

Interdisciplinary Studies as Change of Perspective

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Abstract: This framework for introductory science courses presents a theoretical perspective in the context of an experimental tertiary college at the University of Bielefeld, the Oberstufen-Kolleg. It examines general assumptions about interdisciplinarity and illustrates the theoretical perspective with a concrete example of a course entitled “Maker or Marionette? Perspectives on Man in Industrial Society.”

IN THIS CONTRIBUTION we would like to present a theoretical concept for introduction-to-science courses not deduced from *one* academic discipline. To accomplish this, we feel it necessary to begin by calling some general assumptions about interdisciplinarity, which are seldom thematized, into question.¹ Then we will outline our theoretical framework² and develop our own course concept from it.³ And finally, after a brief description of the structural characteristics of the Tertiary College at the University of Bielefeld, where we are both employed,⁴ we will illustrate the practical applicability of our theoretical concept on the basis of a concrete example.⁵

1) In the following discussion we will differentiate and analyze two lines of argumentation in favor of interdisciplinary studies: one which is motivated by pedagogical considerations, and one which has its orientation in the sociology science.

From a pedagogically motivated viewpoint the necessity of interdisciplinary *learning* is, as a rule, derived—explicitly or implicitly—from the discrepancy between a general world view and the specialized scientific world interpretation. It is assumed that specialized research and teaching limit one’s perspective on reality, skewing and distorting it, until it eventually becomes destructive. In this sense, learning is regarded as being interdisciplinary when that which falls through the gaps in the fabric of traditional disciplinary research and learning is made the subject of study. The topics discovered in this way are addressed without recourse to the customary disciplinary procedures (distinctions)—whereby the boundaries to differentiating disciplinary approaches seem perfect, but the characterization *interdisciplinary* makes no real sense. Aside from this, it is not considered that every view of “reality” is a specific view, a unique, individual construction of reality (see the following discussion). We must ask ourselves, which “rules” for constructing of reality take the place of the systems of rules characteristic of the disciplines which we have excluded. Our observations suggest that it is most often extra-scientific judgements, typically couched in moral terms, which take their place. In this pedagogically motivated version of interdisciplinary studies, an inherently scientific approach to interdisciplinarity is eliminated from the outset.

By having its orientation in the sociology of science, the argumentation concentrates upon interdisciplinary *teaching*. Once again, the starting point is an awareness of the boundaries and gaps that are necessarily left by any disciplinary science (see Kocka, 1987, 8). This perception of deficiency does not result from research which is organized within disciplines, from internal processes within science; for any given discipline the division of so-called “reality” into (accessible) segments and subjects is constitutive. It originates instead in our observation of the (external) consequences of the research organized within disciplines.

However, the idea of interdisciplinarity here sparks the hope that specific (undesirable) side-effects and consequences of the scientific method can be prevented, or at least minimized. There is the hope, in other words, to arrive at solutions to problems which, in turn, create as few new problems as possible by taking as much of so-called “reality” into consideration as is feasible.

Now, in order to avoid the imaginary space of “another community” introduction-to-science courses must have their orientation in the concrete goals and possibilities of interdisciplinary research, particularly when discipline-specific work is being critiqued (see Luhmann 1990, 713f).

The aim of interdisciplinary research is to facilitate our understanding of the different disciplinary perspectives; we speak of bridge-building, restructuring, focusing on overlap (see Hermeren 1985), of coordination, cooperation and communication. In the end, interdisciplinarity is the effort to reestablish communicative connections between disciplinary discourses which have grown apart, to create a single common discourse.

Considerations on how to achieve the goals of interdisciplinarity lead more or less directly to the question of whether or not it is possible to ensure that students learn, within the scientific curriculum, to see (and communicate) beyond the boundaries of

their fields. Or, at the very least, they should be made aware of the existence of these boundaries so that they can avoid the dangers of specialization and disciplinary limitations.

Now, however, problems with research and ideas concerning their resolution cannot be carried over into teaching, and certainly not into learning, without further thought. Students do not—to make a direct analogy to interdisciplinary research—bring the specific disciplinary perspectives that should be thematized in interdisciplinary studies with them at all. The problem is that students have to solidify their viewpoint “from their own shore” before they can attempt bridge-building (to another shore). This is the only way that bridge-building will ever be understood as a sensible and helpful measure. Structuring must take place before restructuring may begin. “Focusing on overlap” can only be experienced when different viewpoints exist that lead to differentiated, if not completely different, perspectives. In interdisciplinary communication, “admitted” specialists must make an effort to reestablish links between disciplines which have drilled apart in the course of scientific differentiation (and thus were made into what they now are). It is our opinion that the purpose of interdisciplinary studies is to develop a “sense of perspective” notwithstanding parallel processes of initiation into limited disciplinary perspectives.

Simply put, we believe that in interdisciplinary studies it is necessary to not only keep in mind, but explicate one’s social relationship to the disciplines (considering the conditions of communication between those persons involved) as well as one’s relationship to disciplinary content (subjects and methods).

2) We would now like to make a few comments about our theoretical background which, naturally, has influenced the preceding observations. We would also like to provide at least a brief explanation of the concepts that will be important to us in the following discussion. These have been extrapolated primarily from the considerations of sociologist Niklas Luhmann (1984, 1990).

Luhmann begins with the premise that as a social system modern society has become functionally differentiated. This means that specific (sub)systems have assumed particular functions, and indeed only these functions. Each social system has its own (binary) code which serves as the basis for deciding which types of communications belong to it, and which do not. Science is one such functionally distinct system. According to Luhmann, communications and statements are only acceptable within science, if they can be generated or evaluated on the basis of the true/false binary code. Consequently, statements utilizing moral distinctions, for example, between “good” and “bad” (i.e.: “I consider the interference of genetic engineering in the evolutionary process immoral!”) can be expressed within an organization such as the university, but within the scientific system, such statements have no validity. What is important for us in this theory is, first of all, that social (sub)systems are closed and, secondly, that each social system constitutes a part of the environment for all other social systems. Social (sub)systems must also be differentiated from psychic systems, which are controlled through the consciousness of individuals. Psychic systems are never components of social (sub)systems, but they do understand social systems to be part of their environment. It is therefore valid to begin by designating the theoretical *reference system*; this means determining what is being referred to as “system” or as “environment.”

Secondly we concur with Luhmann (and Bourdieu) in the opinion that within modern society there is no specifically designated point of view from which it is possible to give a “true” description of “reality.” This includes the scientific point of view. Each observational perspective has (or produces, respectively) its own blind spot—or, as Luhmann frequently and (seemingly) offhandedly formulates: One sees only what one sees, and not what one doesn’t see. This sounds trite, but Luhmann’s statement is laden with overtones from theories of cognition. It implies that any given observation is the result of a distinction, and one thing (that which is intended) is marked, the other is not. If we wish to discover something about the world, we must observe how observations are made (and for this purpose, we use distinctions which, again, can only be observed by other observers, using other distinctions).

3) In our own conception of interdisciplinary studies, besides what has already been mentioned, the most important task is to determine the system of reference. To do this we must now return to our opening observations and ask which are the implicit reference points of the lines of argumentation that we have distinguished? In the considerations which are pedagogically motivated, the *learner* is chosen as the reference point; he is the one who must integrate experience and knowledge into his consciousness. Now, we don’t want to deny this in the end, but we must assert that we do consider this reference point to be unsuitable so long as, for example, advances in learning theory are not incorporated which might shed some light on the “black-box category” of “consciousness” (in our opinion, this does not take place within the context of interdisciplinary studies). We have a very similar problem with the approach which has its orientation in the sociology of science. It seems to use the *teacher* as the point of reference. It trusts in teachers to carry out and exemplify the desired forms of communication necessary for interdisciplinary research (compare Frank/Schülert, 1992).

The pedagogical orientation and the orientation in the sociology of science both take an individual as reference point, thus offering few possibilities for further distinctions that could lead to a concept based in theory. And we will remain incapable of deriving practical “strategies” from theory, which would make achieving the goals of interdisciplinary communication probable, if we do not consider the social-psychological level. Otherwise, practices and analytical observations are reduced to the

assumption of “good will” or a “favorable response” on the part of individuals. In view of these difficulties, we would like to choose another system of reference, specifically that of the learning situation—a communicative (= social) event organized in a particular fashion.

Just as we spoke about implicit reference points at the beginning of this section, one can also discern implicit *methodological and theoretical goals*: in both cases we see *integration* of different disciplines, theories, contradictory values, etc. being carried out by the individual. Within the corresponding context, the concept of integration suggests a seemingly promising process of reconciliation, harmonization, or simplification resulting in the reestablishment of a lost—or the creation of a desired—“unity.” The opposite thereof, which we favor, is apparent: difference.

Unquestionably, any consideration of interdisciplinarity must begin with the division of the sciences into disciplines and subdisciplines. It also seems inarguable that this differentiation into disciplines produces a closed communication system. In this system the “true/false” code of the sciences remains in effect, but each discipline has specific criteria, by which the abstract code is manipulated, its specific perspective established. Theories, methods and forms of argumentation which are considered “truths” in one discipline are likely to be part of a description in another discipline, or perhaps even a sign of an “unscientific” procedure. Thus communication between the disciplines is made extremely difficult: integration becomes utopian. With this realization consensus has already reached an end; we are immediately faced with two irreconcilable positions: the one questions the sense of any differentiation, the other clings to the normative power of the factual and most likely tries to force the process of differentiation. Again, we would like to suggest another path.

Since we do not, practically speaking, feel it is either reasonable or promising—nor theoretically possible—to develop a universal perspective (for which there is no system in modern society which offers possibilities to serialize communication), it is only in “reflection upon perspective” that we see a realm of action and a direction for efforts grouped under the heading “interdisciplinary.” And reflection does not mean levelling (integration), but explication of distinctions. The didactic-methodological formula that we’ve decided upon is *change of perspective*.

However, we assume that the individual consciousness cannot achieve such a change of perspective at will; it can only be produced at a social (communicative) level. Here it becomes evident how important it is to mark the reference system: just as the theoretical-methodological goal of “integration” must remain illusionary within social (communicative) processes, the theoretical-methodological goal of change of perspective related to the individual psyche would require the development of an almost schizophrenic personality structure. We therefore want to define change of perspective as offering a specifically structured *configuration of learning opportunities* (in introduction-to-science courses). Change of perspective is not, however, to be characterized as a constant switching from one area of specialization to another. The goal of such a concept is initiation into the distinctions between discipline-specific differentiations. This means development of the capability to not only be aware of one’s own perspective (which is always a given) to the extent that one can recognize it in relation to other perspectives, but to be able to recognize, at least in general, the constitutive conditions of other perspectives (the way in which observations are made).

We understand perspectives as dispositions in making observations from which realities are constructed by drawing distinctions. Let us now take a look at academic education and training. In specialized education, success depends upon becoming practiced in one (at best two) discipline-specific perspectives. In this process both teachers and students are involved: teachers who have been socialized into a repertoire of distinctions specific to their fields, and students who probably function on the basis of very different everyday-theories with completely different distinctions. In the course of their disciplinary education students discover which distinctions are valid within this special context by receiving communications which clearly delineate the difference between everyday-theories and the perspective of scientific (academic) disciplines. They must develop a specific perspective and ignore others—at least if they want to be good students. Interdisciplinary studies do not exist to merely transmit one more specific perspective. On the contrary, interdisciplinary studies should provide an opportunity to reflect upon different perspectives and recognize them as different forms of distinctions.

The purpose—and it almost sounds like a paradox—is to learn that one doesn’t have to give up one’s own perspective in order to critically view another perspective, since change of perspective concerns a social process, rather than an individual one.

4) The preceding abstract considerations are the result of specific theoretical (re)orientations which could be grouped under the heading “difference rather than unity.” But they are also an expression of our concrete experiences in teaching. We are both employed by an institution which has been exploring the relationship between specialized and general education since its founding in 1974, both in its teaching and in its research (Curriculum Workshop), The Tertiary College of the University of Bielefeld is a (one-of-a-kind) experimental school in German. Its structure is comparable to that of an American college. It combines the last three years of Gymnasium (high school) with the first semesters of university studies into a four-year educational program. For the students this means, on the one hand, that their education is specialized: they select two majors—out of an offering of twenty-five subjects. On the other hand, they must also complete general education courses. These interdisciplinary courses are the heart of the tertiary college’s curriculum.

In other publications we have extensively presented the conceptual development underlying this form of curriculum (Frank/

Schülert 1992). All of these concepts have centered upon the relationship between disciplinary specialization and interdisciplinary studies. The current state of these developments, which is presented in this article, is the result of an on-going discussion between members of a project team, who have been working together for about one and a half years. It draws attention to a fundamental problem in academia. In an institution like ours, in which 100 colleagues work, there are several project teams, and they do not always strive towards the same goals. There are recognized differences in theoretical, ideological and pedagogical approaches stemming from various academic directions. There are also “territorial struggles” in which individuals adhere to the paradigm: “the safest place is—and will always remain—within a discipline.” So, during the past ten years, for example, it has often happened that “new disciplines”—or, more accurately, interdisciplinary study options—have been incorporated into the curriculum. Students can now choose from such subjects as Environmental Studies, Health Sciences and Women’s Studies. This tendency has somewhat reduced the fruitful tensions between specialization and general education, in our opinion. Although for the protagonists working in these new interdisciplinary fields the goal was, and is, admittedly different. They have been trying to increase the general acceptance and perceived value of their respective areas of thematic concentration above that of general education—where the themes once originated and flourished. Internal conflicts notwithstanding, our project team was formed in order to record practical experiences within interdisciplinary courses. At the beginning of this project we scheduled hearings with all those who were offering interdisciplinary courses and asked them how they were implementing their original theoretical concept of interdisciplinarity in their courses. This procedure proved helpful only insofar as we were first made aware of how extensive the discrepancy is between the institutional idea and individual practice. We also discovered that we ourselves did not exactly know what we understood under the catchword “interdisciplinarity.” In the discussions which followed a new catchword was created: “change of perspective,” which proved to be much more useful in the second round of hearings (conducted with a group of colleagues teaching other courses). This catchword seemed closer to daily practice than its more exacting predecessor. In any case, uneasiness with this term soon developed as well. Quite a few representations of intended and/or practiced change of perspective were lost in a fog of pedagogical and ideological wishful thinking: teachers thought that through a change of perspective noble-mindedness would develop in the minds (and hearts) of their students, or, respectively, that this attitude change could be nurtured together. At this point, the moment had come to return to an “old” idea on the one hand, and to focus this idea with new theoretical justifications on the configuration of learning opportunities as the system of reference on the other. The tertiary college (ideally) offers students the possibility to experience different forms of communication through different forms of instruction. In classes organized by academic discipline, students learn distinctions applicable within those specific disciplines. In interdisciplinary courses, students learn to think about distinguishing distinctions, and in “project courses”—which we have not yet mentioned—students can test their practical ability to act. While in traditional disciplinary education course content and goals for teachers and students are relatively evident through their orientation on university curricula, and in “project courses” the time constraints involved in doing practical work on concrete topics provides a reasonable (limited) framework, in general education and interdisciplinary courses we are forced to develop concepts which are independent of particular disciplinary content yet make the differences between these and other forms of learning clear for teachers and students alike. This is the purpose of the considerations presented here. We are referring to work in process.

5) In order to test the usefulness of this concept at its inception, Schülert offered a course called “Maker or Marionette? Perspectives on Man in Industrial Society.” In the course syllabus he offered students the possibility of informing themselves of their instructor’s intentions and ideas before registering for the course. The course would emphasize change of perspective as both method and goal.

Fourteen students participated in the course. Eleven of them had not yet completed their first two years of the four-year program at the tertiary college. Aside from that, eleven students in the group had chosen at least one of their majors in the fields of Social Science or Philosophy. The relatively homogenous composition of this group made it difficult for them to articulate different perspectives at first, which was evidenced by the fact that the students managed to agree upon a single everyday-theory in the first class period: “*The group came to the more or less unanimous conclusion that man, as a social being, is both maker and marionette, since social behavior is conditioned by both freedom and dependence.*” (Excerpt from the class notes of one of the participating students). No one contested the ironic conclusion that the course, scheduled to extend over 60 classroom hours, could be concluded—after the first session—with this synopsis.

Only after (and because of?) the explanation that, corresponding with the concept of the course, the question to answer was not “What is the world like?” but “How does an observer create constructs which allow further observations to be related back to them?” (Compare Niklas Luhmann 1990, 62f.) and the teacher’s demand that this question be applied to the course synopsis, did the students’ opinion finally change: they considered this synopsis to be minimally productive in both theoretical and practical senses; they found that it stimulated no further questions and discussions, and opened up no new behavioral insights.

What could be done? It would certainly have been possible to take one of the authors mentioned in the course syllabus and on the basis of his or her works show how “valid” statements about reality are constructed. But then the distinction “everyday-theory—scientific world interpretation,” which is so significant in reflections upon perspective, would have been nullified by

the one-sided distinction. Fortunately, Simon (one of the students) came up with a provocative everyday-theory for “man as maker” which not only fit perfectly into the course concept, but also proved extremely useful in making connections to other everyday-theories and scientific views.

The basis for Simon’s considerations were assumptions concerning man’s freedom:

Even though man is socialized during childhood—by parents, relatives, peers, etc.—his future actions are free. Decisions concerning his future life ultimately lie in his own hands. As the only form of life which is more or less without instincts, man is capable of considering and understanding his behavior: he is able to plan for the future and act according to his plans. Man is the only form of life capable of differentiated communication.

Simon had accepted the distinction between “maker—marionette.” By placing his description on the one side (that of maker and not marionette), he provoked a response, and was forced to defend his observations.

As was to be expected, most of the other students took an oppositional stance and countered Simon’s arguments with an introduction of the distinction “individual—society,” stressing the side of society (and not the individual).

The discussion about this distinction—or more accurately, the marking of the “correct” side of this distinction was now met with a discussion which resulted in Simon’s introduction of the distinction “responsible—irresponsible” and description of the one side as “the purpose of life” and the other side as “living a lie.” Simon wrote:

While every action has its own consequences, it is also limited by the subjectivity of the individual and the decision, which necessarily result in making mistakes, since by doing the one thing, the other must be left undone. To conclude from this that man is a marionette is to deny one’s own responsibility, to sacrifice one’s freedom, because one is not ready to pay the price of freedom—the responsibility for one’s own actions. Like the reveller, who is all too willing to feast opulently, but doesn’t want to be handed the bill: freedom without cost, life as a game, as a supermarket with great sales! Whoever desires freedom on the one hand, yet avoids responsibility on the other, persists in childish irresponsibility.

This was followed by a critique of current “marionette arguments.”

Concerning: Marionette Argument I—Unwillingness to Think:

It is precisely the awareness of one’s socialization which paradoxically is not proof of man’s lack of freedom, but rather proof of his freedom. To the extent that one’s ability to think is developed, his freedom grows: to think for oneself is to be free.

The basic chord struck by the Marionette Argument corresponds more closely to chosen apathy, a mixture of laziness, complacency and habit. The popular idea—man as marionette “forced” by an omnipotent system which tolerates no argumentative spirit—is accepted, and since we are too lazy and too comfortable, we do not even question it.

Concerning: Marionette Argument II—The Religiosity of Knowledge:

Whoever truly wants to achieve a goal cannot obstruct the path to that goal with a utopian vision of objective discernment: cannot shy away from the goal merely because it might be associated with difficulties.

The failure of generally accepted expectations is not proof of lack of freedom, but proof of the distance between reality and objectivistic thinking.

Simon combined this critique of objectivistic thinking with a fundamental consideration of the construction of reality. On the basis of his construction of reality (with its corresponding distinctions and marking of the “correct” side) Simon extrapolated consequences of actions for himself and for all individuals who strive for maturity:

The biggest dilemma originates in our basic assumptions. With every theory, which we retrace ad infinitum, we eventually reach a basic central tenet, which either has to be

believed or doubted.

To face this dilemma requires an everyday kind of courage: the courage to accept criticism, the courage to doubt, the courage to make mistakes.

If all children who dreamed of flying were to lapse into passivity because of the impossibility of their dream, they would also give up on the possibility of learning to run, for in the process of learning to run some hurdles must be overcome and some scrapes and cuts endured. Just as I can only learn to run by beginning to run, learn to draw by beginning to draw, learn to play music, read, write, calculate, write poetry, think, and do so many other things by beginning to do them, I can only learn to “be free” by acting freely, learn to “be responsible” by acting responsibly.

To me this means that man’s ability to act freely (to be a maker) is, in the final analysis, limited only spatially, by his body (limiting the sphere of action) and temporally, through his life-span (limiting the time of action).

We cannot continue to document the progression of the course in such extensive detail. And perhaps it is not even necessary, since Simon’s comments anticipate the themes the rest of the course would explore.

The danger of levelling (integration) through a “not only . . . but also” statement was avoided. Now the teacher could optimistically and expectantly await the explication of difference and the thematization of change in perspective that he and his students would prepare by compiling commented text samples dealing with the themes of the course, by the following authors (among others): Kant, Marx, Horkheimer, Adorno, Popper, von Hentig and Luhmann.

In the attempt to distinguish between distinctions on this basis, it became evident that most of the aforementioned authors could not be differentiated by their use of the juxtapositions “individual—society” and “responsible—irresponsible.” They differed in either marking the individual (Kant, Popper, von Hentig) or society (Marx, Horkheimer, Adorno) and they all ascribed the blame for immaturity to the side they had chosen to mark.

Admittedly, these are rough generalizations and are certainly inaccurate in detail. In the classroom, whenever we ran into statements which did not fit into the chosen rubric, or were not easily classifiable, we always asked ourselves whether we had chosen the wrong distinctions, or whether the authors had not constructed their realities consistent with the distinctions we were using as a basis for analysis.

However, our primary objective in this course was not to closely interpret these authors’ works, but to use the texts to test the observations of observers, aided by distinguishing distinctions as a principle of reflection. We also tried to produce a corresponding change of perspective using the group of students as the reference system.

In view of these goals it was most important that one of the students be given the opportunity to vent her long-held anger—she was less discriminating in her choice of words—and complain about always working with the distinction “individual—society.” The philosophical debate marking either one side or the other side created a blind spot that would only be detected and compensated for by an empirical analysis of the social structures of society.

She envisioned the introduction of the distinction “above—below,” as well as the incorporation of a measuring scale, at least at the ordinal level. Incidentally, she was the only course participant who was specializing in one of the classical disciplines of natural science (geology).

Finally, it was vital that curiosity remain as to whether there weren’t also other distinctions which might put the “maker—marionette” discussion into an entirely different light. With the help of some of the students who were particularly interested in the questions being raised, the instructor utilized the students’ curiosity to differentiate between Luhmann (whom they had not been able to classify using the “individual—society” and “responsible—irresponsible” distinctions), Simon’s everyday-theory, and the basic premises of Marx and von Hentig.

The distinction introduced by Luhmann, which generated his whole system of thinking, was “system—environment.” This distinction, combined with his demand that in the construction of reality one must always decide upon a single reference system (here psychic or social system) and his polemic against any moralizing {i.e.: as in using distinctions such as “responsible—irresponsible”) produced a love-hate reaction to his theories among the majority of the students.

“That’s disgusting” remarked one student after he had just spent considerable time (competently, and with obvious enjoyment) reconstructing his world view to correspond to the parameters of Luhmann’s theory of systems. “It’s astounding: Luhmann fascinates and shocks [me] at the same time!” another student realized while referring to the following:

Many aspects of “Eastern philosophy” are visible here:

— Thinking in paradoxes

— Suspension of linearity and causality

— Expression of the imperceptibility of the world in its deepest foundations

- *Mores and ethics lose their appearance of “naturalness”*
- *Complexity is evolution*

Whether or not this is an apt characterization of Luhmann's system theory is beside the point. What was important in this context was the recognition of relativity (not arbitrariness). Every “realization,” and with it the answer to the question “Is man a maker or a marionette?” changes with the choice of reference system, if one follows the tenets of Luhmann. If the individual, with his consciousness which steers his psyche, is the reference system, then man is a maker, and only a maker. If the social system is the system of reference, then the individual as “psychic system” is part of the environment of the social system, thus neither maker nor marionette. The psychic system contributes to communication—insofar as this is true, no social system is conceivable without the psychic system as environment (!) but the psychic system does not include itself in the social system.

This intentional abandonment of an “archimedial point” from which the evil world and irresponsible man must be seen and eliminated was probably what simultaneously fascinated and shocked most of the students.

Had more time remained, the instructor would have liked to introduce the distinction “systemic—final” and “moralizing—non-moralizing” into the discussion as a possibility of distinguishing distinctions.

Very noticeable and heartening was the fact that the students, as far as they applied themselves to the task of providing a synopsis at the end of the course, consistently considered themselves to be observers of observers, as for example Frank:

In this paper I am trying, for one thing, to create an overview which includes a content analysis of the various theories by well-known social philosophers and social scientists which we have discussed and written about in this course. I approach this task on the basis of the following questions:

- *Is man maker, marionette, or both?*
- *In each instance, how is the point of view justified?*
- *From which point of reference are observations being made?*

The most significant experience for our conceptual considerations was, in any case, that the students did not sacrifice their everyday-theories on the altar of science. To quote Frank again:

In addition, in the second part I will attempt to formulate my own everyday-theory by addressing the question “Man—maker or marionette?” and taking a position relative to the above-mentioned theoreticians.

The students allowed their own everyday-theories to prevail as the other side of the distinction between “everyday-theory—scientific world interpretation.”

This confirmed to us how important it is when dealing with the concept of change of perspective not to choose students as the point of reference. Because, the change of a life-perspective is something very different for an individual than the development and change of perspective within the communication of a study group. In both cases we are talking about a challenge, which is only legitimate in relation to a social (= communicative) process.

In this situation students would, and could, face the challenge of a change of perspective—because they encountered it as part of a process of discussion, and not directly, their personal spheres were never threatened. Thus there remained an opportunity—which was also used through the end of the course—to differ from the scientific world interpretation, to relate to it, and to assert oneself against it as a person.

But, as has already been stated, we have been speaking of work in process. The course we have described was the first in which an attempt was made to consistently relate the idea of a change of perspective to the reference system “learning situation” and it was also an attempt to make the concept itself into a theme that could be discussed with students. This attempt was later continued in the phase of the “Project Course” which followed: The goal of this course, in which some of the same students also took part, was, among other things, to develop different models for the future of the tertiary college. Here the practiced ability to distinguish distinctions and the sharpened awareness of the significance of the choice of reference point could be applied to a concrete pedagogical, didactic and organizational problem.

In the end, the fact remains that in the example presented here we have not been talking about an interdisciplinary course per se, since, scientifically speaking, we have merely distinguished between different philosophical distinctions. This insight draws attention yet again to the question of whether it is at all possible for a single teacher to conduct an interdisciplinary course. And one more thing must be considered. In our presentation we have thoroughly characterized only one side of the distinction “disciplinary courses—interdisciplinary courses.” Utilizing this distinction makes sense only as long as it continues to have significance. As soon as the other side (disciplinary courses) merges into interdisciplinary intentions and the configuration of learning opportunities no longer creates difference, the basis for our concept will have disappeared.

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