

Crossing of Boundaries: Interdisciplinarity as an Opportunity for Universities in the 1990s

by
Wilhelm Vosskamp
University of Cologne

Translated by Roslyn Abt Schindler
Wayne State University

Abstract: This essay discusses interdisciplinarity as a theoretical, historical, and political scholarly issue. Vosskamp emphasizes, first and foremost, that interdisciplinarity is both dependent upon and indebted to disciplinarity and, further, that successful dialogue and cooperation among the disciplines require both independence within and competence of individual disciplines. He offers a scholarly history of interdisciplinarity before embarking upon an explanation and illustration of interdisciplinary communicative competence; these discussions lead him to draw specific institutional conclusions pertinent to research and teaching in universities in the 1990s.

THE EARLY ROMANTIC POET Friedrich von Hardenberg (Novalis) attributed to the biases of scholars not only “the propensity to possessiveness,” the “contempt for non-scholars” or the “jealousy and passion for belittling colleagues,” but also the “contempt for all other disciplines.” In the face of strict German erudition, Novalis prefers a freer look beyond the boundaries of the actual individual disciplines.

Little has changed, even up to the present day, with regard to this preference. The key word is “interdisciplinarity.” “Interdisciplinarity” belongs to those concepts, which, certainly since the 1960s, have played a central role in developmental theoretical and political discussions. Especially today, this issue is particularly current because the renewed neopositivist and neohistorical tendency toward the specific and the empirical—at the same time the theoretical models and concepts of the 1960s and 1970s are being cast aside—necessitates dialogue among individual research initiatives and disciplines all the more. Although the scholarly/political situation vis a vis the 1960s has changed considerably, internal and external scholarly points of view may be differentiated today. Internal scholarly problems include questions about the ability of scholars and disciplines to communicate, given an ever-increasing differentiation and specialization in the context of a theoretical concept that encompasses and corrects several disciplines. External scholarly issues include, for example, the role of the humanities in contemporary modern society. Could interdisciplinary research and teaching take over the responsibility of education that belongs to the universities and is assigned principally to the humanities?

“Interdisciplinarity” is, therefore, simultaneously a theoretical, historical, and political scholarly issue.

Interdisciplinarity always remains dependent upon and indebted to disciplinarity. Subject-specific and subject-overlapping research are inseparable. There is a precise mutual relationship between both because discussion about interdisciplinarity presupposes a high degree of scholarly differentiation and, in that vein, of specialized disciplinary research. Dialogue or cooperation among the disciplines requires the independence within and competence of individual disciplines. Interdisciplinarity cannot be imagined, is not possible without fully developed disciplinarity.

I would like now to provide a brief historical sketch of this phenomenon (I), then explain and illustrate the concept of an interdisciplinary communicative competence (II), in order to draw specific institutional conclusions pertinent to research and teaching in universities in the 1990s.

I. Toward a Scholarly History of Interdisciplinarity

In discussions about interdisciplinarity, it is not always clear that the condition of its possibility is the loss of unity in scholarship. Consequently, interdisciplinarity is a relatively modern problem; the birth of interdisciplinary discussion occurs historically at the very moment that the independence of individual disciplines and the kick of unity of scholarship are perceived as a problem.

One is reminded that for the Greeks scholarship as a “methodical way of knowing” was the one scholarly form that was separated from the other forms of scholarship (mythology, poetry, and tradition). Besides philosophy (critique of knowledge) there was scholarship from the perspective of history (discovery and organisation of experience) and of technique (application of organized experiential knowledge). These three stages of knowledge were unified in the concept of philosophy as the unity

of all knowledge; whereby philosophy was thought of neither as a theory nor as a system, but rather as the reflexive form of the unity of all disciplines.

This concept of the unity of scholarship remained current until early contemporary times. Descartes still believes in the ideal of the unity of the disciplines when he stresses: “All of philosophy is like a tree whose roots are metaphysics; the trunk is physics, and the branches that originated from this trunk are the other scholarly areas that trace back to the three main disciplines, namely medicine, mechanics, and morality.”

It certainly becomes clear in the seventeenth century and, above all, in the eighteenth century that the enormous increase of knowledge leads to an increasing specialization in individual scholarly disciplines. More and more, the problem of the unity of knowledge presents itself as a theoretical as well as a practical, hardly still soluble, problem. The presupposed unity of scholarship (in the context of a philosophically founded cosmology) henceforth corresponds to a unity that still/first must be produced and created. Such attempts toward unity may therefore, be observed in contemporary history only in philosophically different ways and on different theoretical levels; for example, the work of Comenius, Leibniz, d’Alembert, Kant or Wilhelm von Humboldt, and finally Hegel. The most pronounced expression, the epitome, of the move toward a new unity can be observed in the early Romantic concept of “Symphilosophy.”

These philosophical and/or mythological concepts do not yet speak of “interdisciplinarity”; however, they allude implicitly or explicitly to the possibility of a unified theory or concept of all knowledge and all disciplines after the original unity (qua philosophy) had disappeared,

A connection between the philosophical discussion of the unity of scholarship and an institutional solution can be found at the beginning of the nineteenth century when the University of Berlin was established, based upon Humboldt’s theory of education. Humboldt was the first, with the establishment of the modern university, to succeed with the relief of the “encyclopedic” solution (Diderot/d’Alembert) through the practical conversion of an idealistic concept of education, which attempted to answer institutionally the old question of the unity of scholarship under new historical conditions. The question of a possible unity of all scholarship was not answered by Humboldt in terms of subject connections or structural parallels among the individual disciplines, but rather in the context of a theory of education, which places the subject capable of improvement at the center.

The difficulties of a scholarly conversion of this concept were already apparent during Humboldt’s time, and they have become a perennial problem for our universities as they try to preserve the unity of research and teaching. Organizational and political problems are among the principal ones universities face as they pursue interdisciplinary collaboration and questions related to the possibility of generalizing Humboldt’s new humanistic concept of education to all disciplines. The ideal “educated person” was identified more and more—falsely—as a philosopher/humanist. The gap between the humanities and the sciences became ever greater. Humboldt’s ideal remained current until the middle of the nineteenth century, but the supplanting of philosophy by other disciplines, perhaps by sociology as the “third culture” (W. LePenies), clarifies how difficult it was theoretically and institutionally to realize the unity of all disciplines in the face of a universal concept of education.

II. Communicative Competence as (Interdisciplinary) Education

If one sticks to the concept that the university must be preserved as an institution of education through scholarship, the following question emerges: to what extent can the concept of interdisciplinarity replace the concept of a new humanistic education in the tradition of Humboldt? Is interdisciplinarity the appropriate and relevant answer to the loss of the universal concept of education according to Humboldt? Can the “uncoupling of scholarship and education” be preserved through interdisciplinarity in research and teaching?

One must refer here to the fact that various forms and possibilities of interdisciplinary collaboration occurred before Humboldt and still occur. Whether or not interdisciplinarity is determined more strongly by various object spheres, targeted problems or questions, or various methodological issues, the aforementioned interrelationship between disciplinarity and interdisciplinarity will always play a role in any of these contexts. Interdisciplinarity is often a means to solder the boundaries of disciplinary knowledge and not seldom a prehistory of new disciplinary achievements in the individual disciplines. Such a disciplinary catalyst function does not have to be effective immediately; it can also show “delayed results.”

In all areas of research, multidisciplinary cooperation is playing the most important role today. Collaboration that crosses boundaries and subjects does not, in this context, have to signify the union of two or three subjects (like biochemistry, cultural anthropology, or neuropsychology); rather, the exchange between/among disciplines or the partial exchange of disciplinary knowledge probably plays an even more important role. Productive collaboration, Hubert Markl has emphasized correctly, means “that people do not *have* to talk with one another but rather that they *want* to, and that people know that they have something to share with one another.”

The issue of the relationship between “interdisciplinarity and education” at our universities focuses—beyond such pragmatic forms of crossdisciplinary and “boundary-breaking” work—on another point. The issue focuses on the conditions for the possibility of interdisciplinary communication and on the function that such could have for the crossdisciplinary communication

and for a usable concept of “education through scholarship” in research and teaching.

The assumption of multiplicity of agreement/disagreement (“consent/dissent”), necessary for all communication, is particularly operative for the dialogue among various disciplines or different bodies of knowledge. In contrast to traditional communication among disciplines, in which the premises and idiosyncrasies are well ingrained, the unaccountable and often also misunderstandings determine interdisciplinary communication. The “consent/dissent” structure is the characteristic feature of interdisciplinary communication, insofar as the acquaintanceship in dialogue with the unknown has to first be practiced in dialogue. The experience of “Alteritaet” is, therefore, an assumption as well as a result of interdisciplinary communication. Such communication requires an effort, which is ready to admit to the unforeseeable, accepts misunderstanding as a productive element, and considers the experience of the unknown stimulating.

Consequently, *the development of a communicative competence* in interdisciplinary dialogue is necessary; for the ability to integrate dialogue, it is a desirable goal but not yet a necessary one. What is decisive is rather a sense of the new and the surprising in the mutual exchange and dialogue that makes interactive communication possible. I also believe that interdisciplinary communication does not yet offer a guarantee for a settled consent; moreover, the measurement of dissent must be and remain a thorn with a long-range effect in the communicative process. If “scholarship may be viewed as something not yet found and never fully discovered,” to quote Wilhelm von Humboldt, then interdisciplinary communicative competence belongs at the center of scholarly efforts. This is predicated as much upon clearly selected and limited questions/issues as upon institutional forms of dialogue and a multidisciplinary competence of those participants in interdisciplinary dialogue.

Interdisciplinary dialogue and the development of communicative competence are inherently bound up with problems of language. That is equally true for issues or problems whose solution is dependent upon the participation of different disciplines of the humanities, as when dialogue among disciplines of the humanities and natural sciences is attempted. In the context of an interdisciplinary research group dedicated to studying the history of literary Utopias in modern times, which I led at the Center for Interdisciplinary Research of the University of Bielefeld, and in the context of a project dedicated to the history of the development/education novel, which I am currently leading and in which the analysis of the concept of education is being conducted both in relation to its evolutionary-theoretical and socializational-historical aspects, it became clear to me that the (difficult) language problem is at the core of interdisciplinary work. The reason is that language represents, above all, a “problem of the transference of the connections of selection” (N. Luhmann) and thereby immediately affects the constitution of scholarly discourse. This is especially operative then when time is short and the compulsion for the “quick” selection is correspondingly large. From that a “responsibility” toward understanding develops, which goes beyond the subject terminology boundaries, if, at the very least, partial agreement among the communication participants is expected. The condition of the possibility for dialogue among those persons concerned is mutual understanding, not an exact measurement of the precision of concepts. Specific subject-centered, unambiguous challenges may be juxtaposed against a notion that aims at agreement in the departure of dialogue.

As an interdisciplinary research group progresses, various phases may be observed. After a beginning phase, in which a provisionally definitive minimal consent/consensus is reached, basic definitions are set in the second phase, which come about through agreement of the participants. The uniqueness of such “conventions of definition” (G. Frey) is determined, on the one hand, by retrospective certainty in view of standing traditions of discussion and definition and, on the other hand, by adaptation to the subsequent selection of problems out of the given questions posed. In my opinion, there is an additional difficulty that emerges for humanities/philosophy scholars: the expectation that at least parts of all of this be made comprehensible to a non-scholarly public. This is true in even greater measure for interdisciplinary projects—for example, in utopia studies—which are always involved with great, also open expectations. This question of comprehensibility for more than just a scholarly public manifests itself especially as only a *conditionally* soluble problem, if questions that arise through the given subject and the course of internal research development can only be intercepted by new theorizing efforts (for example, restructuring or change in/of theory, etc.).

All in all, a unique language develops in connection with interdisciplinary projects, which consists of elements of different disciplinary traditions of dialogue. That this “hybrid language” shows a kind of balance of terminological components out of various disciplinary areas can be especially well observed when one strives to bridge a largely philosophically/humanities-oriented terminology and a scientifically-oriented terminology. In the aforementioned project concerning the education novel, theoretical models and concepts out of the “classical” humanistic tradition meet concepts that come from theoretical biology or systems theory. The analysis of the change relationship between, for example, genetic determination of the individual (according to the theory of evolution) and “environmental conditioning” (according to aspects of socialization) recognizes the research problem also as a linguistic-terminological one. Individual global developmental schemes of system and function differentiation (variation—selection—stabilization) may be identified, but a more exact description of the complex self-improvement process of an individual in the education novel is not yet available.

It strikes me as important that interdisciplinary communicative effort does not result in a *unified* language, even when the contours of a new discourse of research become recognizable. The *richness of language* is decisive, not the unity of language. The richness of language appears to me to be the necessary presupposition of interdisciplinary competence. If “understanding ...

as Telos” is inherent in human language, then the richness of language provides the decisive capability of interdisciplinary communication. This richness is the only thing upon which the hope for synthesis can rely; “From the very first element, the generation of language is a synthetic process, and one in the truest sense of the word where the synthesis creates something that cannot be found in any of its component parts” (W. von Humboldt).

The development of communicative competence as a condition for the possibility of interdisciplinary work cannot, therefore, be separated from the *development of a language culture*. Communicative competence can only be trained when language is comprehended not only under points of view encompassing communicability and adjustment of results and methods, but also as a creative competence. Linguistic wealth of knowledge and reflection indicate the function that the philosophical and cultural disciplines can take over here in a particular way. Philosophical disciplines are primarily *reflective disciplines*, therefore, because they *thematize* the problems of communicative competence.

The development of communicative competence is the condition for the possibility of interdisciplinarity. The training of such competence requires not only a multi-subject qualification on the part of the participants, but also beyond that an effort that allows itself to be stimulated by the everpresent difference between consent and dissent. The progressive, but not conclusive, dialogue is able to deliver not only disciplinary and interdisciplinary knowledge but also enlightening orientation about the process itself. Therein interdisciplinary communicative competence is itself an element of education.

III. Institutional Anchoring of Interdisciplinary Research and Instruction at the University

The scholarly historical and scholarly theoretical explanations of the problem of interdisciplinarity should make clear that this is in no way only about the theme of research.

Interdisciplinarity is a problem of scholarship as education.

How is this fact made concrete in the universities in connection with our contemporary situation in the high schools/“Gymnasien”? Can interdisciplinary instruction—in addition to interdisciplinary research—replace or complement a part of (necessary) disciplinarily in instruction?

Obviously, it appears to me in any event that interdisciplinarity must also be learned: “Whoever (also in a disciplinary framework) has not been instructed in an interdisciplinary mode, will also not be able to research in an interdisciplinary mode” (J. Mittelstrass).

The possibilities of interdisciplinary research depend decisively upon openness and curiosity on the part of teachers and students and in that way upon a specific attitude that is ready to adapt quickly and unconventionally to new and surprising constellations. Inside of universities arrangements would be required to make it possible to develop interdisciplinary teaching programs, whereby the conversion of such programs into practice depends decisively upon the question of the extent to which it is possible to successfully reduce and (also linguistically) transfer complex connections of a problem area to their most significant aspects.

It is true that for interdisciplinary instruction as well as for interdisciplinary research, interdisciplinary competence is not possible without disciplinary competence. Interdisciplinary instruction assumes—without becoming amateurish—solid disciplinary knowledge. One must strive here for multi-qualification or disciplinary double competence whereby one guiding discipline may stand in the foreground and other disciplines can take over the function of supporting disciplines. This is often the first step in the direction of interdisciplinarity. In the final analysis, interdisciplinary engagement must be sufficiently worthwhile in instruction to appear in the instructional program as a viable addition.

If one calls these presuppositions possibilities for interdisciplinary instruction, it becomes clear that a new organization of consciousness and practice is long overdue at our universities. Which possibilities for solution are viable in the face of these “real conditions”: “overburdened secondary school conditions; adverse supervisory relationships between students and teachers; extremely burdened courses of study with entrance limitations; far too many years spent studying; graduates of universities entering their professions at a much older age than previously as well as poor chances for placement in the professions for the new/younger generation of scholars” (according to the opinion poll taken last Fall of the United Organizations of German Industry and German Workers).

Solutions should be sought, in my opinion, in two ways: on the one hand through *reform of the courses of study* and on the other hand through *creation of institutional possibilities within the universities*, in order to prevent a further departure of research out of the universities to other non-university settings. Only in this way will the unity of research and instruction be reactivated again and the often cited “uncoupling of scholarship and education” prevented. Nevertheless, none of this can be brought about without a clear improvement in the supervisory relationship between students and teachers.

In regard to the *courses of study*—and here I can only speak for cultural scholarly studies—the ideal solution would consist of organizing the basic course of study more strongly along interdisciplinary lines and carrying it out methodologically in order to arrive at a distinct specialization in a continuing phase of the educational process. Basic to this would be—and not only in cultural research studies—an expansion of philosophical knowledge and an improvement of knowledge of foreign languages,

already in the basic course of study. Here at least one foreign language should be required in addition to English. In the realm of a basic course of study that is stronger methodologically, one could forgo certain specific portions of study, so that one could even count on an abbreviated time of study with intensive attention, for example, in the form of a developed *tutorial program*.

This works, in my opinion, even when one orients oneself to already existing models and courses of study. There are surely arguments that support beginning with a *disciplinary* basic course of study. To this would be added sections of study that contain strong interdisciplinary components. As a part of this, our current construction of a model for the basic and main course of study, it would be important to demonstrate certain portions of the main course of study as interdisciplinary project studies and to require corresponding proof of qualifications.

Both variations could be enhanced by a stronger interdisciplinary and research-oriented graduate course of study. The proposed or already established graduate colleges provide an outstanding place to bring the often all-too-strong specialization effectively to bear on the subject of the actual doctoral dissertation and practice interdisciplinary work. At this point I will share the optimism that is occasionally expressed today, that the supervision of doctoral students in the graduate college could contribute to an abbreviation of the years of study if one uses the duration of study as a criterion for selection of students.

Students engaged in interdisciplinary study need professors who are trained accordingly. If the goal is to stop the migration of all interdisciplinary study out of the universities—often interdisciplinary work can only be accomplished in non-university settings/institutions—then there is an urgent need to establish interdisciplinary conditions within our universities. That is particularly true for the large universities with an enormous research potential which, however, can hardly be used for interdisciplinary research because of the great burden of its use in instruction. Therefore, I consider highly worthwhile the proposed preliminary recommendations made by the research group, “Humanities Today. Perspectives of the Humanities in West Germany,” to erect cultural studies research colleges. Research centers with a clearly outlined thematic research interest should become institutionalized in this manner at universities, so that means within the framework of the college would become available for limited faculty sabbatical leaves for instructional and research projects or assignments. Added to this there should be a constant influx of guest professors, so that not only a “rotating” faculty but also a constant exchange of scholars, similar to that in a graduate college, would be guaranteed. Such research colleges would provide an excellent opportunity for the results attained in research to be applied to instruction at the universities. Thereby the separation of research and teaching could best be prevented. The connection of research colleges and graduate colleges at universities is, in my view, the vision of the future that should be seized today. It is a vision that is inconceivable without interdisciplinarity. Such institutionalized interdisciplinary instruction and research would offer opportunities that would reactivate the university as a place of scholarship and education.

Finally, I express hope that this does not remain merely a vision of the future but rather that, here and now, it be a symbol of the scholarly crossing of boundaries as well as have a chance for full realization of the vision.

Biographical Note: The author, Wilhelm Vosskamp, is Professor of Literature and Linguistics in the Institut für Deutsche Sprache und Literatur at the University of Cologne. He is also Dean of Philosophische Fakultät at Cologne. In 1982, the three-volume study of modern utopias appeared. *Utopieforschung. Interdisziplinäre Studien zur Neuzeitlichen Utopie*. Vosskamp directed the interdisciplinary research project on utopias at the Center for Interdisciplinary Research of the University of Bielefeld.

The translator, Roslyn Abt Sehindler, received a Ph.D. in Germanic Languages and Literatures from the University of Pennsylvania in 1972. She is currently Associate Professor of Humanities in and Director of the Interdisciplinary Studies Program at Wayne State University. She also serves as Associate Dean of the College of Lifelong Learning. In addition to Holocaust Studies, her main areas of research, presentations, and publications include interdisciplinary studies and adult education.

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