

i2a  
COMIC  
SERIES  
2015

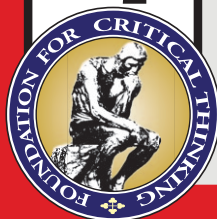
THE ORIGINAL CRITICAL THINKING COMIC SERIES

# ADVENTURES IN CRITICAL THINKING



## "ROOMMATE TROUBLES"

ISSUE  
No. 2





## **"ROOMMATE PROBLEMS"**

*Author: Melody Niemann*

*Illustrator: Alex O'Keefe*

*Editors: Brian Barnes, Ph.D., Rush Cosgrove, Ph.D.*

*Artistic Director: Mith Barnes*

*Creative Director: Brian Barnes*

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### **SPECIAL THANKS TO:**

*The University of Louisville Ideas to Action (i2a)  
(<http://louisville.edu/ideastoaction/>)*

*The Foundation For Critical Thinking ([www.criticalthinking.org](http://www.criticalthinking.org))*

*Patty Payette*

*Edna Ross*

*Cathy Bays*

*Richard Paul*

*Linda Elder*

*Gerald Nosich*

*Cindy Saling*

*Andrew Segal*

*Cameron Kalegi*

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### **ABOUT THIS PROJECT**

*This project was Funded by a SUN grant From The University of Louisville's Ideas to Action i2a critical thinking initiative (: <http://louisville.edu/ideastoaction/programs/grants>).*

*All writers and illustrators were paid For their efforts through a stipend at the time of writing or illustration. The program seeks to infuse a deep sense of Fair-minded critical thinking in the tradition of Richard Paul and The Foundation For Critical Thinking.*

*Each issue contains one story written by an undergraduate student at The University of Louisville who, at the time of the writing, had taken one Critical Thinking course utilizing the Paul-Elder Critical Thinking Framework or had received some personalized Critical Thinking training in the Framework. Illustrators were also undergraduate students, and most of them received no critical thinking training prior to the project. The comic scripts were evaluated by representatives at The Foundation For Critical Thinking prior to illustrators seeing them. Brian Barnes and Mith Barnes are responsible For all work on the final comic books. Brian is responsible For the analyses behind Mith's attractive color-coding. At the time of satisfying the grant, Brian Barnes is a visiting scholar with The Foundation For Critical Thinking, a Senior Lecturer at The University of Louisville's Department of Philosophy, and a sustainability advocate at U of L. He also has teaching gigs at Bellarmine University, Spalding University, Simmons College, and Indiana University Southeast. Mith Barnes is a Lecturer in Bellarmine University's Interdisciplinary Core and the Department of Philosophy at Indiana University Southeast.*

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*For printed copies of this comic book, For consultation regarding your own project, or For educational events, please contact Brian Barnes at [brian.barnes@louisville.edu](mailto:brian.barnes@louisville.edu), at 502-338-1338, or on Facebook.*

*Examples of how to use the comic books to make critical thinking explicit can be found at <https://youtu.be/JsLzgM3KAT4>*

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# HOW TO USE THIS COMIC BOOK TO LEARN OR TEACH CRITICAL THINKING IN THE PAUL-ELDER FRAMEWORK

Each issue of *Adventures in Critical Thinking* is an opportunity to practice identifying Features of the Paul-Elder Critical Thinking Framework. There are several levels to this practice built into the comic.

## 1. IDENTIFICATION OF THE PAUL-ELDER CRITICAL THINKING VOCABULARY

Readers can use the theory pages, located at the front of each issue, to learn the basic pieces of Paulian Critical Thinking Theory: The Elements of Thought, the Intellectual Standards, the Intellectual Traits, and two kinds of biases, Egocentric Bias and Sociocentric Bias. Story cells and thought balloons on many pages are color-coded to prompt readers to identify one or more Features of Paul-Elder CT occurring in that cell. The color codings are not meant to be exhaustive, however, so other aspects may be in that cell. The activity avoids being didactic, since the particular vocabulary term is not identified by the coloration, only the group. Readers will have to interpret the language on the page and compare it to the appropriate theory page in order to gain the basic of knowledge of how critical thinking can fit into the scenario in the comic book. The basic interpretations built into the color coding in each comic are explicated for teachers and students at the project's YouTube channel.

## 2. RECONSTRUCTION

After readers have identified the critical thinking terms in each comic, he or she may analyze the situation to reconstruct the thinking of the characters in the comic book. This will entail a combination of Elements, Standards, Traits, and Biases, and there may be multiple constructions.

## 3. SELF REFLECTION

The reader could relate this to his or her personal narrative, to his or her own Egocentric and Sociocentric biases, or to other relevant personal systems and ideologies.

## 4. JUDGMENT

The reader can decide whether he or she agrees with the thinking of the characters after he or she has completed an analysis.

Of course, many other uses can be found. The participants in the project hope that this will be a fun and accessible way to learn critical thinking for students of all age groups and appropriate education levels.

In a classroom setting, these easy to digest comics could be used for group work, for individual practice, or for interactive teaching opportunities. At a minimum, interactive, engaged groups can always participate in at least six learning modalities while engaging with the comics:

1. Reading about the thinking and behaviors in the comics.
2. Writing or blogging about the thinking in the comics.
3. Speaking about the thinking in the comics with others.
4. Listening to others speak about the thinking in the comics.
5. Thinking about the thinking in the comics.
6. Role Playing the thinking in the comics in an effort to develop Intellectual Empathy.



# KEEP CALM AND USE CRITICAL THINKING

**“Need to think something through?**

**Have a problem and want to think about it in a new way?**

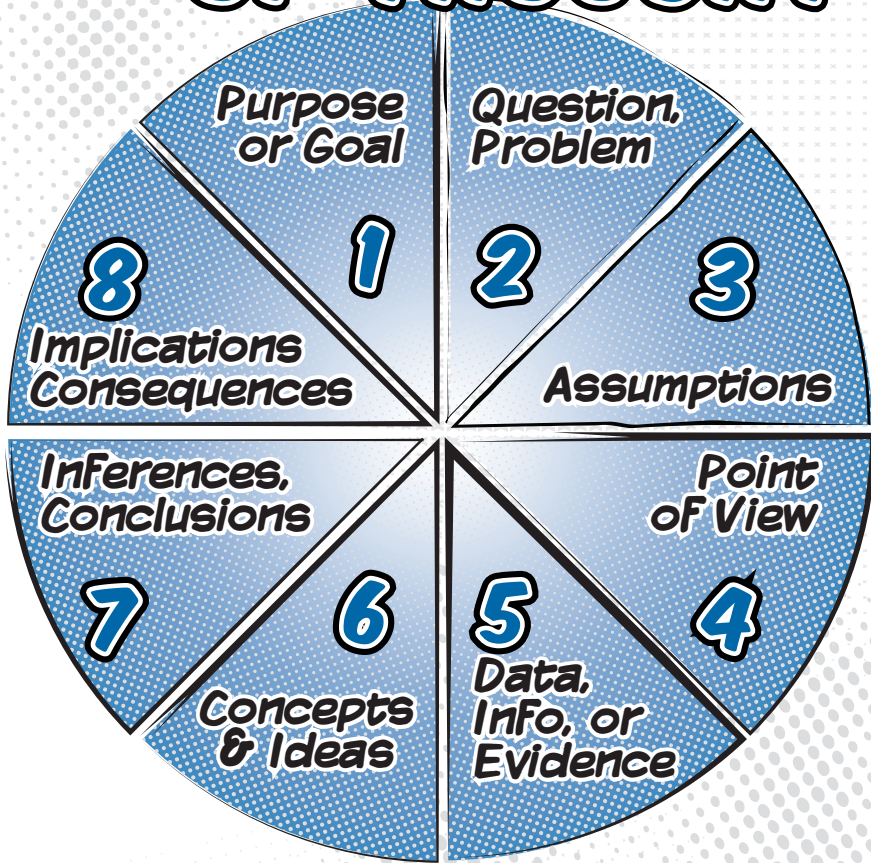
**Check out the interactive critical thinking tool that enables  
you to apply the Paul Elder approach to real life problems.**

**Interactive Tool at this URL:**

**<http://www.criticalthinking.org/pages/elements-and-standards-learning-tool/783>**



# THE ELEMENTS OF THOUGHT



- 1) All reasoning has a PURPOSE or GOAL.
- 2) All reasoning attempts to settle a QUESTION or solve a PROBLEM.
- 3) All reasoning is based on ASSUMPTIONS.
- 4) All reasoning is done From some POINT OF VIEW.
- 5) All reasoning is based on DATA, INFORMATION and EVIDENCE.
- 6) All reasoning is expressed through, and shaped by, CONCEPTS and IDEAS.
- 7) All reasoning contains INFERENCES or interpretations by which we draw CONCLUSIONS and give meaning to data.
- 8) All reasoning leads somewhere or has IMPLICATIONS and CONSEQUENCES.

# INTELLECTUAL STANDARDS

ASKING QUESTIONS OF OURSELVES OR OTHERS HELPS US EVALUATE INTELLECTUAL STANDARDS

## Clarity

Could you elaborate on that point? Could you express that point in other way? Could you give me an illustration or an example?

## Accuracy

Is that really true? How could we check that? How could we find out if that is true?

## Precision

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

## Relevance

How is that connected to the question? How does that bear on the issue?

## Depth

Does your answer address the complexities in the question? Are you taking into account the problems in the question? Are you dealing with the most significant factors?

## Breadth

Do we need to consider another point of view? Is there another way to look at this question? What would this look like from the point of view of...?

## Logic

Does this really make sense? Does that follow from the facts at hand? How does that follow?

## 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

Are we considering all relevant viewpoints in good faith? Are we distorting some information to maintain our biased perspective? Are we more concerned about our vested interests than the common good?



# INTELLECTUAL TRAITS

## Intellectual Humility

Awareness of the limits of one's knowledge, sensitivity to bias and prejudice, lack of intellectual conceit

Having rational control of one's beliefs, values, and inferences, to think for oneself

## Intellectual Autonomy

## Intellectual Integrity

Ability to be true to one's own thinking; to be consistent in applying intellectual standards, to admit inconsistencies in one's own thought and action

Awareness of the need to face and fairly address difficult ideas, beliefs or viewpoints

## Intellectual Courage

## Confidence in Reason

Confidence that the higher interests of humankind will be best served by using reason, faith that people can learn to think for themselves

Ability to put oneself in the place of others, willingness to reason from premises, assumptions, and ideas other than our own

## Intellectual Empathy

## Intellectual Perseverance

Willingness to pursue reason in spite of difficulties or frustrations, adherence to rational principles despite opposition, willingness to struggle with problems over time

Willingness to treat all viewpoints alike, adherence to intellectual standards apart from one's own advantage

## Fairmindedness

# THE PROBLEM OF EGOCENTRIC THOUGHT

INSTEAD OF USING INTELLECTUAL STANDARDS IN THINKING, WE OFTEN USE SELF-CENTERED PSYCHOLOGICAL STANDARDS TO DETERMINE WHAT TO BELIEVE AND WHAT TO REJECT. HERE ARE THE MOST COMMONLY USED PSYCHOLOGICAL STANDARDS IN HUMAN THINKING.

**It's TRUE because...**

**...I BELIEVE IT!**

*This is: Innate egocentrism! I assume that what I believe is true even though I have never questioned the basis for many of my beliefs.*

**...WE BELIEVE IT!**

*This is: Innate sociocentrism! I assume that the dominant beliefs of the groups to which I belong are true even though I have never questioned the basis for those beliefs.*

**...I WANT TO BELIEVE IT!**

*This is: Innate wish Fulfillment! I believe in whatever puts me in a positive light. I believe what "feels good," what does not require me to change my thinking in any significant way, or what does not require me to admit I have been wrong.*

**...I HAVE ALWAYS BELIEVED IT!**

*This is: Innate self-validation! I have a strong desire to maintain beliefs that I have long held, even though I have not seriously considered the extent to which those beliefs are justified by the evidence.*

**...IT'S IN MY OWN INTEREST TO BELIEVE IT!**

*This is: Innate selfishness! I believe whatever justifies my getting more power, money, or personal advantage even though these beliefs are not grounded in sound reasoning or evidence.*



# THE PITFALLS OF SOCIOCENTRIC BIAS

MOST PEOPLE DO NOT UNDERSTAND THE DEGREE TO WHICH THEY HAVE UNCRITICALLY INTERNALIZED THE DOMINANT PREJUDICES OF THEIR SOCIETY OR CULTURE. SOCIOLOGISTS AND ANTHROPOLOGISTS IDENTIFY THIS AS THE STATE OF BEING "CULTURE BOUND." THIS PHENOMENON IS CAUSED BY SOCIOCENTRIC THINKING, WHICH INCLUDES:

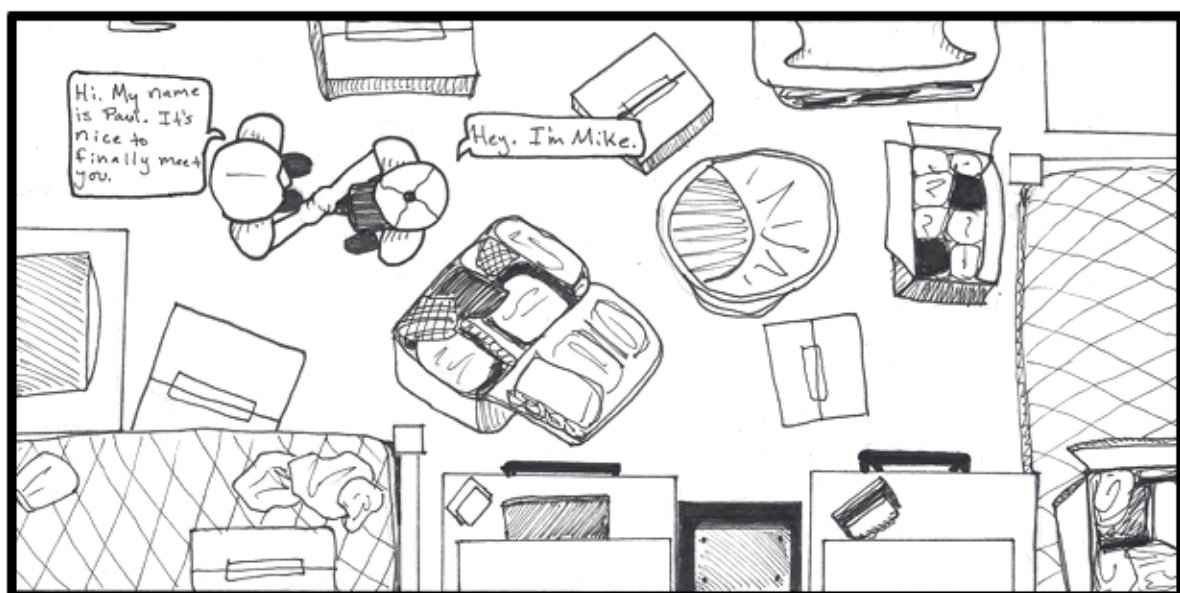
## The uncritical tendency to:

- ✗ place one's culture, nation, religion above all others.
- ✗ select self-serving positive descriptions of ourselves and negative descriptions of those who think differently from us.
- ✗ internalize group norms and beliefs, take on group identities, and act as we are expected to act without the least sense that what we are doing might reasonably be questioned.
- ✗ blindly conform to group restrictions (many of which are arbitrary or coercive).

## The Failure to:

- ✗ think beyond the traditional prejudices of one's culture.
- ✗ study and internalize the insights of other cultures (improving thereby the breadth and depth of one's thinking).
- ✗ distinguish universal ethics from relativistic cultural requirements and taboos.
- ✗ realize that mass media in every culture shapes the news from the point of view of that culture.
- ✗ think historically and anthropologically (and hence to be trapped in current ways of thinking).
- ✗ see sociocentric thinking as a significant impediment to intellectual development.

SOCIOCENTRIC THINKING IS A HALLMARK OF AN UNCRITICAL SOCIETY. IT CAN BE DIMINISHED ONLY WHEN REPLACED BY CROSS-CULTURAL, FAIRMINDED THINKING — CRITICAL THINKING IN THE STRONG SENSE.







Welcome week is now over and school starts the following day.



I'm heading out. See you guys later.



I told you everything would be okay. We have been living together for a week now with no issues.



I'm sure it will. Mike is having someone over and ordering pizza tonight. Do you wanna grab dinner at the Village Grill to get out of his way?

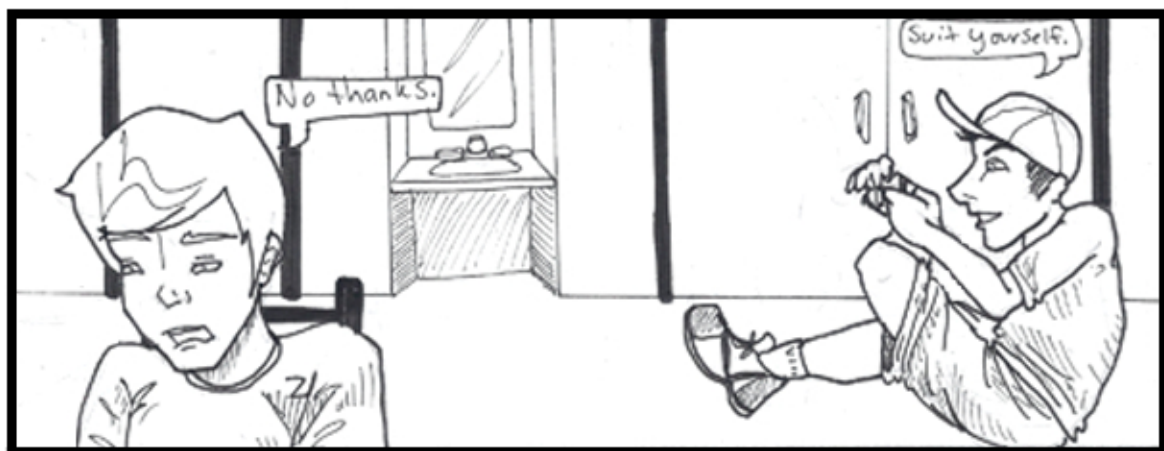
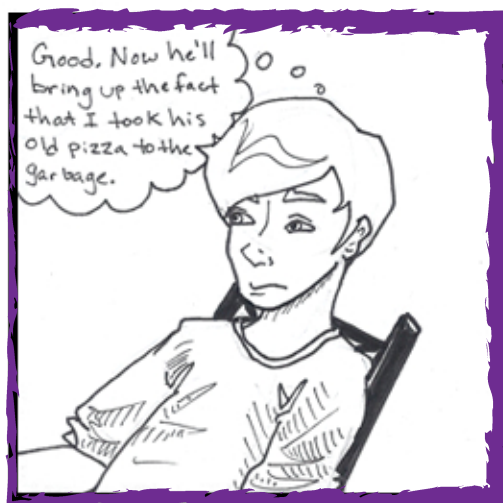
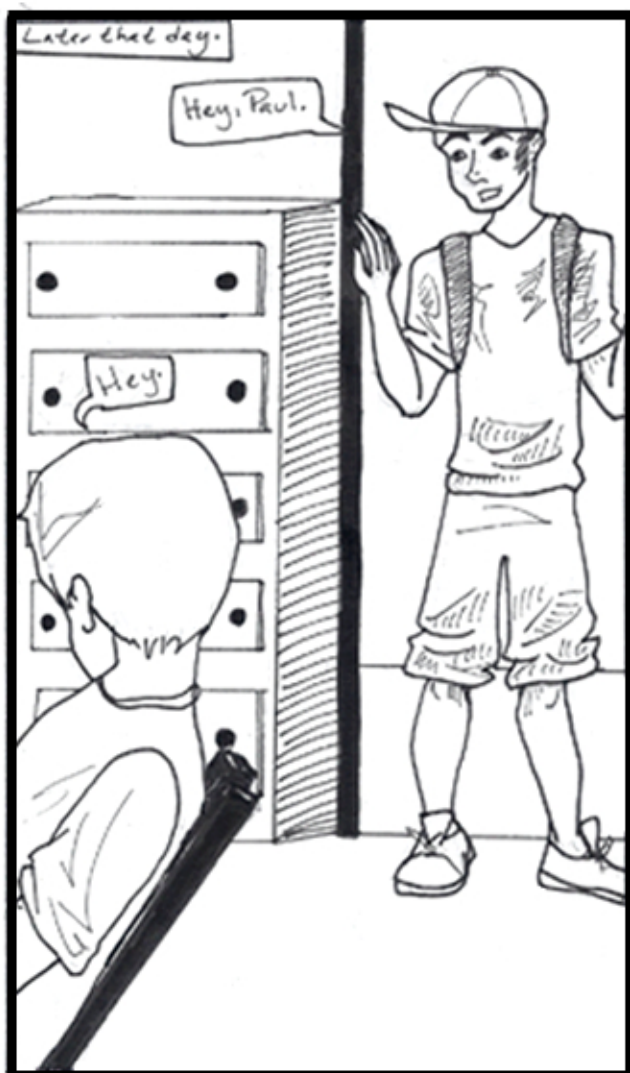


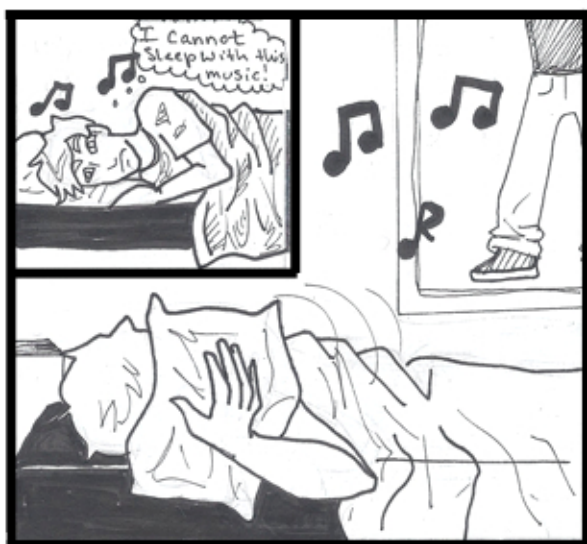
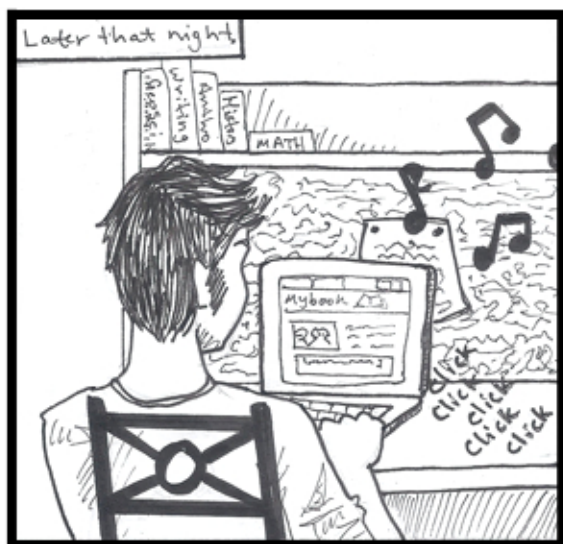
Sure I'll meet you at 7.



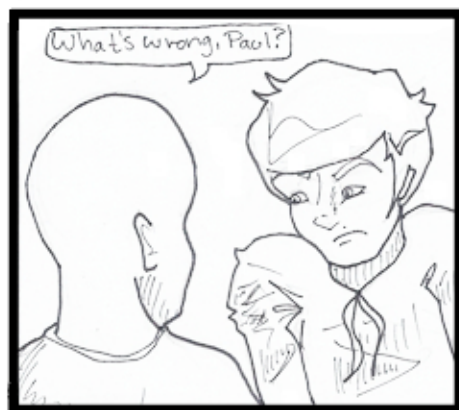




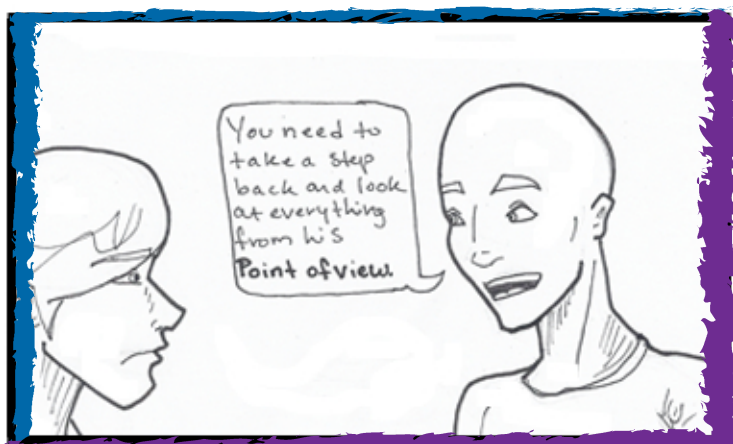


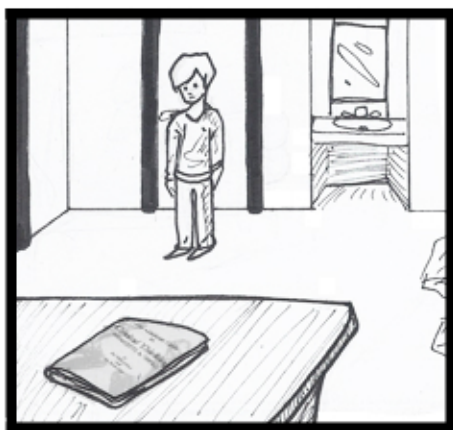
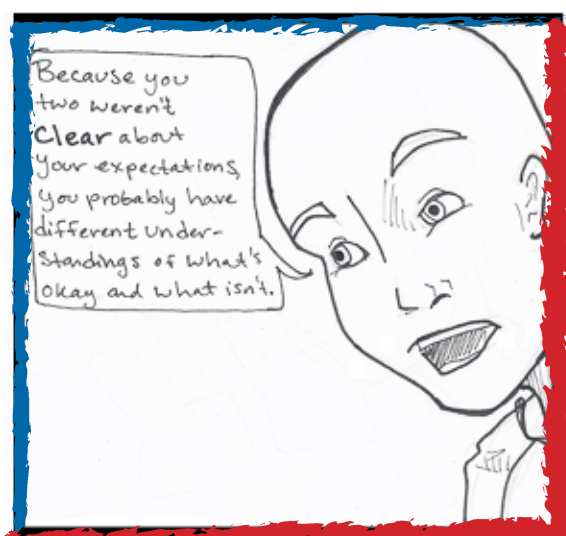














## Clarity:

The Miniature Guide to Critical Thinking Concepts and Tools

### Universal Intellectual Standards: And questions that can be used to apply them

Universal intellectual standards are standards which should be applied to thinking to ensure its quality. To be learned they must be taught explicitly. The ultimate goal, then, is for these standards to become infused in the thinking of students, forming part of their inner voice, guiding them to reason better.

**Clarity:**  
Could you elaborate further on that point? Could you express that point in another way? Could you give me an illustration? Could you give me an example?

Clarity is a gateway standard. If a statement is unclear, we cannot determine whether it is accurate or relevant. In fact, we cannot tell anything about it because we don't yet know what it is saying. For example, the question "What can be done about the education system in America?" is unclear. In order to adequately address the question, we would need to have a clearer understanding of what the person asking the question is considering the "problem" to be. A clearer question might be "What can educators do to ensure that students learn the skills and abilities which help them function successfully on the job and in their daily decision-making?"

**Accuracy:**  
Is that really true? How could we check that? How could we find out if that is true?  
A statement can be clear but not accurate, as in "Most dogs are over 300 pounds in weight."

**Precision:**  
Could you give me more details? Could you be more specific?  
A statement can be both clear and accurate, but not precise, as in "Jack is overweight." (We don't know how overweight Jack is, or what Jack is overweight.)

**Relevance:**  
How is that connected to the question? How does that relate to the issue?  
A statement can be clear, accurate, and precise, but not relevant. For example, students often think that the amount of sleep they should be used in raising their grade in a course. Often, however, the quality of student learning, and when that is so, the appropriate grade.

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## POINT OF VIEW.

### A Checklist for Reasoning

- 1) All reasoning has a **PURPOSE**.
  - State your purpose clearly.
  - Distinguish your purpose from related purposes.
  - Check periodically to be sure you are still on target.
  - Choose significant and realistic purposes.

- 2) All reasoning is an attempt to **FIGURE** something out, to settle some **QUESTION**, solve some **PROBLEM**.
  - State the question or issue clearly and precisely.
  - Express the question in several ways to clarify its meaning and scope.
  - Break the question into sub-questions.
  - Distinguish questions that have definitive answers from those that are a matter of opinion and from those that require consideration of multiple viewpoints.

Reasoning is based on **ASSUMPTIONS**. Identify your assumptions and determine whether they are justifiable. Consider how your assumptions are shaping your point of view.

Reasoning is done from some **POINT OF VIEW**. Identify your point of view.

- Seek other points of view and identify their strengths and weaknesses.
- Strive to be fair-minded in evaluating all points of view.

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## ASSUMPTIONS.

The Miniature Guide to Critical Thinking Concepts and Tools

### A Checklist for Reasoning

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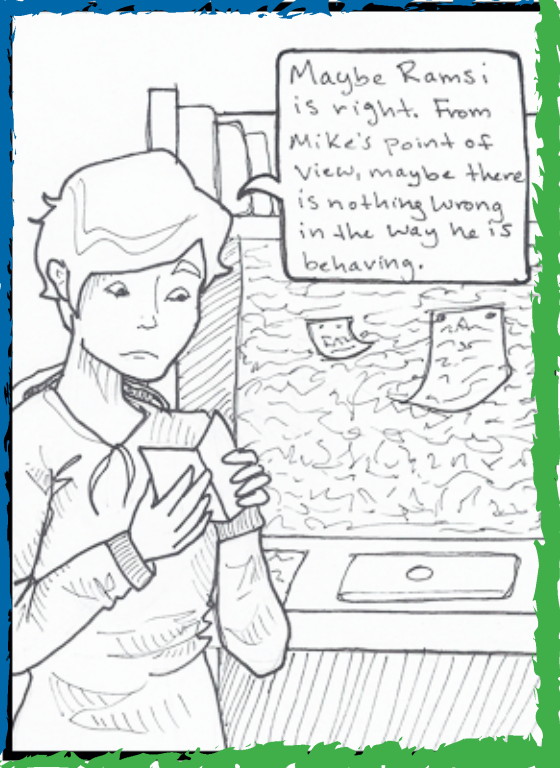
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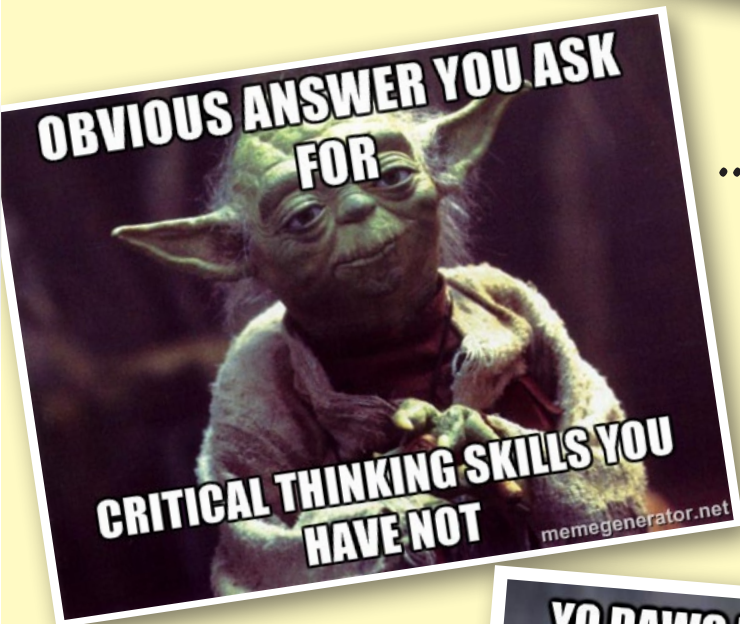
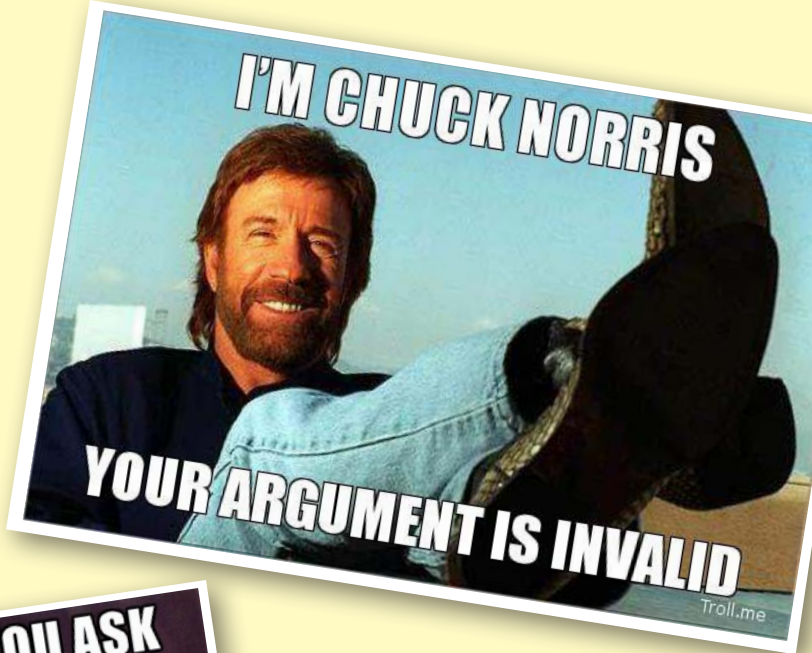
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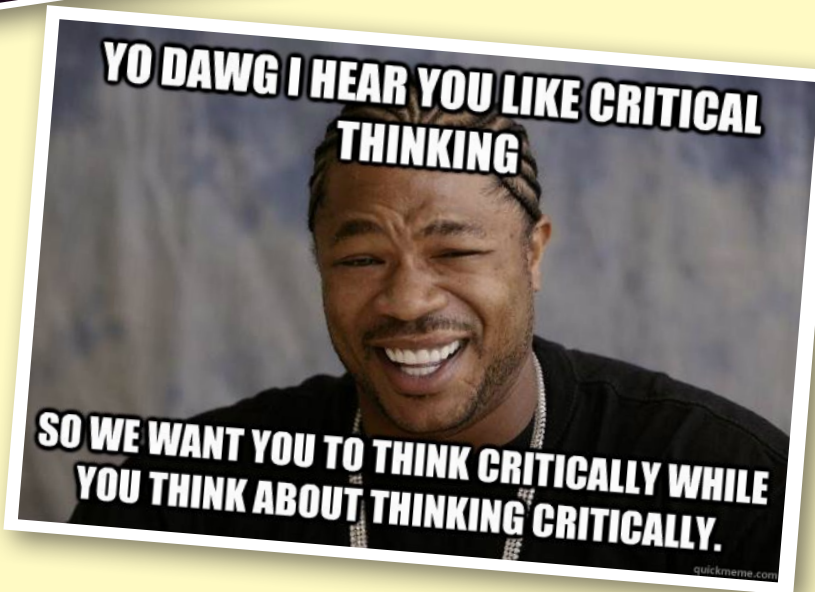


*Sometimes,  
making an  
argument  
is easy...*



*...the rest of  
us might have  
to work at  
it a little.*

*Good thing  
there are tools  
for that!*



Visit the The Critical Thinking Community online

Check out the interactive tool at: <http://www.criticalthinking.org/pages/elements-and-standards-learning-tool/783>

# WHAT YOUR FELLOW STUDENTS ARE SAYING...

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Danna Penaranda

Critical thinking skills are part of my everyday analysis. I use it in public speaking, writing, and in general to analyze my thinking and others, too.

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Rhonda Orman

The critical thinking "Elements" poster started me on a journey that brought an awareness that critical thinking should be approached as a way of life rather than simply as a task to complete. I am learning to think critically in the disciplines in my major, but more importantly, I am beginning to think critically in my life.

Critical Thinking Posters Appear in U of L Classrooms

bit.ly

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Spencer Scruggs

My Critical Thinking class really has helped me understand and use critical thinking every day. I never realized how much I was missing by not using it. I particularly try to pay attention to the assumptions, point of view, and inferences sections of critical thinking. These sections have helped me with dealing with difficult situations and delicate situations. I have to think about how to approach someone and what assumptions are they going to have as I approach the situation. I also have to think what they are going to infer from what I say. Point of view always helps me in not being so one-sided about things and always thinking about how someone else can approach the situation.

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