From Roman Speakers to IBCS Pragmatics

The Basic Problem: How to do Things with Information?

The Roman Speakers Wisdom: How to be understood?

Data ≠ Information ≠ Knowledge ≠ Action

It’s not enough to deliver information, you must communicate it

Three Pillars of Semiotics describe different levels how to form and use a message

- **Syntax**
  - Relations between the signs
  - Rules how to use combination of signs

- **Semantics**
  - Meaning of signs
  - Rules to define the meaning of signs and combinations thereof

- **Pragmatics**
  - The intended effect of communicated signs and combinations thereof
  - Rules of using signs to produce the intended effects

Mirror, mirror
On the wall,
Who has the nicest slides at all
How to do things with information? The intended effect of a message is decisive …

- … to bring all relevant people to the same state of knowledge
- … to convince with arguments (assertions, proofs, demonstrations)
- … to support decisions
- … to warn
- … to promise
- … to recommend

The decisive factor is not what the author of a message means, but whether and how the information has been understood by the recipients.

The message of our information product should be the answer to the question posed by the interested audience.

You cannot understand the answer if you do not know the question.

Therefore the question must be communicated, too.

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The Rules of Rhetorics could help IBCS

How to convince the “person in power” (i.e. the judge or decider) in a concrete situation to get an appropriate decision?

It is not enough only to deliver information.

General Rules in Roman Rhetorics:

- Good preparation  **SAY**
- Structuring (story line)  **STRUCTURE**
- Clear Intention  **SAY + SIMPLIFY**
- Good Arguments  **CONDENSE + CHECK**
- Good Performance  **EXPRESS + CONDENSE + UNIFY**
The Rules of Rhetorics could help IBCS

Moreover: Pragmatic Rules

Select suitable means
novelty & confirmation

Select Form:
Deductive, inductive, appellative
(message type)

Communicate about your
communication (explain problem and
question) and about the context

To deliver inform is not enough!

Why?

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Available information (Files, Books, Charts, Interactive
Means) is not yet knowledge!

From Data to Decision

Data

Analytics
calculation
visualization

111 2222 3333 444 5555 666

Information

Decision
A More Throws
B Remove the dice,
may be fake

Knowledge incl. Pre-Knowledge
A The data are not sufficient to decide
B Number 2 is really biased
Information is only something that can be understood.

Only Information, that has been understood by an individual, becomes knowledge.

Knowledge consists on pre-knowledge and understood information, which has been integrated within the already existing knowledge.

It’s the difference That makes the difference

George Bateson
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What kind of knowledge do you want to convey to the decision makers?

Knowledge what’s going on
- The difference between \( x \) and \( y \) is \( \Delta \)
- Our goal is \( \Delta = 0 \)
- \( \Delta \) is three times the size of the rival company

Knowledge why
- Explanation, proofs, deduction, induction

Knowledge how
- Technical & organizational rules

Knowledge what to do
- Obligations, duties, convictions, recommendations

What kind of knowledge do you want to convey to the decision makers?

Knowledge what’s going on
Facts, circumstances, properties, differences

Knowledge how
Technical & organizational rules

Knowledge why
Explanation, proofs, deduction, induction background

Knowledge what to do
Obligations, duties, convictions, recommendations

It is not enough, to show only charts, dashboards etc.

To communicate about the options of interpretation of your message requires trust and a little bit of courage.

You must say something about the mesh size of the fisher net to explain the statistics of caught fishes.

Enable the controller to have a nontrivial message and encourage him to communicate it.