The Minto Pyramid Principle

or the case for hierarchically structured thinking and communication...

The Proseminar Quadrology (2/4)
http://education.dbai.tuwien.ac.at/wie/WS05/

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Online available at: http://www.dbai.tuwien.ac.at/staff/gatter/work/051104_The_Minto_Pyramid_Principle.pdf
A LETTER FROM A FRIEND (1/3)

Dear Shirley,

Remember last Saturday afternoon when I was playing in the park with my boyfriend and you came over, and he told me that when my back was turned, you kissed him?

And also, on Sunday when you came to my house and my Mom made you a tuna fish salad for lunch and you said: “Yech! That’s the worst salad I ever ate!”?

And yesterday, when my cat brushed against your leg, you kicked her and threatened to sic your dog “Monster” on her?

Well, for all of these reasons, I hate you, and I no longer want to be your friend.

Lucy
Dear Shirley,

I HATE you. Here are my reasons:

1. You stole my boyfriend.
2. You insulted my mother.
3. You scared my cat.

Wouldn’t the message be far clearer if the letter were written that way?
In the second letter, the hierarchy of Lucy’s actual thoughts becomes more explicit and can be considered as a fictitious question-answer dialogue with the addressee.

A LETTER FROM A FRIEND (3/3)

Q: Why did Lucy write this letter to me?

A: Because ...

Q: Why?

A: Because ...

Lucy hates me.

I stole her boyfriend.
I insulted her mother.
I scared her cat.
Any main statement can be either supported by an independent group of arguments ...

STAYING IN VIENNA (1/2) – INDUCTIVE LOGIC*

Mary should stay in Vienna.

- Mary has a good job in Vienna.
- Vienna has very good life quality**.
- Mary’s friends all live in Vienna.

Independent group of answers (logical grouping)

* Induction [MW05]: inference of a generalized conclusion from particular instances.
** Vienna is the second best city to live in according to a 2005 survey from the Economist Intelligence Unit (EIU) on living quality in 127 cities of the world. Vancouver is ranked first.

Source: http://education.dbai.tuwien.ac.at/wie/WS05/
... or by a chain of statements that together form a logical argument.

STAYING IN VIENNA (2/2) – DEDUCTIVE LOGIC*

Unless she is prepared to change, Mary has to stay in Vienna.

Mary wants to continue living in a large city.

Because she only speaks German, Mary is limited to Vienna, Zurich or a large city in Germany.

Mary dislikes Zurich and all German cities.

Therefore, if she wants to live in a large city and does not learn another language, Mary must stay in Vienna.

* Deduction [MW05]: the deriving of a conclusion by reasoning.

* Syllogism [MW05]: deductive argument, consisting of a major and a minor premise and a conclusion.

Source: http://education.dbai.tuwien.ac.at/wie/WS05/
In such a way, we can also answer the question about why we discuss this topic in class.

MOTIVATION OF THE TOPIC*

Q: Why do we discuss this strange stuff in class?

These topics are relevant for the overall course goals.

One of the two course goals is preparation for scientific work.

The lecturer considers this topic to be highly relevant for scientific work.

Therefore, we talk about the pyramid principle in class.

Q: Why?...
Whenever you read or write a scientific paper, first “distill” the key message, and then analyze or support it along a logical question-answering pyramid.

REMEMBER

**Key message**  First find or state the key message before you plunge into details.

**Questions**  Ask questions before you give answers (even if it’s only in your mind).

**Pyramid**  Envision the question-answering process to follow top-down a fictitious logical pyramid structure*.

* Please also see remark 2 in the backup
Source: http://education.dbai.tuwien.ac.at/wie/WS05/
Many people consider Barbara Minto as the thought leader on logically structuring facts and ideas. She is especially well known for being the founder and author of *The Minto Pyramid Principle*. Student can order her book directly with her for a reduced price of 35 EUR (November 3, 2005):


The example of Lucy writing to Shirley is taken from the following book with kind permission of Gene Zelazny:


Definitions are taken from:


Thanks to Barbara Minto, Markus Gremmel and Gerhard Zehetner for useful comments and suggestions.

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Backup
We made arguments for logically structuring your ideas top-down. Depending on the situation, it might make sense to actually present your reasoning bottom-up. Take the example from slide 5 and imagine you try to convince Marry that she has to learn English if she does not want to stay the rest of her life in Vienna. When talking to her, you might want to start with the premises before stating the conclusion.

Still, despite presenting your reasoning bottom-up, you would let the governing thought, top-down, “govern your own thinking” while constructing your argument.

Draw the analogy to a (hypo)thesis in scientific research. You start with a problem, make a hypothesis and try to prove it. If it won’t work, you have to be honest to yourself and change the hypothesis.

On the other hand, great breakthroughs in science and evolution tend to be bottom-up. Tim Berners-Lee might not have tried to prove the idea of the WWW when he first worked on his personal hypertext system ‘Enquire’ in 1980.

But even in this case, he will have followed some idea, some dream, some end goal in mind, even if it was still not what it later turned out to be.
REMARK 2 – POSSIBLE NAMING AMBIGUITY

Watch out for a possible naming ambiguity between the *Minto Pyramid Principle* and the *inverse pyramid structure* of writing.

In journalism, the *inverse pyramid structure* (IPS) of writing refers to reporting a news story from the most important material to the least important, separating the statement of what happened from the specific detail of how and why it happened. This writing style contrast to the *chronological style* of fiction, in which a story is told in the sequential order in which events occurred.

The main difference between the *Minto Pyramid Principle* and the IPS is that the former presents ideas and conclusions that rest on logical analysis and reasoning, whereas the latter is used to report facts in typical news writing style, starting with more and ending with less important information.

Source: http://education.dbai.tuwien.ac.at/wie/WS05/