GEOINFO 20 Anos Depois: *Revisitando o Passado e Inventando o Futuro*
A dialogue between Brutus, the panel mediator, and Antony, a panelist

by

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Prologue

Brutus: I will ask you three questions:

1) Which was your research theme in 1999?

2) Which are, today, your research topics and how they are related to Geoinformatics?

3) Which will be the promising areas and themes in Geoinformatics in the next 20 years??

Please answer them as wisely as possible!
Question 1

Brutus: Which was your research theme in 1999 (1st Geoinfo)?
Question 1

Brutus:  *Which was your research theme in 1999 (1st GeoInfo)?*

Antony:  *Friends, Romans, countrymen, lend me your ears,*
          
          *I am sorry to say, but I have no idea!*
          
          *Let me ask Google Scholar, my trusted seer...*
Google Scholar (replying from the Web):

Oh! You published papers on spatial access methods, co-authored by Gattass, at VLDB, SBBD, and SIBGRAPI.

But, further back in 1996, I found a book on Geographic Information Systems (with 487 references), written for the 10th Computer Science School, and co-authored by Claudia, Gilberto, Geovane and Andrea!!
Question 2

Brutus: *Good, but which are, today, your research topics and how they are related to Geoinformatics?*
**Question 2**

**Brutus:** Good, but which are, today, your research topics and how they are related to Geoinformatics?

**Antony:** That's a much simpler question!

I have been working on **keyword search and data integration**.

**Databases, for short, as in the last 40 years.**

The question therefore is:

"How research on **databases** is related to **Geoinformatics**?"
Question 2

Antony: ... the answer is immediate:

A. Geoinformatics turns geospatial data into useful information.

B. Geospatial data must be captured, stored, and integrated.

(A) and (B) implies that:

C. Databases are at the heart of Geoinformatics!
Question 3

Brutus: *The answer was too trivial, but let's move on...*

*Which will be the promising areas and themes in Geoinformatics in the next 20 years?*
Question 3

Brutus: The answer was too trivial, but let's move on...

Which will be the promising areas and themes in Geoinformatics in the next 20 years??

Antony: Stop all the messages, cut off the WiFi.

In 20 years, I will be dead and cremated; therefore occupying no geospatial position I will!

Brutus, I can only venture to talk about the next 2-3 years.
Question 3

Antony (after thinking for a while):
Take any "fancy area" that has "Data" in the name; change "Data" by "Geospatial Data"!
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    Take any "fancy area" that has "Data" in the name;
    change "Data" by "Geospatial Data"!

Brutus  (slightly upset):
    That's not an answer. Be precise, please!!

(the answer caused the audience to reconnect the WiFi, ...)

Question 3

Antony: For example, take Data Science and change "Data" by "Geospatial Data" – the definition will read...

"Geospatial Data Science refers to the use of statistics, data analysis, machine learning, and related methods to understand and analyze actual geospatial phenomena, based on very large volumes of geospatial data, originating from several sources, often in real time."
Question 3

Antony: For example, take Data Science and change "Data" by "Geospatial Data" – the definition will read...

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Question 3

Antony (as an aside): "Big Geospatial Data" seems redundant...
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Yet, try to retarget "Big Data" algorithms to work on "Big Geospatial Data":

– Clustering
– Stream processing
– Set sampling (MinHash, KMV-Synopses)
...
Question 3

Brutus: *That means you will change area in the future?*

Antony: *Not at all – I am faithful to databases...*

Brutus: *Then, I do not see your point...*
Question 3

Antony: *Data Science requires data integration, which will guarantee my job for years to come, and I can quote a recent survey from Crowdsourced:*

**Percentage of time spent on a Data Science project**

- Collecting data sets: 19%
- Cleaning and organizing data: 60%
- Building training sets: 3%
- Mining data for patterns: 9%
- Refining algorithms: 4%
- Other: 5%
Question 3

Brutus: Are you suggesting that Geospatial Data Integration will be an important area?
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Antony: Exactly! Geospatial Data Integration has always been and will always be a key area! Thank you for bringing it up...
Question 3

Brutus: Enough – your vision lacks imagination!

"Geospatial Data Science"
"Big Geospatial Data"
"Geospatial Data Integration"

are too obvious!

... and your time is over!!
Antony: *Let me just finish by claiming that*

*... we must "put people in the loop": geospatial problems are mostly socio-economical, and not technical.*
Epilogue

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... we must work on geospatial systems to help prevent environmental problems.
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Epilogue

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... we must "put people in the loop": geospatial problems are mostly socio-economical, and not technical.

... we must work on geospatial systems to help prevent environmental problems.

... sadly, scientists seem to be discredited these days!

... but the humanities came to lend a hand!

Sebastião Salgado (https://www.amazonasimages.com/accueil)
Minamata disease (https://en.wikipedia.org/wiki/Minamata_disease)
(https://www.magnumphotos.com/newsroom/health/w-eugene-smith-minamata-warning-to-the-world/)
Svetlana Alekseevitch. Vozes de Chernobyl - Historia de Um Desastre Nuclear.
Quotes

From the speech:
“Friends, Romans, countrymen, lend me your ears”
by William Shakespeare
(*Julius Caesar*, spoken by Marc Antony, Act 3 Scene 2)

https://internetshakespeare.uvic.ca/doc/JC_F1/scene/3.2/index.html

From the poem:
"Stop all the clocks, cut off the telephone"
by W. H. Auden
(published in *The Year's Poetry*)

https://en.wikipedia.org/wiki/Funeral_Blues