Thinking Critically About Disciplinary Perspectives

7

What It Means to Think Critically About Disciplinary Perspectives

In Chapter 5, we learned that each discipline has a perspective that is *partial* when applied to complex multidimensional subjects. Consider the case based on a real-life situation where multiple and conflicting perspectives arose over the issue of whether to build a sports stadium in a run-down and crime-ridden part of City, USA. From the perspective of the team's owners, their business associates, and professors from the nearby business school, the site made economic sense because it was located next to an interstate highway and the land could be purchased inexpensively. From the perspective of the city, the plan was attractive because it would eliminate a blighted and crime-ridden area, create jobs, and generate new tax revenues. However, from the perspective of sociology, the plan was seriously flawed because it would force hundreds of low-income people to relocate and would destroy the many minority-owned mom-and-pop businesses operating in the area. Education pointed out the disruptive effect of such massive relocation of the area's children on the city's school system whose budget was already strained. And criminal justice referred to research showing that criminal elements would simply relocate to another part of the city.

Clearly, the issue of whether the sports complex should be built in that location was complex and multifaceted. Each perspective was only partial and none provided a "big picture" of the issue. Nor was one perspective "wrong" and another "right." To think critically about disciplinary perspectives on an interdisciplinary subject, then, involves (1) developing a sophisticated conception of knowledge and (2) learning how to interrogate disciplinary perspectives.

Developing a Sophisticated Conception of Knowledge

In order to think critically about disciplinary perspectives, it is important to have, or be willing to develop, a more sophisticated conception of knowledge to make sense of the multiple and often

conflicting perspectives and insights that you will encounter. Arriving at this conception involves (1) reflecting on your present "epistemic position," (2) assessing your tolerance for multiplicity, and (3) moving toward critical pluralism.

Reflect on Your Present Epistemic Position

The term **epistemic position** refers to your understanding of the nature of knowledge and how you determine truth. Research by noted educational psychologist William G. Perry Jr. (1981) finds that many students entering college tend to favor one of the following epistemic positions when confronted with particular controversial and emotionally charged issues: dualism, relativism, or critical pluralism. [Note: This is not to suggest that all students or even most students can appropriately be labeled by how they think or to suggest that all their other traits, abilities, sensibilities and inclinations pale in comparison to how they think.] These positions are summarized here:

- *Dualism*: Students who are dualistic thinkers believe that knowledge is objective, certain, and absolute. They think in terms of dualistic categories such as right-wrong, true-false, correct-incorrect, or good-bad. So, when confronted with multiple and conflicting pieces of information, they reject as false or mistaken any views that challenge their own (pp. 80–81). Similarly, they tend to reject divergent disciplinary perspectives that are raised in interdisciplinary subjects as being "wrong" while believing their own perspective is "right."
- *Relativism*: Students who are relativist thinkers believe there is no such thing as objective knowledge and view beliefs, theories, and values as inherently relative, contingent, and contextual (pp. 81–82). When confronted with multiple and conflicting perspectives on a subject, they consider conflicting disciplinary insights as mere opinion or personal preference.
- *Critical pluralism*: Students who are critical pluralist thinkers believe that knowledge can be objective, but not certain and absolute as dualists assume. Critical pluralists accept the pluralism of relativism without drawing the relativist conclusion that "anything goes." Critical pluralists view multiple and conflicting disciplinary perspectives on a subject as more or less well-reasoned judgments (pp. 81–82). So, when presented with a range of disciplinary perspectives on a subject, critical pluralists view each as partial and none as complete.

Importantly, other cognitive theorists describe a similar progression, but use different labels and make some gender distinctions.

Assess Your Tolerance for Multiplicity

Multiplicity refers to when you experience several plausible yet contradictory explanations of the same phenomenon as opposed to one simple, clear-cut, unambiguous explanation (Perry, 1981, pp. 81–82). Such multiplicity is a key feature of interdisciplinary studies when working with conflicting insights coming out of different disciplinary perspectives.

The dualist and relativist positions are **simplistic epistemic positions** because they rest on the assumption you already "know what is true" about a given subject. If you have already taken a simplistic

epistemic position concerning what is true about the interdisciplinary subject you are studying, you will be unable to work effectively with the multiple and conflicting disciplinary perspectives and insights concerning it. Even worse, you will misunderstand the aims and expectations of interdisciplinary learning. When faced with a range of plausible expert insights from different disciplinary perspectives where none seem to be simply "right" or "wrong," says Clinton Golding (2009), you will likely react in one of these possible ways: You will experience "intellectual vertigo" and be unable to figure out what is going on, you will stubbornly cling dogmatically to your opinion come what may, or you will retreat to an equally problematic relativist position and think that it's just "all a matter of opinion" (p. 18).

The tragic result of these attitudes will be twofold: (1) You will not understand *why* there is so much disagreement when the experts should just be able to get the "right answer" and move on, and (2) you will see little value in continuing in interdisciplinary studies.

But if you take a **sophisticated epistemic position**, that of critical pluralism, you will see the multiple and conflicting perspectives as *partial understandings of the subject under study.* You will also realize that what is needed is not another partial understanding or uninformed opinion but an understanding that takes into account the subject's complexity and that respects the scholarship of disciplinary experts.

Move Toward Critical Pluralism

The critical pluralist position is the necessary foundation for interdisciplinary work for two reasons. First, multiple disciplinary perspectives and the insights they produce cannot be simply categorized as true or false or understood as mere opinion. Second, each disciplinary perspective has at least *some* useful insights (though the proportion can vary considerably from discipline to discipline, depending on the problem under study).

Therefore, the dualistic and relativist classification methods cannot support interdisciplinary learning. The reason, explains critical thinking expert Richard Paul (1994), is that these positions have conceptions of "right answers," "wrong answers," or "mere opinion," but they do not have a conception of "reasoned judgment" where ideas are judged "better" or "worse" depending on the appropriateness or quality of reasoning supporting them (pp. 347–348). Without the understanding that only comes with critical pluralism, says Golding (2009), it is impossible to make sense of the complex judgments needed to balance, accommodate, and integrate the perspectives and insights of multiple disciplines (p. 19). In Box 7.1, Repko makes the case for a critical pluralist approach when analyzing the conflicting insights of disciplinary experts.

Box 7.1   The Fable of the Blind Men and Elephant Redux

A sophisticated epistemic position understands that research conducted by the disciplines is similar to the activity of the blind men trying to make sense of the elephant. We can compare these men to disciplinary experts who are trying to understand a complex

(Continued)

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phenomenon (i.e., the elephant). They naturally concentrate on that part of the phenomenon that their disciplinary training has taught them to focus on: One disciplinary expert concentrates on the trunk, another focuses on the tusks, and others study the ears, body, legs, or tail. Their disciplinary training has equipped them to approach the problem with a specialized toolkit of assumptions, epistemology, concepts, theories, and methods. This describes disciplinary reductionism in operation. The disciplines are doing exactly what they are supposed to be doing: probing deeply into those parts of the problem (and only those parts) that they are uniquely designed to study and producing narrow, specialized understandings of it. Instead of dismissing conflicting insights as "mere opinion" or "right" or "wrong," it is best to view their work as partial or incomplete.

It is left to the interdisciplinarian to look at the "big picture" and research the whole elephant. We do this, not by duplicating the narrow and specialized work of the disciplinary specialists, but by critically examining their multiple and conflicting insights, integrating them, and producing a more comprehensive understanding which will lead to a workable solution. This, in a nutshell, describes interdisciplinary process. Engaging in it is possible only by exercising "reasoned judgment." (Repko, 2012b)

Part of the task facing interdisciplinarians is to critically evaluate disciplinary perspectives and their insights, *not* to just sort insights into "better" or "worse" categories. Even "worse" insights may have a kernel of truth that the interdisciplinarian needs to identify and use.

Why Some May Find the Transition to Critical Pluralism Difficult to Make

As you prepare to critically analyze the disciplinary perspectives and insights concerning the problem you are studying, reflect on your epistemic position concerning it and your tolerance for multiplicity. If you find that you are already "entrenched" in a dogmatic position, you may find the transition to critical pluralism difficult to make. As Howard Gardner (1989) explains, epistemic positions tend to be extremely robust and difficult to abandon for two reasons: one internal and the other external. *Internally*, everything people experience and learn is "colored" by their epistemic position. *Externally*, social forces such as experiencing discrimination deeply impact and may reinforce their epistemic position. In other words, even with good intentions to move toward a sophisticated epistemological position, people who are dualist or relativist thinkers may (1) still interpret the multiple perspectives and conflicting insights from their simplistic epistemic position, (2) reject outright those insights that conflict with their own, (3) categorize insights according to their personal view of the issue, or (4) just lump all the insights together as mere opinion.

How to Move From a Position of Dualism or Relativism to One of Critical Pluralism

To move from a dualist or relativist position toward a critical pluralist position, consider doing the following:

- Reflect on those past experiences that may have colored your position on the problem you are studying. For example, early memories of the towering stacks of coal-powered electric power plants belching clouds of noxious emissions may be coloring your thinking about whether coal should be used for electric power generation.
- Reflect on social forces (e.g., peer or academic pressures) that may be influencing your position.
- Temporarily set aside your position on the problem so that you can consider the views of others and the possibility that they may be as valid as your own.
- Keep in mind the goal of the interdisciplinary enterprise, which is to develop a more comprehensive understanding of the complex problem.

Why Interrogate Disciplinary Perspectives (or Practice Critical Pluralism)

One way interdisciplinarians practice critical pluralism is to challenge the disciplinary perspectives themselves as to their applicability to the problem, keeping in mind that they provide only partial understandings of the subject under study. After identifying disciplines relevant to the problem and verifying their relevance by conducting the literature search, interdisciplinarians "interrogate" these perspectives. To **interrogate in an interdisciplinary sense** means to ask critical and probing questions of each relevant discipline. Fortunately, the interdisciplinarian need not achieve mastery of each discipline to ask such questions.

The Issues of Disciplinary Depth and Interdisciplinary Breadth

The relevant issue is the *minimum* depth that entry-level students need in relevant disciplines. "Minimum depth" refers to knowing the perspective (in an overall sense) of each discipline relevant to the problem as discussed in Chapter 5. Depending on the program, you may also need to know the defining elements of each relevant discipline's perspective (as discussed in Chapter 5). Critics of interdisciplinarity argue that in order to work in a discipline, it is necessary to achieve mastery of it by attaining the doctorate or the equivalent degree. Such criticism reflects disciplinary preference for specialization.

But entry-level interdisciplinary work requires adequacy, not mastery (see Box 7.2). As an entry level student, you are taking a major step toward achieving adequacy by engaging the information about the disciplines presented in this book.

Box 7.2

Much interdisciplinary work does not require disciplinary depth. One example is the interdisciplinarity of a policy analyst, judge, or political decision maker, who uses special interdisciplinary skills to locate information from multiple disciplines and then to understand, balance, and synthesize this information so they can make a final decision. Another possible example is the researcher in an area of study such as education, who does not have a specific disciplinary background, but who has the ability to draw on multiple disciplines when they [are] illuminating, and has general methodological skills for designing and carrying out research.

   Expertise in a discipline may be useful for this kind of interdisciplinary work, making it easier to access and understand some disciplinary knowledge, but it is not necessary. . . . The only thing necessary . . . is being able to identify when disciplinary expertise is needed and knowing how to access and use this. (Golding, 2009, p. 5)

Undergraduate interdisciplinarity focuses on developing interdisciplinary *breadth* more than on disciplinary *depth* (although some programs emphasize the latter). **Interdisciplinary breadth** is basic knowledge about each potentially relevant discipline so that you can understand its perspective and access, translate, think critically about, and use its insights. This basic information about disciplines appears in Chapters 4 and 5. The best time to start developing this competency of interdisciplinary breadth is *before* you begin to develop expertise in a particular discipline by majoring in it or decide to pursue a field in interdisciplinary studies.

Identifying Disciplines Relevant to the Problem

One of the first questions interdisciplinarians ask as they begin studying a complex problem is, "Which disciplines are relevant to the problem?" Answering this question requires connecting the problem to disciplines that study it. To illustrate how this is done, we introduce the issue of human cloning. You can make these connections yourself by consulting Table 5.4 "Disciplines and the Phenomena They Study" in Chapter 5. Concerning human cloning, the *potentially* interested disciplines include biology, psychology, political science, ethics (a subdiscipline of philosophy), religious studies, the applied field of law, and the interdiscipline of bioethics. These disciplines are only *potentially* interested because, at the outset, it is unclear if authors from each of these disciplines have even written on human cloning. If experts from a particular discipline have not yet written on the subject, then that discipline is not relevant, at least to students in an introductory course.

   However, it is not enough to connect an interdisciplinary subject as broad and complex as human cloning to a particular discipline such as psychology. Interdisciplinarians must also know the *basis* for making this connection. Table 7.1 identifies disciplines *potentially* relevant to the subject of human cloning because they consider the problem (or some part of it) as falling within their research domain. [Note: We say *potentially* relevant because at this point we do not know if each discipline's community of scholars has published insights on human cloning.]

Table 7.1   Why Each Discipline Is Potentially Relevant to Human Cloning

Disciplines Potentially Relevant to the Issue of Human Cloning	Basis for Relevance
Biology	Analyzes the biological process of human cloning and measures the rates of success or failure
Psychology	Analyzes the psychological impact on the cloned person of a sense of personhood
Political science	Examines the role of the federal government and particular agencies
Philosophy	Probes the ethical implications of cloning a human life
Religious studies	Analyzes the sacred writings of the world's major faith traditions to see if they are consistent with human cloning
Law*	Analyzes the legal rights and relationships of the cloned child and its "parents"
Bioethics**	Examines the ethical implications of the technical procedures required to clone a human, particularly in the event of failure

Source: Repko (2012b)

*Law is an applied field in many taxonomies.

**Bioethics is an interdisciplinary field in many taxonomies.

After forming a list of disciplines potentially interested in the problem, the next question to ask is, "What is the perspective (in a general or overall sense) of each discipline on the problem?" Before discussing how interdisciplinarians go about interrogating disciplinary perspectives, we explain the necessity for performing this critical task.

Why Interdisciplinarians Interrogate Perspectives

Interdisciplinarians are interested in viewing the subject from the perspectives of potentially relevant disciplines for six reasons.

No. 1: Perspective Taking Is a Key Feature of Interdisciplinarity That Is Necessitated by Complexity

The very premise of interdisciplinary studies is that each discipline is uniquely able to focus on that part of a subject it considers within its research domain, and study that part in depth. But no single discipline is equipped to explain a complex subject comprehensively. This is why studying complex subjects requires tolerance for multiplicity and why the critical pluralist position is the necessary foundation for interdisciplinary work.

Viewing the problem through the lens of each discipline's perspective involves moving from one discipline to another, shifting from one perspective to another. One practitioner describes this process of "moving" and "shifting" in rather colorful terms. The interdisciplinarian, he says, must take off one set of disciplinary lenses and put on another set in their place as each discipline is examined (Newell, 2007, p. 255). Figure 7.1 depicts this process.

The problem, depicted by the multisided figure, is complex, meaning that it has multiple parts or facets. Each disciplinary lens is able to focus on only one facet.
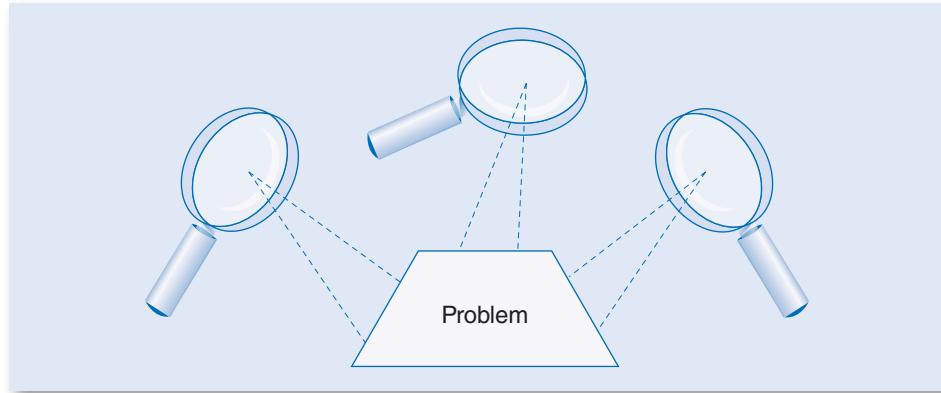

Figure 7.1   Viewing the Problem Through Different Disciplinary Lenses

No. 2: Perspective Taking Is a Prerequisite for Turning Multidisciplinary Work Into Interdisciplinary Work

We established the critical role that perspective taking plays in interdisciplinary work. Here we add that perspective taking is a prerequisite for turning multidisciplinary work into interdisciplinary work. In multidisciplinary work, we are *not* interested in the discipline's **perceptual apparatus** (i.e., its defining elements) because it is enough to point out that each discipline sees the subject in a certain way but not explain *why* this is so.

The focus of multidisciplinary work is on *comparing insights* rather than integrating them. Hugh Petrie (1976) describes multidisciplinary work this way: Two disciplines "look at the same thing [but] do not see the same thing" (p. 11). The fable of the blind men and the elephant depicts how disciplinary experts, though looking at the same phenomenon (i.e., the elephant), are compelled by their disciplinary training to quickly zero in on those parts they are trained to study (e.g., ears, tails, legs).

But in interdisciplinary work, interdisciplinarians must understand the significance of each discipline's perspective (i.e., its cognitive map) so that they can think critically about how each perspective and its insights illumine some part of the problem. Insights from different disciplines often conflict, as in the case of the blind men who described different parts of the elephant. When insights do conflict, integrating them involves creating common ground between them and then using this common ground to construct a more comprehensive understanding of the subject.[1]

1 A detailed discussion of exactly how to create common ground by modifying assumptions, concepts, or theories is the focus of the follow-on text by Repko (2012b), *Interdisciplinary Research: Process and Theory* (2nd ed.).

No. 3: Perspective Taking Enables Us to See the Relevance of Other Perspectives

When working with complex problems such as human–environment interactions, the factor addressed by one discipline is affected by factors addressed by other disciplines. Interdisciplinary subjects present multiple and often conflicting perspectives and ways of knowing. One practitioner explains why interdisciplinarians cannot ignore the perspectives of other disciplines in these cases:

> [A reason] for this is that . . . the environment is a complex system where the factors addressed by one discipline are affected by factors addressed by other disciplines. The environmental factors studied by a biologist may have effects on the health factors studied by a medical scientist. The culture of a group of people studied by an anthropologist may affect their use of the technology developed by an engineer. In order to solve an engineering problem about the best location of wells in Papua, New Guinea, the engineer . . . had to first use anthropology to help him understand how the local people used water. (Golding, 2009, p. 3)

No. 4: Perspective Taking Illumines Our Understanding of the Problem as a Whole

Perspective taking also illumines our understanding of the problem *as a whole*, as illustrated in this example:

> Implementing an environmental solution from one discipline often requires dealing with factors from other disciplines. For example, to implement new health care or contraceptive methods, we have to understand not only medicine, but also education. To find out what would be the optimal place to dig a well, we have to consult geologists about the hydrogeology and sociologists about how the people currently use water. To build something, architects have to consult engineers, and engineers have to consult mathematicians. Even something as simple as deciding where a bike path will go and how it will be constructed requires the input from multiple disciplines: we may have to consult an engineer about the composition of the pavement, the ergonomist about the design of signs that are noticed by pedaling cyclists, the transport planner about the likely users and their intended trips, the sociologist about the potential impact on neighboring land holders, the licensed surveyor about land titles on the proposed path, the stream ecologist about proposed fords and bridges and their effects on the waterways, and even the animal behaviorist about swooping magpie risks. (Golding, 2009, p. 3)

No. 5: Perspective Taking Reduces the Possibility of Making Poor Decisions

Perspective taking reduces the possibility of making poor decisions resulting from failure to take important perspectives into account. When it comes to making decisions and policy recommendations on a host of complex and costly public works projects, bad decisions are likely to result if important perspectives are overlooked.

> Someone might calculate the most efficient energy use for a new community center without considering how people will interact with the center and so they build an efficient center that

no one wants to use. Alternatively, someone might argue that, because of sociological factors, fire-destroyed communities should be rebuilt where they are, but because they ignore what planners and architects might say about mitigating fire risk, they rebuild communities that are in imminent danger. (Golding, 2009, p. 4)

No. 6: Perspective Taking Exposes Strengths and Limitations of Disciplines

Interdisciplinary subjects bring together multiple disciplinary perspectives. Therefore, one of the responsibilities of the interdisciplinarian is to know the strengths and limitations of each discipline's perspective on the subject. These are more readily apparent when perspectives are juxtaposed as they are in Table 5.3 from Chapter 5, reproduced here for your convenience. [Note: There is no separate category for the Fine and Performing Arts because their perspectives do not differ significantly from those of the humanities in general.]

Table 5.3 Perspectives of Natural Sciences, Social Sciences, and Humanities Disciplines, Criminal Justice, and Education, Stated in General Terms

Discipline	Perspective on Reality
Natural Sciences	
Biology/ecology	While the other natural sciences focus on the principles that govern the nonliving physical world, biology studies the behavior of the living physical world. When biologists venture into the world of humans, they look for physical, deterministic explanations of behavior (such as genes and evolution) rather than the mental ones (such as the decisions of individuals or groups based on free will or norms) on which the social sciences focus. Ecology is an interdisciplinary branch of biology that studies the relations that living organisms have with respect to each other and their natural environment.
Chemistry	Chemistry focuses on the distinctive properties of the elements, individually and in compounds, and their interactions. Chemistry sees larger-scale objects, organic as well as inorganic, in terms of their constituent elements and compounds.
Earth science/geology	Earth science focuses on the large-scale physical processes of planet Earth and is concerned with both the details and functions of the four subsystems and their interactions: the lithosphere (the Earth's hard, outermost shell), the atmosphere (the mixture of gases that envelops the Earth), the hydrosphere (the subsystems that contain the Earth's water), and the biosphere (the realm of all living things, including humans).
Mathematics	Mathematics is interested in abstract quantitative worlds mathematicians create with postulates, assumptions, axioms, and premises and then explore by proving theorems.
Physics	Physics studies the basic physical laws connecting objects (atoms and subatomic particles, quanta) and forces (gravity, electromagnetic, strong, weak) that often cannot be directly observed but that establish the underlying structure of observable reality, and cosmology (the form, content, organization, and evolution of the universe).

Discipline	Perspective on Reality
Social Sciences	
Anthropology	Cultural anthropology sees individual cultures as organic integrated wholes with their own internal logic and culture as the set of symbols, rituals, and beliefs through which a society gives meaning to daily life. Physical anthropology seeks to understand former cultures through the artifacts it uncovers.
Economics/ business*	Economics/business emphasizes the study of the production and distribution of goods and services with the individual functioning as a separate, autonomous, and rational entity.
Political science	Political science views the world as a political arena in which individuals and groups make decisions based on the search for or exercise of power. Politics at all levels and in all cultures is viewed as a perpetual struggle over whose values, not just whose interests, will prevail in setting priorities and making collective choices.
Psychology	Psychology sees human behavior as reflecting the cognitive constructs individuals develop to organize their mental activity. Psychologists also study inherent mental mechanisms, both genetic predisposition and individual differences.
Sociology	Sociology views the world as a social reality that includes the range and nature of the relationships that exist between people in any given society. Sociology is particularly interested in voices of various subcultures, analysis of institutions, and how bureaucracies and vested interests shape life.
Humanities	
Art and art history	Art history views art in all of its forms as reflecting the culture in which it was formed and therefore providing a window into a culture. Art, and thus art history, has a place for universal aesthetic tastes.
History	Historians believe that any historical period cannot be adequately appreciated without understanding the trends and developments leading up to it, that historical events are the result of both societal forces and individual decisions, and that a picture or narrative of the past can be no better than the richness of its details.
Literature (English)	Literature believes that cultures, past and present, cannot be adequately understood without understanding and appreciating the literature produced by the culture.
Philosophy	Philosophy recognizes a variety of limits to human perceptual and cognitive capabilities. Philosophy views reality as situational and perspectival. Reality is not a collection of imperfect representations that reflect an "absolute reality" that transcends all particular situations. Rather, these representations are the reality that is the world.
Religious studies	Religious studies views faith and faith traditions as human attempts to understand the significance of reality and cope with its vicissitudes through beliefs in a sacred realm beyond everyday life.

(Continued)

Table 5.3 (Continued)

Discipline	Perspective on Reality
The Fine and Performing Arts	
Art	The study of art as a creative pursuit sees the creative process as a means by which human experience (and therefore the culture in which it exists) can be articulated via a chosen medium (paint, ceramics, clay, stone, etc.). Part of the study of art involves examining the developments in the discipline over time and in different parts of the world.
Dance	The study of dance as a creative art form articulates observations on human experience (and therefore the culture in which it exists) via the movement of the body of one dancer alone or choreographed with two or more individuals, accompanied by sound or silence. Part of the study of dance involves examining developments in the discipline over time and in different parts of the world.
Music	The study of music as a creative pursuit involves the composition and/or performance of music, which is itself produced in response to elements of human experience (and therefore the culture in which it exists). The study of music can include conducting, performing on various instruments, aural training, performing as part of an ensemble or soloist, or composing or arranging. Part of the study of music involves examining developments in the discipline over time and in different parts of the world.
Theater	The study of drama as a creative pursuit involves the creation of original dramatic works or acting and/or producing such works. Works of drama express observations about the human experience (and therefore the culture in which it exists). Part of the study of drama involves examining developments in the discipline over time and in different parts of the world.
Applied Fields	
Criminal justice	Criminal justice sees crime and criminal behavior through the lenses of theories on human nature, societal structure, social order, concepts of law, crime and criminals, the logic of crime causation, and the policies and practices that follow from these.
Professions	
Education	Education views learning as developmental and governed by a linear and universal model of progress, civilization, democracy, rationality, and science. This modernist view is being challenged by a postmodern recognition of diversity and contextualization that values what is local and different.

Source: Repko (2012b)

*Like other professions, business schools are at least multidisciplinary and address sociology as well as economics.

How Interdisciplinarians Interrogate Disciplinary Perspectives

Interdisciplinarians interrogate the perspectives of relevant disciplines by asking three questions.

1. What Is the Discipline's Perspective *on This Particular Subject*?

We have said that a disciplinary perspective concerns a discipline's overall view of reality. As such, it is highly instructive to apply the discipline's perspective to a particular subject that falls within the discipline's research domain as the following examples of professional work demonstrate. [Note: The examples assume that the authors have done some background reading concerning the subject but have not yet conducted an in-depth literature search.]

Primarily From the Natural Sciences: Dietrich (1995), *Northwest Passage: The Great Columbia River*

In his award-winning study of the causes of alarming decline of salmon populations in the great Columbia and Snake River systems in the American Northwest, William Dietrich first identified the disciplines that he thought would be relevant to understanding this complex subject holistically. As a journalist, he had no expertise in any of these disciplines. Each discipline's perspective on the problem shown in Table 7.2 is based on its overall perspective on reality as described in Table 5.3.

Table 7.2   Disciplinary Perspectives on the Causes of Declining Salmon Populations

Disciplines Relevant to the Problem	Perspective on Problem
Biology/ecology	Views the reduction of salmon populations as an ecological phenomenon
Economics/ business	Views the reduction of salmon populations as having economic/business impacts on local, state, and regional economies
Earth science (geology)	Views the reduction of salmon populations as having something to do with the hydrosphere and biosphere
History	Views the reduction of salmon populations as a problem with a historical context
Political science	Views the reduction of salmon populations as a struggle between competing interests

Source: Repko (2012b)

Primarily From the Social Sciences: Fischer (1988), "On the Need for Integrating Occupational Sex Discrimination Theory on the Basis of Causal Variables"

Fischer is grappling with the very complex social problem of the causes of sex discrimination in the workplace (OSD). He draws on several disciplines, primarily in the social sciences. His approach is instructive because of the way he simplifies the process for the uninformed reader by briefly describing each perspective in a narrative (not reproduced here) from which we distilled the information that appears in Table 7.3.

Table 7.3   Disciplinary Perspectives on the Causes of Occupational Sex Discrimination (OSD)

Disciplines Relevant to the Problem	Perspective on Problem
Economics	Views OSD as an economic/business problem
History	Views OSD as a historical phenomenon
Sociology	Views OSD as a reflection of sociological phenomenon
Psychology	Views OSD as a psychological phenomenon
Marxism**	Views OSD as an inevitable consequence of capitalism

Source: Repko (2012b)

**Marxism is a school of thought that transcends disciplines and offers an all-encompassing explanation of reality

Primarily From the Humanities: Bal (1999), Introduction to *The Practice of Cultural Analysis: Exposing Interdisciplinary Interpretation*

Mieke Bal, who helped develop the interdiscipline of cultural analysis, is attempting in this example to decipher the meaning of an enigmatic poem written in yellow paint on a red brick wall in post–World War II Amsterdam, Netherlands:

Note

I hold you dear

I have not

thought you up

Her study involves drawing on several disciplines and their perspectives (simplified) as depicted in Table 7.4.

Table 7.4   Disciplinary Perspectives on the Poem

Disciplines Relevant to the Problem	Perspective on the Problem
Anthropology (cultural)	Views the poem as a cultural artifact
Art history	Views the poem as complex physical object/text
Linguistics (narratology)	Views the poem as a linguistic symbol
Philosophy (epistemology)	Views the poem as an epistemological query
Literature	Views the poem as part of Dutch literature
Psychology	Views the poem as a public expression of deep emotion

Source: Repko (2012b)

2. How Does Each Perspective Illumine Our Understanding of the Subject *as a Whole*?

The next question to ask is how each perspective illumines our understanding of the subject as a whole. The focus here is on the "big picture" and the possible causes (or effects) of the problem.

Primarily From the Natural Sciences: Dietrich (1995), *Northwest Passage: The Great Columbia River*

Table 7.5   How Disciplinary Perspectives Illumine the Problem of Declining Salmon Populations in the Columbia River System as a Whole

Disciplines Relevant to the Problem	How the Perspective Illumines the Problem/Subject as a Whole
Biology/ecology	The reduction of salmon populations may have something to do with the system of hydroelectric dams that were constructed on the Columbia and Snake Rivers.
Economics/business	The reduction of salmon populations produced unforeseen economic consequences.
Earth science (geology)	The dam system impacted the region's hydrological system.
History	The damming of the Columbia River system tells us something about the nation's confidence in this period of history.
Political science	The problems arising from the damming of the Columbia River system raise questions about the role of government concerning the future of the system.

Source: Repko (2012b)

Primarily From the Social Sciences: Fischer (1988), "On the Need for Integrating Occupational Sex Discrimination Theory on the Basis of Causal Variables"

By asking this second question, Fischer drills more deeply into each discipline's perspective as shown in Table 7.6. In effect, he asks what, in general terms, does each perspective say is the probable cause of OSD?

Table 7.6   How Perspectives Illumine the Problem of OSD

Disciplines Relevant to the Problem	How the Perspective Illumines the Problem/Subject as a Whole
Economics	OSD is caused by rational economic/business decision making.
History	OSD is caused and perpetuated by long-standing institutional practices.
Sociology	OSD is caused by a process of socialization that, in turn, is directly reflected in occupational structures.
Psychology	OSD is caused by males perpetuating the traditional male-female division of labor.
Marxism**	OSD is a logical extension of attempts to preserve the institutions of capitalism.

Source: Repko (2012b)

**Marxism is a school of thought

Primarily **From the Humanities: Bal (1999), Introduction to** *The Practice of Cultural Analysis: Exposing Interdisciplinary Interpretation*

Table 7.7 shows that Bal is concerned to probe more deeply into the meaning of the poem from multiple standpoints of the author, those who encountered it when it appeared, and those who grapple with its meaning today.

Table 7.7   How Disciplinary Perspectives Illumine the Meaning of the Poem

Disciplines Relevant to the Problem	How the Perspective Illumines the Problem/Subject as a Whole
Anthropology (cultural)	The poem is an expression of contemporary (i.e., circa 1945) "popular" Dutch culture.
Art history	The poem is a complex artistic creation in its composition and placement.
Linguistics (narratology)	The poem is a symbol.
Philosophy (epistemology)	The poem suggests that love was real or unreal.
Literature	The poem is comparable to other Dutch poetry.
Psychology	The poem is an expression of psychic mourning for a lost love.

Source: Repko (2012b)

3. What Are the Strengths and Limitations of Each Perspective?

It is not enough to know the perspective of each discipline on the problem in a general sense, or even to know how these perspectives illumine some aspect of the problem. Interdisciplinarians also need to know the strengths and limitations of each perspective in that particular context, and this information is often revealed only after juxtaposing disciplinary perspectives as we do in Table 7.8 with Fischer's study.

Fischer's study of the causes of occupational sex discrimination points up the strengths and limitations of each of the disciplines that he identifies as potentially relevant because the subject falls within their research domains. His detailed comments on the limitations of each perspective reflect his expertise in economics and his determination to achieve adequacy in other potentially relevant disciplines.

Table 7.8   Strengths and Limitations of Disciplinary Perspectives on the Causes of Occupation Sex Discrimination

Relevant Disciplines	Strengths of Perspective	Limitations of Perspective
Economics	• Economic motivation of employers	• Economists have not decided upon a single explanation of OSD. • Economic motivation fails to account for prejudice, sex-role socialization, and "tastes" adverse to hiring women. • It assumes that individuals are rational and self-interested.
History	• Able to identify historical trends that may have produced the problem • Able to place problem in a broad context	• It is unable to comprehensively analyze behavior of groups. • It is unable to account for psychological motivation of individuals.
Sociology	• Conflict among social groups, institutions • Differences between how men and women are raised	• Its focus on groups fails to account for individual behavior motivated by complex psychological factors or genetic predisposition.
Psychology	• Individual behavior, decision making	• It is unable to study group behavior.
Marxism	• Explains macro trends and developments	• Economic considerations fail to explain behavior of all groups or individuals.

Source: Repko (2012b)

Simply because a discipline's perspective has limitations does not disqualify it from being used. After all, every perspective has limitations, and these vary depending on the characteristics of the problem and the goal of the study.

Nevertheless, these limitations *do* mean that the insights of the discipline are skewed by the way each author defines the problem, and the interdisciplinarian must acknowledge this as Fischer does.

CRITICAL THINKING SCENARIO

The following scenario is based on an actual situation in which newly laid-off employees and their union leaders attempted to save their jobs in the supermarket industry in Big City, USA. They planned to pool their resources (e.g., personal savings and 401k retirement plan money) and apply for a large bank loan in order to purchase the bankrupt supermarket where they had worked, and manage it themselves. At the time, a team of academics from a nearby university came together to conduct research on job-saving strategies in areas that were experiencing population loss and economic decline, and decided to focus on this particular experiment in "grassroots capitalism."

1. Identify the disciplinary perspectives that would enable the academic team to develop the most comprehensive understanding of the situation facing the laid-off employees.

2. How would each of these perspectives illumine the situation *as a whole*?

3. What primary strength and limitation would each perspective bring to the subject?