

Critical Thinking: Intellectual Standards Essential to Reasoning Well Within Every Domain of Thought

By Linda Elder and Richard Paul

Students live in a world of thoughts. They accept some thoughts as true. They reject others as false. But the thoughts they perceive as true are sometimes false, unsound, or misleading. And the thoughts they perceive as false and trivial are sometimes true and significant.

The mind doesn't naturally grasp the truth or naturally see things as they are. People don't automatically sense what is reasonable and what unreasonable. Thought is often biased by personal agendas, interests, and values. People typically see things as they want to and twist reality to fit preconceived ideas. Distorting reality is common in human life. Everyone falls prey to this phenomenon.

Each person views the world through multiple lenses, often shifting them to fit changing feelings. In addition, perspective is largely unconscious and uncritical and has been influenced by many forces including social, political, economic, biological, psychological, and religious influences. Social rules and taboos, religious and political ideologies, biological and psychological impulses, all play a role, often unconscious, in human thinking. Selfishness, vested interest, and parochialism are deeply influential in the intellectual and emotional lives of most people.

A system for intellectual intervention—a method for pre-empting bad thinking—is necessary: one that allows us to take rational command of our cognitive processes so we may rationally determine what to accept and what to reject. In short, we need standards for thought; standards that guide us to consistently excellent thinking; and standards we can count on to keep our thinking on track, to help us mirror in our minds what is happening in reality, to reveal the truth in situations, and to enable us to determine how best to live our lives.

In this and the next few columns we introduce an explicit foundation for thinking about intellectual standards and the words that name them. When taken seriously, such explicitness will lead to a higher level of consciousness of these standards and their importance in human life. It will enable students (and instructors) to think more effectively in every domain and subject in which, or about which, they think. Of course, in these brief columns we can merely begin to analyze the standards for thought.

In conceptualizing intellectual standards, we hypothesize the following:

1. Intellectual standard terms are rooted in everyday language and are presupposed in every subject, discipline, and domain of human thought.
2. There is a rich variety of intellectual standard terms extant in natural languages from which one can draw in order to discipline one's thinking.
3. Intellectual standards form constellations of interrelated meanings that can be placed into categories under headings such as clarity, accuracy, precision, relevance, importance, and fairness.
4. There are numerous concepts (e.g., integrity, empathy, fairmindedness) in natural languages which, though not themselves intellectual standards, presuppose intellectual standards.

5. Systematic cultivation is required for humans to use intellectual standard words at a high level of skill.
6. In reasoning through subjects and disciplines, intellectual standards to which one is expected to adhere should be made explicit (to be properly monitored).
7. The consistent and explicit satisfaction of intellectual standards is important to commanding the quality of one's life and, more generally, to creating societies that genuinely value critical thinking.

Intellectual Standard Words

All modern natural languages provide their users with a wide range of intellectual standard words. Natural languages are languages used in the conduct of daily life (such as English, German, French, Arabic, Japanese). These languages emerge from repositories of terms and phrases that have developed over thousands of years by people who share a region and hence communicate with one another within that region. Natural languages contrast with artificial languages, which are created by specialties to facilitate a domain of study or interest (e.g., science, psychology, mathematics, baseball, etc.). Natural language terms, when appropriately used, serve as plausible guides for assessing reasoning. For example, the following words name intellectual standards in the English language: clarity, accuracy, precision, relevance, depth, breadth, logicalness, significance, and fairness (see Figure 1). There are synonyms for these essential intellectual standards in every natural language (German, French, Spanish, Korean, Chinese, Turkish, and so on). The same words in French, for instance, are *clarté*, *exactitude*, *précision*, *pertinence*, *profondeur*, *ampleur*, *logique*, *signification*, and *impartialité*.

Understanding how to apply intellectual standard words appropriately to cases is essential to thinking well in every language and to reasoning through all content. To live "reasonably," humans need to construct their thinking so as to be clear, accurate, relevant, significant, logical, and so forth. They also need to clarify the thinking of others, to check for accuracy, logic, significance and so on. Routine use of these nine intellectual standards—reflected in the intellectual standard words—is essential to thinking well within every domain of human life. And these standards are part of a much broader set of intellectual standards humans need to draw upon regularly as part of their everyday life.

In speaking of "intellectual standards," it may be more accurate to say "intellectual standards words." For purposes of simplicity and ease of reading, we often use the shorter term "intellectual standards." The relationship between concepts and word use is complicated. It would be difficult to understand or explain intellectual standards without using and talking about intellectual standard words. The critical analytic vocabulary of the English language, rightly used, fosters command of intellectual standards for English speakers. These standards may go beyond present usage in that they may encompass underlying implications. But without cultivated command of intellectual standards, the foundations cannot be laid. In short, when

we use the term “intellectual standards,” we generally mean “intellectual standard words established by educated use.” Intellectual standards, as we understand them, are conceptualizations in disciplined human minds of possible strengths and weaknesses in thinking. They are embodied in the proper use of intellectual standard words in context.

Conclusion

Our fundamental purpose in this series is to illuminate (a) the essential role intellectual standards play in the life and mind of the scholar, (b) the importance of intellectual standards in understanding and reasoning through content of any kind, and (c) the importance of explicitly mastering intellectual standards. In doing so, we offer a brief analysis of some of the most important intellectual standards in the English language. We look at their opposites. We argue for their explicit contextualization within subjects and disciplines (see Figure 2). And we call attention to the forces that undermine their use in everyday human life and human reasoning.

Reasonable people judge reasoning by intellectual standards. When you internalize these standards and explicitly use them in your thinking, your thinking becomes more clear, more accurate, more precise, more relevant, deeper, broader and more fair. You should note that we focus here on a selection of standards. Among others are credibility, sufficiency, reliability, and practicality. The questions that employ these standards are listed on the following page.

Clarity:

understandable, the meaning can be grasped

Accuracy:

free from errors or distortions, true

Precision:

exact to the necessary level of detail

Relevance:

relating to the matter at hand

Depth:

containing complexities and multiple interrelationships

Breadth:

encompassing multiple viewpoints

Logic:

the parts make sense together, no contradictions

Significance:

focusing on the important, not trivial

Fairness:

justifiable, not self-serving or one-sided

Figure 1. Essential intellectual standard words, and brief definitions, applicable to skilled reasoning in all domains of human thought and action.

Note: Reprinted with permission from Elder, L., & Paul, R. (2012). *The Thinker's guide to analytic thinking* (p. 8). Tomales, CA: Foundation for Critical Thinking.

Reference

Elder, L., & Paul, R. (2012). *The thinker's guide to intellectual standards: The words that name them and the criteria that define them*. Tomales, CA: Foundation for Critical Thinking Press.

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Clarity

Could you elaborate further?
Could you give me an example?
Could you illustrate what you mean?

Accuracy

How could we check on that?
How could we find out if that is true?
How could we verify or test that?

Precision

Could you be more specific?
Could you give me more details?
Could you be more exact?

Relevance

How does that relate to the problem?
How does that bear on the question?
How does that help us with the issue?

Depth

What factors make this a difficult problem?
What are some of the complexities of this question?
What are some of the difficulties we need to deal with?

Breadth

Do we need to look at this from another perspective?
Do we need to consider another point of view?
Do we need to look at this in other ways?

Logic

Does all this make sense together?
Does your first paragraph fit in with your last?
Does what you say follow from the evidence?

Significance

Is this the most important problem to consider?
Is this the central idea to focus on?
Which of these facts are most important?

Fairness

Do I have any vested interest in this issue?
Am I sympathetically representing the viewpoints of others?

Figure 2. Questions implied by understanding and use of intellectual standards. Each question represents an intellectual move students can make as they reason through content and as they develop ideas.

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