

AN OUTLINE OF CRITICAL THINKING

LEVELS OF INQUIRY

1. **Information:** correct understanding of basic information.
2. **Understanding basic ideas:** correct understanding of the basic meaning of key ideas.
3. **Probing:** deeper analysis into ideas, bases, support, implications, looking for complexity.
4. **Critiquing:** wrestling with tensions, contradictions, suspect support, problematic implications. This leads to further probing and then further critique, & it involves a recognition of the limitations of your own view.
5. **Assessment:** final evaluation, acknowledging the relative strengths & limitations of all sides.
6. **Constructive:** an articulation of your own view, recognizing its limits and areas for further inquiry.

EMPHASES

Issues!

- **Reading:** Know the issues an author is responding to.
- **Writing:** Animate and organize your paper around issues.

Complexity!

- **Reading:** assume that there is more to an idea than is immediately obvious; assume that a key term can be used in various ways and clarify the meaning used in the article; assume that there are different possible interpretations of a text, various implications of ideals, and divergent tendencies within a single tradition, etc.
- **Writing:** Examine ideas, values, and traditions in their complexity: multiple aspects of the ideas, different possible interpretations of a text, various implications of ideals, different meanings of terms, divergent tendencies within a single tradition, etc.

Support!

- **Reading:** Highlight the kind and degree of support: evidence, argument, authority
- **Writing:** Support your views with evidence, argument, and/or authority

Basis! (ideas, definitions, categories, and assumptions)

- **Reading:** Highlight the key ideas, terms, categories, and assumptions on which the author is basing his views.
- **Writing:** Be aware of the ideas that give rise to your interpretation; be conscious of the definitions you are using for key terms; recognize the categories you are applying; critically examine your own assumptions.

Criteria!

- **Reading:** If the author is making judgments, analyze what criteria those judgments are made of.
- **Writing:** If you are evaluating an idea or tradition, be clear about the criteria you are applying and think critically about their validity and appropriateness.

QUALITIES OF MIND

Critical thinking isn't limited to things you do but depends on particular qualities of mind that *dispose* you toward critical thinking and *enable* you to do it.

1. **Seriousness and inquisitiveness.** Critical thinking depends on being serious about ideas, values, and the conditions of the world around you (taking *yourself* seriously gets in the way). And true seriousness leads to a deep inquisitiveness.
2. **Respect and criticalness.** To inquire deeply one needs to have an openness and respect for divergent and unusual ideas and worldviews, recognizing their significance, and at the same time a tendency to wrestle with problems. You need both to get beyond the surface.
3. **Imagination and precision.** In order to engage the ideas and problems, one needs both creative imagination and precise logic. The former is a mental suppleness that allows you to enter another's worldview while the latter enables penetrating rational analysis – both are necessary.
4. **Openness and thoroughness.** Critical thinking requires an openness to ambiguity – an ability to consider conflicting but compelling options as well as inconclusive arguments. It also requires at the same time a determined drive toward some type of resolution, even if it is complex and open-ended.

HIGHLIGHTING COMPLEX ISSUES

Scientific and factual uncertainty or dispute

Sometimes natural scientists and social scientists do not yet have sufficiently reliable information to make a precise analysis or strong argument, or they provide us with conflicting data. Look for these gaps and discrepancies, and if directly pertinent to your paper, articulate the provisional quality of the data and support your use of that data.

- This data could refer to the current situation (e.g., type and level of pollution), effects of certain actions (e.g., jobs lost if environmental regulation goes into effect), history or causes of current conditions (e.g., temperature increase), etc.

Policy disagreements

Often policy makers and policy advocates disagree on the relative wisdom of a particular policy. Look for these debates, and if directly pertinent to your paper, summarize objectively the disagreements and the bases for the different views, and then argue for your particular judgment.

Policy disagreements may be based on:

- Different data used
- Different objectives
- Different priorities (e.g., relative importance of conserving wilderness and creating jobs)
- Consideration (or lack of consideration) of certain aspects of the issue (e.g., effect on the poor of other countries)
- Values (see below)

Disagreements over basic values

Some environmental disagreements concern basic values. In your paper, you should engage some of these issues and articulate and support your values.

- **Ethical values.** What kind and degree of ethical responsibility do we have to the poor, to future generations, to species? How do these values impact policy?
- **Social philosophy.** What type of society is ideal? For instance, should we be aiming at an economy that maximizes the “standard of living,” or should we be aiming at a society that maximizes the health of communities and diversity of cultures? Should we support corporations gaining additional strength, or should we aim at a decentralized society living within the limits of the bioregion? How is current society evaluated: positive view of corporate wealth which is the best way to help people, or a critique of injustice and oppression? Can we trust science and technology to solve problems in the future, or should we use the precautionary principle?
- **Philosophy of nature.** What is nature – resource for our use, a living system we should preserve, a community we are a part of and yet use? Does nature “care” if we clear-cut a mountain? What is our essential relationship to nature – are we separate and superior or a “plain citizen” of the land?
- **Epistemology and psychology.** What are the relative validity and the place of intuitive, emotional, and mystical awareness of nature?
- **Aesthetics.** What is the relative significance of aesthetic values to policy? How can we incorporate aesthetic values into policy?

THE DIMENSION OF VALUES IN ENVIRONMENTAL POLICY

Environmental issues are often portrayed as being simply questions of scientific fact. In other cases, social policy (primarily economics and politics) is seen as part of environmental issues. Only rarely do people recognize or consider the **dimension of values** found primarily in the **humanities** – especially philosophy and religion. Indeed, if this dimension is brought up, its relevance is frequently denied. In actuality, every environmental issue or policy involves (at least implicitly) ethical values and philosophical views. The UW Oshkosh Environmental Studies program is designed to highlight this dimension along with science and policy, and ES 490: Senior Seminar is an opportunity to articulate at a sophisticated level the significance of values in environmental issues. When you analyze a policy and when you develop your own policies, it is crucial to recognize and articulate the values involved.

To simplify, we can state that there are **two main aspects of the values dimension** in environmental policy. The *first* is **ETHICS**. A policy inevitably involves a particular sense of **moral responsibility to other humans**. In the policy, whether it is another's or you own, you should ask what type and degree of moral responsibility is assumed in relation to people in the local arena (e.g., Wisconsin or the U.S.), people around the world (e.g., Sri Lanka), people in different races and classes (including workers), and people in the future. Different views on moral responsibility lead to different policies.

The question of moral considerability is not limited to humans. In a particular policy, what is the type and relative degree of **moral considerability** given to **individual animals and plants, to ecosystems, and to the biodiversity of the planet**? A policy toward renewable energy, for instance, affects the health of children who breathe the air and the poor who eat more of Wisconsin's toxic fish than the wealthy, the livelihood of workers (too often ignored by environmentalists), the biological health of lake ecosystems, and future generations of people living close to the ocean, such as in Sri Lanka. And because that policy has the potential to benefit or harm these and many other living things, it has a moral dimension. If you believe that you have moral obligations to the people of Sri Lanka and to local ecosystems, your policy will be different than those who see their primary (or only) obligation to the economic well-being of corporations and consumers. Pick a policy on any issue: what moral values are at work?

The *second* major aspect of the values dimension is what we can loosely call philosophy, both **PHILOSOPHY OF NATURE AND SOCIAL PHILOSOPHY**. (I say "loosely" because the concepts and approaches involved may not fit the confines of rationality that most modern Western philosophers work within.) Any policy involves at least an implicit **conception of what nature is**. If you see nature as a collection of resources, you will probably come up with a different policy than if you see nature as a community of fellow beings or an integrated system we are a part of or God's sacred creation. For instance, the belief that nature is a set of resources without any real vitality or inherent value is quite likely at work in a policy that favors genetic engineering. That belief is a philosophical view that dates back to Francis Bacon and other philosophers of the scientific revolution. What conceptions of nature are at work in the policies you discuss?

Also involved in any policy is a **social philosophy**, in the sense of a *view of the self and of our relations to other humans and to nature*. Most environmental (and social and legal) policies imply that we are individuals, essentially separate and distinct from other humans. Our relations to others, whether locally, nationally, or globally, are secondary and “accidental” – not part of our essential self. But some environmental policies, especially those proposed by deep ecologists and ecofeminists and those influenced by Asian or Native American culture, involve a belief that we are inextricably and essentially part of a human community to which we are responsible and to which we should have deep care that goes beyond a rational sense of justice. A related issue concerns *our relationship with nature*. Does a policy (another’s or yours) assume that we are essentially separate from and superior to the natural world? Or does it assume that we are fully a part of nature, whether it is Aldo Leopold’s sense of being a “plain citizen of the land” or the more mystical sense of identification found in deep ecology?

In thinking about the dimension of values, it is often helpful to keep in mind various **schools and movements**, such as animal rights, bioregionalism, deep ecology, ecofeminism, social ecology, and stewardship. You should also consider different **types of ethics**: consequentialist (utilitarian), deontological, natural law, virtue ethics, and ethics of care. And it is important to consider a number of **distinctions** made in environmental philosophy: anthropocentrism versus biocentrism versus ecocentrism, holism versus communalism versus individualism, intrinsic value versus instrumental value, biocentric egalitarianism versus hierarchies of value, monism versus pluralism. Reference to these can help analyze the philosophical assumptions in any environmental policy.

It is crucial that we learn to recognize and articulate how these issues of value are at work in environmental policy. Debates about policies often go astray because the real disagreements are found in implicitly held values that no one talks about. And one of the reasons the environment has been so degraded is because our society has failed to consider such issues.

DIALECTICAL ANALYSIS

Dialectical analysis is a way to deepen your analysis and probe an idea, issue, or thinker.

The goal of dialectical analysis is to go beyond a summary to probe the ideas and values, their significance, and their limitations.

It does not matter what your final conclusion is, as long as you show good dialectical analysis in getting there.

The main thing to avoid is too-easy acceptance and too-easy dismissal.

Here are some levels in the process of dialectical analysis.

Initial, surface analysis

What are the ideas and values being presented? (Give quotes to illustrate and support your interpretation.)

Deeper analysis

What are the issues involved, their basis, their support, and their implications?

Sympathetic assessment

What is the significance of the ideas and values? In what way do they make sense for that thinker? In what ways are the ideas and their basis and support compelling?

Critique

What are the problems and limitations of the ideas, their basis, the support used, and their implications?

Response

How might the thinker or someone else respond to that critique?

Self-critique

What are the assumptions, basis, and implications of your (the critic's) view? And what are the potential limitations of them?

Reply

How might a critic reply to that response?

etc....

A dialectical analysis doesn't require this structure, but the dialectic needs to animate and inform the analysis in some way.

In this way you probe beneath the surface. And in this way your conclusion is more sophisticated and more compelling – even (or especially) if it is more complex.