups in the real world reach such goals,” as “most teams involving members from different disciplines never function as interdisciplinary integrative teams” (O’Donnell & Derry, 2005, pp. 54, 73). Rogers, Scaife and Rizzo report that cognitive science aims “to integrate disciplines” but “has been predominantly a multi-disciplinary activity” (Rogers, Scaife & Rizzo, 2005, p. 266).

In 1979, pioneering interdisciplinarian Joseph Kockelmans warned of underestimating “the enormous difficulties which prevent genuine *interdisciplinarity*” (Kockelmans, 1979, p. 146). To him, epistemologically our system of knowledge is dangerously fragmented as “each individual discipline has developed its own general conceptual framework, its own set of theories and methods” (Kockelmans, 1979, pp. 145-146). As a result of these divisions, “specialization makes integration virtually impossible” (Kockelmans, 1979, p. 147). While time has certainly proved this last assertion to be overly dour and severely underestimating the enormous capacity for integration, still a quarter of a century later Rogers, Scaife and Rizzo express concerns about integration that are reminiscent of Kockelmans. They assert that “many epistemological obstacles” make it hard “to achieve interdisciplinarity.” These include “incommensurability of concepts, different units of analysis, differences in world views, expectations, criteria, and value judgments” (Rogers, Scaife & Rizzo, 2005, p. 268).

There are scholars, then, who maintain that integration is a defining component of interdisciplinarity and those who see conceptual and empirical blocks to integration. “Interdisciplinarity,” Rick Szostak recognizes, “... is a contested concept” (Szostak, 2007, p. 34). How can the nature of the divergent views on the relationship of interdisciplinarity and integration be confronted and understood? These disputes over the likelihood of integration go back for decades and are still present. This paper explores the factors that promote, complicate, and retard the search for synthesis, and their implication for the place of integration in the definition of interdisciplinary studies. It begins with a look at the disciplines.

The Disciplines: Wild Jungles or Tightly Unified?

Interdisciplinary studies is perceived as emerging from the disciplines. There is a “debt,” philosopher Stephen Toulmin writes, “that interdisciplinary ideas owe to the very disciplines on which they are parasitic. Only within a world of disciplines can one be interdisciplinary” (Toulmin, 2001, p. 140). Boix Mansilla again: “interdisciplinary understanding is ... *deeply*

informed by disciplinary expertise” (Boix Mansilla, 2005, p. 17). Klein and Newell’s definition begins with recognizing that a particular issue cannot be fully addressed by one discipline. Given this starting point, before the nature of interdisciplinarity can be determined, there needs to be an understanding of that elusive concept of disciplinarity, and what disciplinary realities mean for interdisciplinary studies.

An academic discipline, according to Janet Gail Donald, has been “defined as a body of knowledge with a reasonably logical taxonomy, a specialized vocabulary, an accepted body of theory, a systematic research strategy and techniques for replication and validation.” But the “sociological characteristics of disciplines often outweighed their epistemological characteristics.” As Donald reports, “disciplines were found to be ... wildly flourishing jungles rather than orderly municipalities.” In them, “territorialism dominated rational decision making and competition limited access across borders,” and specialization “led to greater fragmentation” (Donald, 2002, p. 7).

Specialization can both advance knowledge and isolate sub-fields from each other. As “disciplines become increasingly technical,” says Allan J. Lichtman, “they tend to devolve into competing subgroups, scarcely able to communicate with each other” (Lichtman, 1974, p. 24). Historian Page Smith observes that as academic disciplines “have fragmented into more and more subfields ... it is hard to get an intelligible account of what is going on in any particular discipline” (Smith, 1990, p. 9). Psychologist Elaine Hatfield and historian Richard Rapson see “hundreds of specialized disciplines” each “speaking their own languages, adopting their own definitions and methodologies, asking their separate questions, and rarely addressing one another” (Hatfield & Rapson, 1996, p. viii). Tony Becher and Paul Trowler claim that there “is no single method of enquiry, no standard verification procedure, no definitive set of concepts that uniquely characterize each particular discipline” (Becher & Trowler, 2001, p. 65). “Most disciplines,” Ken Hyland asserts, “are characterized by several competing perspectives and embody often bitterly contested beliefs and values” (Hyland, 2004, p. 11).

Philosopher Alexander Rosenberg adds that within the “social and behavioral sciences. ... there is no consensus on the questions that each of them is to address, nor on the methods to be employed. This is true both between disciplines and even within some of them” (Rosenberg, 1995, p. 4). Dogan and Pahre state that “each discipline is fragmented; the fragments, too, are fragmented” (1990, p. 5). These observations lead Rick Szostak to wonder “whether ‘perspectives’ are best understood at the level of disciplines or subdisciplines” (Szostak, 2002, p. 110).

How then do these sub-divisions impact the cohesiveness of the disciplines? In all likelihood, sometimes the methods, procedures, and concepts of the different disciplinary sub-fields can be integrated but sometimes not. There is simultaneously consensus, controversy, interconnection, and disconnection within and between disciplines. "The notion of disciplinary unity," Julie Thompson Klein writes, "is triply false: minimizing or denying differences that exist across the plurality of specialties grouped loosely under a single disciplinary label, undervaluing connections across specialties of separate disciplines, and discouraging the frequency and impact of cross-disciplinary influences" (Klein, 1993, p. 190).

Cross-breeding and plural disciplines fall along a spectrum from appearing to have agreed-upon standards to competing models. To what degree do disciplines have an accepted body of theory and how much are they fragmented and divided jungles? Bender and Schorske distinguish between "pluralized disciplines" and "more tightly unified ones" (Bender & Schorske, 1997, p. 5). This claim of disciplinary consensus may be limited by time, place and space. Bender and Schorske identify philosophy and economics as relatively unified disciplines. Anglo-American philosophy departments have been predominantly analytic for some time. Prior to World War II, pragmatism held a similarly privileged place. Continental European philosophy is quite different from the analytic tradition. While Derrida, Heidegger, and Gadamer have made a striking impact within the American academy, it is more among literary theorists than within philosophy departments. Western philosophy is quite pluralized and appears unified only if the time frame is shortened and the geographical space is narrowly confined.

Economics has often been viewed as the most unified social science and has combined sophisticated mathematics with a belief in rational self-interest. According to Paul Krugman, as recently as 2008, Olivier Blanchard saw a broad convergence of vision within macroeconomics. In September 2008, came the financial collapse. Few economists, believes Krugman, had any inkling such a catastrophe was likely, let alone imminent. The field had "turned a blind eye to the limitations of human rationality ... to the problems of institutions that run amok; to the imperfections of markets." The "economics professions ... mistook beauty, clad in impressive-looking mathematics, for truth" (Krugman, 2009). In the case of economics, consensus was tied to illusion; sophisticated methodology concealed ideological blinders.

The two disciplines Bender and Schorske characterize as unified could have other adjectives to describe them. Within a discipline while some may seek unity, it is not unheard of for them to ignore or deny divergences. "A

discipline,” Amariglio, Resnick and Wolff state, “can exist as a result of agreement about the relevant set of objects, questions, and so forth. But quite often it exists in the articulation between contending discourses, where agreements reflect the silencing of subordinate discourses or an uneasy détente between opponents. ... disciplines can be seen as in the process of always becoming other, of multiplying, of undoing their own limits, of fracturing” (Amariglio, Resnick & Wolff, 1993, p. 151).

As well as an agreed-upon foundation, there can co-exist competing perspectives, and these can cause complications for a subject area. As biologist Ernst Mayr explains: “consensus is hard to achieve” because “disagreeing scientists adhere to different underlying ideologies, making certain theories acceptable to one group which are impossible for another group” (Mayr, 1997, p. 103). “All formal rules of scientific procedure,” chemist Michael Polanyi states, “will be interpreted quite differently; according to the particular conceptions ... by which the scientist is guided For within two different conceptual frameworks the same range of experience takes the shape of different facts and different evidence.” Conceptual opponents “do not accept the same ‘facts’ as facts, and still less the same ‘evidence’ as evidence” (Polanyi, 1962, p. 167). To Imre Lakatos, “*science has been and should be a history of competing research programmes the sooner competition starts, the better for progress*” (Lakatos, 1978, p. 69). [Italics in original]

Within disciplines there appear to be five patterns: (1) agreement about objects, ideas and methods which provides for a disciplinary foundation, (2) contending discourses which can cause researchers to pursue parallel lines, (3) the competition which can result in synthesis between once opposing views, (4) ideological splits which can inhibit disciplinary agreement, and (5) fragmentation between sub-fields which results in a minimum of interaction between disciplinary specialties. Each of these five different intradisciplinary patterns has implications for the interdisciplinary goal of integration.

Disciplinary Sub-Fields, Disciplines, and Interdisciplinarity

Disciplines and their sub-fields, then, can alternate between synthesis and division, resolution and fragmentation, discovery and confirmation, insularity and resistance, ideology and empiricism. When the divisions within and between disciplines and their sub-fields are manageable, creative ferment is encountered. When these divergences result in fragmentation and ideological opposition, interconnection is diminished. Then disparity and divergence can create problems for overlapping disciplinary sub-fields and the home discipline.

When within a discipline an issue is too complex to be adequately dealt with by a single sub-field, then disciplines need concepts, methods, and procedures to adequately confront these problems if the issue is to be adequately addressed. Disciplines can be confronted with the same kind of complex issues that have led to the need for interdisciplinary studies. One reason the distinction between the disciplines and interdisciplinarity is blurred is that both are confronted with issues that are too complicated to be handled within a single specialty. Within disciplines, how things turn out depends to what extent sub-fields can overcome contending ideologies and research programs to forge a synthesis or to what degree they remain stuck within their competing perspectives and methodologies.

These divergences between disciplinary sub-fields add to the complexity of both disciplinary and interdisciplinary study. Interdisciplinary confronters of a complex problem may need to seek integration between the conflicted disciplinary sub-fields of the various disciplines pertinent to their issue. The problems created by fragmented and ideologically divided disciplines then can create complications for any effort in forging an interdisciplinary synthesis. Creating common ground around a problem within a discipline or interdiscipline may from time to time be almost as much a challenge as discovering the common ground between disciplines.

Conditions for Interdisciplinarity

The disciplinary alternation between consensus and contending discourses helps us understand something important about both the disciplines and interdisciplinarity. Disciplinary problems of fragmentation, diverse methods, diverging criteria, and conflicting ideologies create obstacles to understanding and integration within many academic fields. The existence of issues between intradisciplinary sub-fields beyond the capacity of one of them to handle is akin to problems between disciplines that call for interdisciplinary examination. Recognizing these complexities within disciplines can be extended to help understand the full challenge of interdisciplinary integration.

Certain disciplinary issues may be primarily within the province of a sub-field. Other areas of investigation go beyond the specialties and concern the subject area as a whole. Once these latter problems appear, these issues cannot be resolved within a disciplinary sub-field, but require ideas and methods that attempt to integrate the disciplinary sub-fields. Similarly, when a problem or issue cannot be adequately addressed within a single academic discipline and requires concepts and findings from at least one external sub-

ject area, a first condition for interdisciplinarity arises. A second necessary condition for interdisciplinarity concerns the approach to these complex issues. To be interdisciplinary, a rigorous attempt to synthesize and integrate the ideas and methods of each pertinent discipline concerning the particular issue must be made. Multidisciplinary, cross-disciplinary, and certain trans-disciplinary approaches would not fulfill these criteria.

When these two necessary conditions co-exist, interdisciplinarity is required. A problem does not imply there is a solution or even just one solution. Within disciplines there are often conflicting perspectives, such as between reductionists and anti-reductionists within biology. Problems that remain within the life sciences are called biological even when resolution is strived for but not achieved.

Integration and Interdisciplinarity

The two conditions making for interdisciplinarity set the stage for integrative efforts. In order to understand the prospects for integration, it will be helpful to review and then analyze integrative attempts. Here are some possible results of this process:

1. **Full Integration:** Integration of disciplinary insights into a more comprehensive understanding. What is integration? Klein and Newell approvingly refer to Armstrong's concept of "integrating material from various forms of knowledge into a 'new, single, intellectually coherent entity'" (Klein & Newell, 1997, p. 404). A dictionary definition of integrate includes making "into a whole by bringing all parts together; unify" (Pickett, 2007, p. 720).
2. **Partial Integration:** Certain sections of the problem addressed result in integration and a more comprehensive understanding, but other areas of the problem remain unresolved.
3. **Incomplete Investigation:** An analysis of the findings and perspectives from the various disciplines shows that the evidence presented is not sufficient to resolve the issue being considered. Therefore, if integration is to be reached, it is only possible after further research is conducted.
4. **Insufficient Interdisciplinarity:** The interdisciplinary investigation is integrative but has omitted considering certain disciplines highly relevant to the problem at hand. In other words, the problem is too complex to be dealt with adequately by the multiple disciplines included.

5. ***Underdetermination of Theory by Evidence:*** As philosopher Robert Klee explains, there can be “a case of two incompatible theories each consistent with all actual *and possible* observational evidence.” It is then said that “in such situations theory is *underdetermined* by observational evidence meaning that the evidence cannot by itself determine that some one of the ... competing theories is the correct one” (Klee, 1997, p. 66). “Empiricists argue,” Peter Godfrey-Smith reports, “that there will always be a range of alternative theories compatible with all our evidence. So we can never have good empirical grounds for choosing one of these theories over others” (Godfrey-Smith, 2003, p. 220). When underdetermination occurs, any attempt at integration of disciplinary insights can meet an equally good but incompatible integration. In underdetermination, there can be more than one comprehensive perspective, but it will not lead to a single coherent entity as Klein and Newell advocated.
6. ***Epistemological Preferences:*** A related obstacle to a single, coherent integration is the intellectual orientation of the investigator. As there are divergent standards and perspectives within and between disciplines, some scholars are likely to be committed to certain ideological and epistemological viewpoints; and others to different and competing perspectives. As Rick Szostak has noted: “disciplinary perspectives are characterized ... by favored theories and methods” (Szostak, 2002, p. 111). There are times where both disciplinary and interdisciplinary scholars from certain perspectives address the same question but with different intellectual commitments and propose quite different syntheses. As there is hardly any scholar that is without disciplinary biases, the knowledge and orientation of the interdisciplinary researchers will shape the way the interdisciplinary problem is structured and the disciplinary perspectives and evidence interpreted. The divergent orientations of interdisciplinary researchers can lead not to one coherent intellectual entity but to a plurality of them.
7. ***Irreconcilable:*** The disciplines needed for the intellectual inquiry have such diverging perspectives and methods that integration is difficult to achieve. Sabine Maasen gives an example of this in her discussion of the 1991-1992 research group on the Biological Foundations of Human Culture held at the Center for Interdisciplinary Research in Bielefeld, Germany. This group consisted of scholars from a variety of pertinent disciplines. At the end, Maasen concludes: “*the*

‘common ground’ of sociological and biological explanations of human culture is not yet in sight” (Maasen, 2000, p. 185)

Another example of incompatibility is the conceptual conflict between universalist cross-cultural psychology and relativistic cultural psychology. In economic history, divisions within the field led one non-monetarist to say about a particular monetarist: The two of us “do not seem to have any common ground on which to discuss our historical stories. How can we talk about the historical facts when we perceive them so differently?” (Temin, 1981, p. 122). The divergent perspectives within literary studies led M.H. Abrams to be concerned that “criticism is often at a loss to discover enough common ground in assumptions and vocabulary, and in the standards for what counts as evidence ... to support ... mutually intelligible ... discussion” (Abrams, 1997, p. 131). There is abundant testimony about disciplinary incompatibility.

8. **Common Ground:** To integrationists, finding the common vocabulary and/or common ground between disciplinary perspectives is a prelude to creating integrative understanding. Leon Wieseltier dissents from the ideal of common ground. He maintains that those adhering to the quest for common ground do not “acknowledge the finality of the difference” and will not “be satisfied with the integrity of the opposition.” He says: “We always choose some commonalities over others” (Wieseltier, 2009, p. 56). Whether or not this is a fair or accurate assessment, it raises the question of the sufficiency of seeking common ground as a way to uniformly resolve all-important differences. In choosing some common ground over others, there can be competing versions of what is held in common.

Problems Within the Idea of Integration

When the conditions for interdisciplinarity exist, there are then a variety of results possible from efforts to forge a synthesis. There can be full integration, no integration, partial integration or multiple integrations. The contending discourses, synthesis, ideological disputes, plural epistemologies, and fragmentations that occur within disciplines and their sub-fields also make their appearance within interdisciplinarity. These diverse results raise epistemological questions for the place of integration within the Klein and Newell definition.

Where there can be multiple integrations, as in “underdetermination,”

“epistemological preferences,” “incomplete interdisciplinarity” or “common ground,” the concept of integration as a single coherent entity no longer fully applies. None of the definitions of interdisciplinarity that center on integration deal with the epistemological questions raised by multiple integrations. In describing interdisciplinarity as primarily within one investigation, the field of interdisciplinary studies sidesteps what can happen in more than one examination of the same problem.

Interdisciplinarity and Reliability

The variations in integrative attempts bring up two sets of epistemological issues not raised within the existing concepts of interdisciplinarity. First, when an individual researcher or an interdisciplinary group in a single study creates a more comprehensive understanding, is that sufficient to judge the integration as successful?

In many disciplines, confirmation by subsequent investigators is required before a finding can be considered reliable. Interdisciplinary studies needs to have some way of confirming or disconfirming the findings of a single integration. Janet Gail Donald has stated that techniques for replication and validation are essential for disciplines. Philosopher Richard Boyd discusses two features of scientific practice: “*intersubjectivity* (the capacity of scientists to reach a stable consensus about the issues they investigate and to agree about revisions in that consensus in the light of new data or new theoretical developments) and *epistemic reliability* (the capacity of scientists to get it (approximately) [sic] right about the things they study)” (Boyd, 1991, p. 350). Boyd’s criteria apply to empirical investigations and less so to many areas within the humanities and those areas of the social sciences where reliability is not the focus.

For an interdisciplinary integration within the sciences to qualify as empirically supported knowledge, subsequent researchers need to determine the findings are epistemically reliable. A third condition for interdisciplinarity is that within the empirical sciences, for successful single integrations to count as a cognitive advance or a more comprehensive understanding, the reliability of the results should be confirmed by other empirical investigators. Having a definition of interdisciplinarity that centers on a single integration is not sufficient to deal with the possible diversity of integrative results. Developing criteria for evaluating competing interdisciplinary claims is a future task of the field.

Second, when contending discourses and plural epistemologies help

produce multiple integrations over the same problem, it is not clear what the meaning of integration can be, for there can be plural wholes, multiple unities, and more than one single, coherent intellectual unity. Einstadter and Henry are concerned that “the result of integration” may be “a new set of competing theories” which results in “competition between different types of integrative theory” and “what emerges is integrational chaos” (Einstadter & Henry, 2006, pp. 319-320). The fact of multiple integrations by itself raises a question: To what degree is full integration sufficiently within reach in all cases to make it realistic to include successful integration as a test of interdisciplinarity? Epistemologically, interdisciplinarity needs to account for pluralistic results and provide for reliability.

Some integrationists may want to label plural integrations as incomplete or partial interdisciplinarity. Certainly, subsequent interdisciplinary reconsideration of multiple integrations can lead to a synthesis and a single integration; this would likely be true for some cases, but it is still uncertain whether this can be achieved in all cases, as both coming together and being divided are likely to occur within interdisciplinary research. At this point in time, adhering solely to integration would be choosing one side of the spectrum; it would be underplaying the place of diverse findings, epistemological pluralism and contending discourses in the heart of the interdisciplinary process. In the past, attempts at interdisciplinary integration may not have always been successful, as not all scholars knew how to achieve integration. Recognizing the hurdles to integration from multiple integrations, the feasibility of integration for interdisciplinary studies is an open question.

New Directions for Interdisciplinary Studies

In the meantime, recognition of the varying results of interdisciplinary research mandates additional possibilities for interdisciplinary studies. Confronting intellectual divisions and epistemological perplexities within and between academic disciplines and their sub-fields is needed to understand what enables synthesis and what makes for continued contention. As Clifford Geertz writes: “insofar as there is a general consciousness it consists of the interplay of a disorderly crowd of not wholly commensurable visions the first step is surely to accept the depth of the differences; the second to understand what these differences are; and the third to construct some sort of vocabulary in which they can be publicly formulated” (Geertz, 2000, p. 161).

A fourth goal of interdisciplinarity is to ascertain what makes for integration and what leads in other directions. This will entail examining the fragmentation, common ground, contending discourses, and competing research programs within and between disciplines. Because the disorderly crowds and wildly flourishing jungles of academia permeate the interdisciplinary process, seeking to clarify the depth of these differences and where there is a shared foundation and where divergence, and then constructing a discourse that can enable further dialectics would be beneficial for disciplinary studies, interdisciplinary studies, and intellectual life as a whole.

In addition, as philosopher Stephen Toulmin writes: “disciplinary emphasis on the technicalities of the human sciences imposes on newcomers ... a set of professional blinders that direct their attention to certain narrowly defined considerations, and often prevent them from looking at their work in a broad human perspective” (Toulmin, 2001, p. 140). Not only newcomers and not just the human sciences suffer from disciplinary blinders. Interdisciplinary studies should be the designated area within academia that has as its subject the complexities within and between disciplines and the deeper human concerns that go beyond them.

Re-Definition

Interdisciplinary studies emerges from the gaps within and overlaps of the disciplines. Interdisciplinarity is invoked when a problem or issue is beyond the competency of one discipline, and a rigorous attempt to integrate the ideas and methods of more than one discipline is made. When a single interdisciplinary integration is forged or multiple integrations result, confirmations from subsequent interdisciplinary investigations are necessary. They can also clarify issues when there are competing integrations. Interdisciplinarity examines the fragmentations, interstices and contending discourses within and between disciplines in order to confront epistemological plurality and intellectual complexity.

As Walter Kaufmann says: “An interdisciplinary approach is dangerous, but so is everything in life that is most worthwhile, including love” (Kaufmann, 1977, p. 153).

Biographical Note: Ken Fuchsman is an Assistant Extension Professor for both interdisciplinary major programs at the University of Connecticut: The Bachelor of General Studies and the Individualized and Interdisciplinary Major. He also writes on war and trauma, the history of psychoanalysis, and various psychohistory topics.

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