Challenging points of view in research articles and popular science articles
A case-study of rhetorical questions

Elsa Pic and Grégory Furmaniak
Université Sorbonne Nouvelle – Paris
Aims and scope

• Project on grammatical ≠ between research articles (RAs) and popular science articles (PAs).
• Interpersonal ≠ reflected in grammatical expression of stance, hedging, presupposition…
• Today: direct rhetorical questions

Ex.1: Our own Western bankers could not control the quality of credit at slower growth rates, so why should Chinese bankers be any better?
Research rationale

➔ Why study questions? = reflect writer/reader relation.

“The ways academic writers use questions are closely related to their assessments of appropriate reader relationships and, as a result, are likely to differ across generic and disciplinary contexts” (Hyland 2002: 530).

➔ Why these questions? = challenge a point of view.

Ex.2: These analyses assumed that large cities inevitably create higher levels of crime and violence […] But how could cities be blamed when the predominantly rural societies of the distant past were far more violent than the predominantly urban societies of the recent past?
1. Presentation of the corpus.
2. Rhetorical questions.
3. Results from corpus analysis and discussion.
Composition of the corpus

Articles in **British English**, written between **2000 and 2012**.

**RAs**
500,000 words

- Eco
- Astro
- Philo
- Applied Maths
- History

**PAs**
500,000 words

- Eco
- Astro
- Philo
- Applied Maths
- History
A standard definition of rhetorical questions: strong/biased assertion (Sadock 1971, Quirk et al. 1985).

Felicity conditions: shared background (Rohde 2006).

Ex.3 This research might be slightly offensive to pasta lovers – **who wants to eat short spaghetti?** ➔ ‘No one does’.

**BUT** data = not so clear-cut categories:

Ex.4 But this raises a more important question: is Kelsey’s account of the genesis and development of the charge adequate? ➔ ‘Maybe not’ rather than it is not.

Gradient of conduciveness (+/- orientation towards answer)

- conducive (weak challenge) ➔ + conducive (strong challenge)

Ex.5 Why would people find it difficult to accept the idea that limitedness is required for thought? ➔ ‘There is no obvious reason why…’

➔ Conduciveness not always but often permits challenging.
A typology of rhetorical questions

- **Rhetorical**
  - Polyphonic
    - Polemic
  - Non-polyphonic
    - Pseudo-polemic
General results

<table>
<thead>
<tr>
<th></th>
<th>RAs</th>
<th>PAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>NON-POLYPHONIC (TOTAL)</td>
<td>20</td>
<td>61</td>
</tr>
<tr>
<td>Polemic questions</td>
<td>76</td>
<td>56</td>
</tr>
<tr>
<td>Pseudo-polemic questions</td>
<td>23</td>
<td>19</td>
</tr>
<tr>
<td>POLYPHONIC (TOTAL)</td>
<td>99</td>
<td>75</td>
</tr>
<tr>
<td>RHETORICAL (TOTAL)</td>
<td>119</td>
<td>136</td>
</tr>
</tbody>
</table>

• Disciplinary distribution:
  – **Philosophy** > economics > history > mathematics > astronomy
  = RQ: same pattern as ordinary questions.
Non-polyphonic questions

- Rhetorical
  - Polyphonic
    - Polemic
    - Pseudo-polemic
  - Non-polyphonic
Non-polyphonic questions: no challenge

= One voice / one unchallenged/unchallengeable point of view

⇒ Unchallenged because well-known/common sense.

Ex.6: Was he not deeply interested in chemistry, after all? (⇒ ‘he was’).
Ex.7: If all these parts were knocked out by brain damage, we would cease to see – how could it be otherwise? (⇒ ‘it can’t’).

• Significant **QNT difference**: PAs > RAs. Why?

⇒ **PAs**: relying on/emphasizing common sense + shared ground (positive face ⇒ paying readership).

⇒ **RAs**: Use common sense with caution + debate (Hyland, Fløttum) → highly polyphonic
Functions of non-polyphonic questions

• Functions in PAs:
  ¼ tags ➔ direct appeal to the reader: guiding function / “so far so good”:
  Ex. 8: *This is very odd because if you always gain by switching you didn’t need to look in the box, did you?* Always switch.
  Explanation/illustration: drive a point home:
  Ex. 9: *Relatively rare yet sensational events are widely, and repeatedly, reported and thus easy to remember – who can forget the repeated footage of planes crashing into the twin towers?*

• Functions in RAs:
  Reductio ad absurdum:
  Ex. 10: *If a bump is no more than a disturbance on the surface of a solid, why is a mountain anything more than a large bump?*
  Tentative hypotheses:
  Ex. 11: *It thus also remains unclear what according to Moore entitles him to claim to know that ‘here is one hand and here is another’. Was his Proof rather meant for the purpose of preaching to the converted?*
Polyphonic questions

- Rhetorical
- Polyphonic
  - Polemic
  - Pseudo-polemic
- Non-polyphonic
Polyphonic questions

= 2 voices / 2 diverging points of view

Ex.12: Let us now look back at Moore's 'Proof of an External World'. [...] (1mw) is not convincing, especially in a debate with the moral sceptic. Why should (1pw) be any more convincing, especially in a debate with the epistemological sceptic?

➔ 2 sub-types: polemic vs pseudo-polemic

<table>
<thead>
<tr>
<th></th>
<th>Polemic</th>
<th>Pseudo</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAs</td>
<td>76</td>
<td>23</td>
</tr>
<tr>
<td>PAS</td>
<td>56</td>
<td>19</td>
</tr>
</tbody>
</table>
Pseudo-polemic questions

- **Rhetorical**
  - **Polyphonic**
  - **Non-polyphonic**
    - **Polemic**
    - **Pseudo-polemic**
Pseudo-polemic questions

= Point of view of author fictively challenged by reader:

Ex.13: Deciding the relative merits of these viewpoints is an empirical not an ideological matter, and a satisfactory answer is crucially important if global poverty and inequality are to be addressed. **Why might capitalism not be established successfully?** One reason is that state policy forbids it, as in the USSR and in pre-reforms China, or at least did not facilitate it as in much of post-colonial Africa where ‘African Socialism’ was attempted.

1. Starting with the author’s point of view
2. Question anticipates incomprehension from lay-reader (= You may wonder why it might not be established successfully).
3. Author explains (often explicit answer).

⇒ Expected in PAs: explicative mode (Grize 1990, Adam 1992).
Pseudo-polemic questions (2)

- But as many occurrences in RAs: Why?

Author anticipates objections from peers (57% in adversative contexts: *but, yet, really*).

**Argumentation / justification:**

Ex.14 (...) *claims widely recognised as unrealistic are a feature of seemingly all mathematical deductivist endeavour in modern economics (...). Why should this be?* And specifically, *why do I suppose that the emphasis on formalistic modelling is the problem? My answer (...) can be expressed in the following three propositions.*

1. I make a claim.
2. You may wonder why I think/say is it the case and you may object to this.
3. I provide further evidence to support my claim.
Polemic questions

- Rhetorical
  - Polyphonic
  - Non-polyphonic
    - Polemic
    - Pseudo-polemic
Polemic questions (1)

= Point of view of expert 1 challenged by expert 2 (usually author).

Ex.15: *One assumption built into Williams’ approach is worth noting, and questioning: namely, that there must be a single, fundamental or determining pattern of use of the *we* in Wittgenstein’s later work. For Williams, either the *we* refers to one human group as opposed to another, or it refers to the plural idealist *we* to which there is no contrasting subject. But why assume that Wittgenstein’s *we* has a single, fundamental pattern of use throughout his later writings?*

- QNT: RAs > PAs. Why?
- Different criteria examined, but mainly:
  - Whose point of view is challenged?
  - How strongly is it challenged?
  - Why / what for is it challenged?
Polemic questions (2) in RAs

• Results for RAs:
  – Origin of challenged point of view: expert clearly identified (proper name or pronoun and often subject)
  – Point of view not so strongly challenged (1.8)
  – Challenged for argumentation/demonstration’s sake in conditional or adversative contexts:

\[
\begin{align*}
\text{If} \\
\text{Since, according to X, P is true, then how could/why would Q be true?} \\
\text{Given that}
\end{align*}
\]

Ex.16: If Moore takes himself to have proven that the external world exists, then how can he deny that he knows what he has proven? Doesn’t proof lead to knowledge?
Polemic questions (3)
Results for PAs

- Source of the challenged point of view often unspecific:
  - School of thought (deontologists, Austrian ideas, historians).
  - Undefined non-expert group (Politicians, European observers, Germans).
  - Popular beliefs or preconceptions (the idea that, modern audience)

- Strongly challenged (mean degree of conduciveness = 2.3 vs 1.8 in RAs)

- Challenging a point of view through subjective evaluation (29%):
  
  Ex.17: If, as the Portishead trial has shown, deregulation can cut congestion at minimal cost, why waste tens of millions on congestion charging?

- Explaining AND challenging:
  
  Ex.18: “There would never be a perfect state or society or individual until some chance compelled this minority of uncorrupted philosophers (...) to take a hand in politics.” Does this mean that we should hand over all governing to philosophy teachers? Heaven forbid!

  Ex.19: MOORE: Fundamentally I don’t agree with the supreme role you assign to Happiness as the mover and shaper of our lives.
  LOCKE: You don’t think Happiness is important?
Conclusion

• RQ used to challenge point of view but in ≠ ways according to genre and type of RQ:
  – **Non-polyphonic RQ**: rare in RAs but untypical use: challenge point of view indirectly.
  – **Polyphonic RQ**: challenge point of view but ≠ purposes (argt vs expl.) and forces in the 2 genres.
  – In all cases: involving reader + ≈ hedges.

• **Further research**: grammar of popularisation, other types of questions in scientific writing in English and French.
References

Corpus: specialised sources

Peer-Reviewed Academic Journals. Written by and for experts.

SOURCES:
The Historian
The Historical Journal
IMA Journal of Applied Mathematics
Journal of Logic & Analysis
Journal of the London Mathematical Society
Analysis
European Journal of Philosophy
Journal of Moral Philosophy
Metaphilosophy
Minerva - An Internet Journal of Philosophy
Proceedings of the Aristotelian Society
Cambridge Journal of Economics
Monthly Proceedings of the Royal Astronomical Society
Corpus: popularised sources

Popularisation articles written by experts for the general public:
“History Today is a unique cultural institution, bringing the best in historical writing and research to a wide audience.”

SOURCES:
History Today
Plus Maths Magazine
Think
Economic Affairs
World Economics
Astronomy Now Magazine
Popular Astronomy
Ratiocinative questions

• Questions in RAs and PAs ➔ no response.
• But not necessarily “rhetorical”:

Ex: How should facts about obligation shape deliberation? In particular, how should a promise shape our thinking about whether to fulfil it? For a simple rationalist there are two alternatives: either a promise provides us with a good reason to fulfil it or it provides us with a decisive reason to fulfil it.

• “Rhetoricity” tests fail: yet / after all / by any chance.

➔ No biased assertion ➔ Rejected.