# GRAPHIC SEMIOLOGY A VINTAGE QUESTION?

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# HOW GRAPHIC SEMIOLOGY IS ACTUALLY USED IN CURRENT CARTOGRAPHIC DESIGN?

News graphics technologies



- provide access to both the creation and consumption of original, innovative and increasingly complex cartography
- maps are being designed and produced ever faster



- cartographic design choices are entrusted to software automation
- Software is not always respectful of graphic meaning
- It can be a source of damaging conceptual drift

# EFFICIENCY VERSUS TEMPORALITY

an survey based on the central question:

can Jacques Bertin's graphic semiology be diluted by the demand for innovation that is sweeping the world of cartographers?

#### La sémiologie graphique, démodée ou non?

Dans le cadre de la 30<sup>e</sup> conférence ICHC (Interdisciplinarity and New Challenges in the History of Cartography), conférence universitaire consacrée à l'avancement des connaissances sur l'histoire des cartes et de la cartographie, nous cherchons à évaluer si la sémiologie graphique de Jacques Bertin est soluble dans l'exigence d'innovation et de rapidité qui frappe le monde des cartographes. Quelle importance est encore accordée à la sémiologie graphique dans la conception cartographique ? Quelle part de la réflexion sémiologique est conservée dans le processus de conception cartographique ? La sémiologie est-elle vraiment démodée ?

Nous adressons notre enquête à l'ensemble des communautés qui travaillent de près ou de loin avec la carte, universitaires, chercheurs, éditeurs, cartographes, journalistes, indépendants, responsables informations géographiques d'entreprises de différents horizons, etc.

Nous vous remercions par avance de bien vouloir répondre à cette enquête. **Réponse attendue pour le 12 avril au plus tard**; le questionnaire restera ouvert jusqu'au 17 mai 2024.

N'hésitez-pas à revenir vers nous si vous souhaitez en obtenir les résultats.

Bien cartographiquement

Marie-Laure Trémélo et Christine Zanin

Il y a 11 questions dans ce questionnaire

- Survey open from March 12 to April 17
- with LimeSurvey software deployed on Aix-Marseille University servers
- Through 4 mailing lists:
  - Geotamtam: a french-speaking geographers
  - MAGIS: Methods and Applications for Geomatics and Spatial Information research group
  - ACG: former cartographer association from the universities of Paris 1, Paris 7 and ENSG
  - Mate-shs: network of engineers working with geographic and survey data

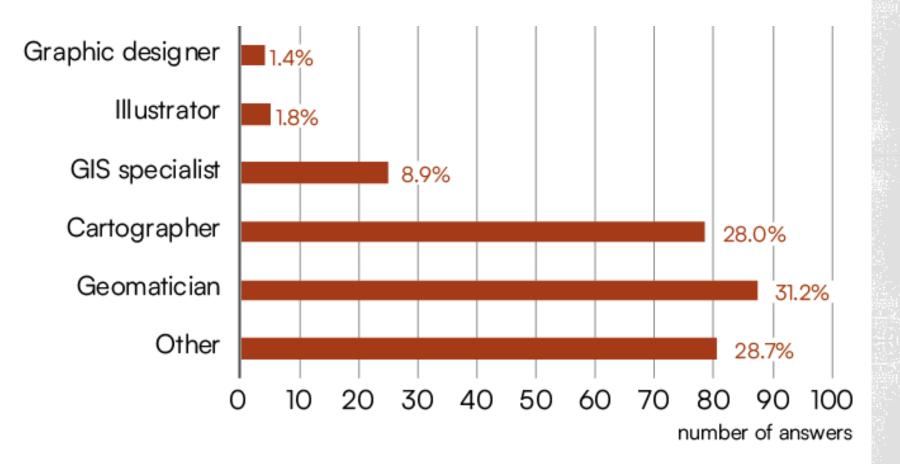
#### THE SURVEY

#### • 2 kinds of questions :

- ✓6 closed questions to understand the link between training and the importance of graphic semiology/ time/efficiency/semiotics.
- ✓ l open question to assess whether cartographers know and use semiotics
- ✓ question on respondents' occupation, training and workplace location

#### THE SURVEY

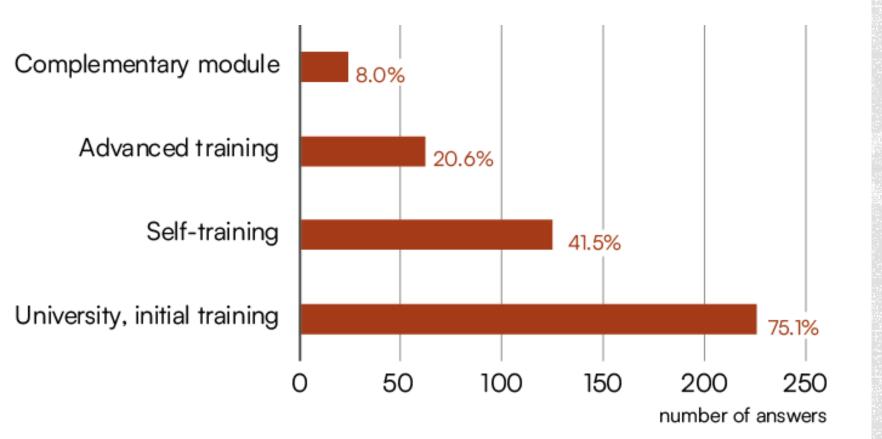
311 answers but 301 full replies/usable (97%)



# Mainly geomaticians

#### THE SURVEY

Q8 - How do you define yourself?



## University trained

#### THE SURVEY

Q9 - How did you learn about cartography?

Multiple-choices question N = 301

Country	Count
United Arab Emirates	1
United States of America	1
Burkina Faso	1
Senegal	2
Monaco	1
Portugal	1
Germany	1
Switzerland	1
Belgium	2
Luxembourg	2
France  Martinique  La Réunion  Metropolitan France	268 1 1 266

#### THE SURVEY

Q10 - Where are you from?

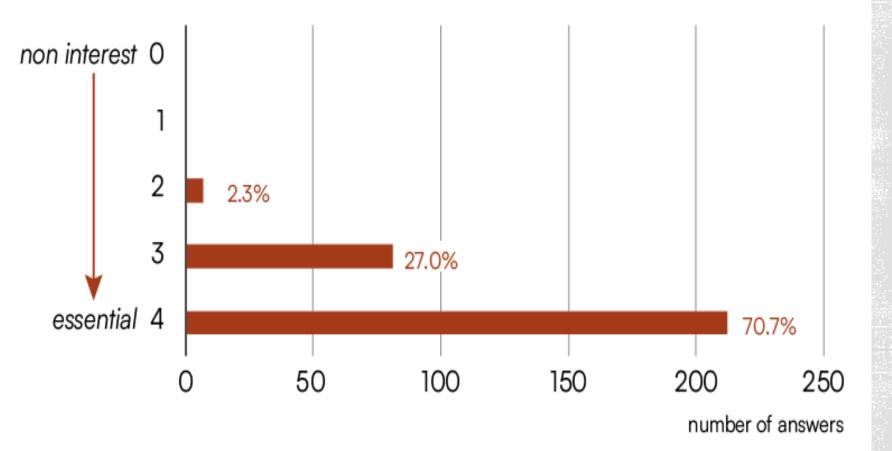
N=281 NA=20

#### Valenciennes Rouen Metz Reims Caen Strasbourg Rennes Orléans Mulhouse Angers Dijon Nantes Besançon Tours Poitiers La Rochelle Clermont-Ferrand Limoges **©** Chambéry St-Étienne Grenoble Bordeaux Avignon Nîmes lier Montpellier Toulouse Nice Aixen-Provence Pau Marseille Perpignan 50 km Source: survey, 2024 Made with Qgis and Illustrator

#### THE SURVEY

Q10 - Where are you from?

N=281 NA=20

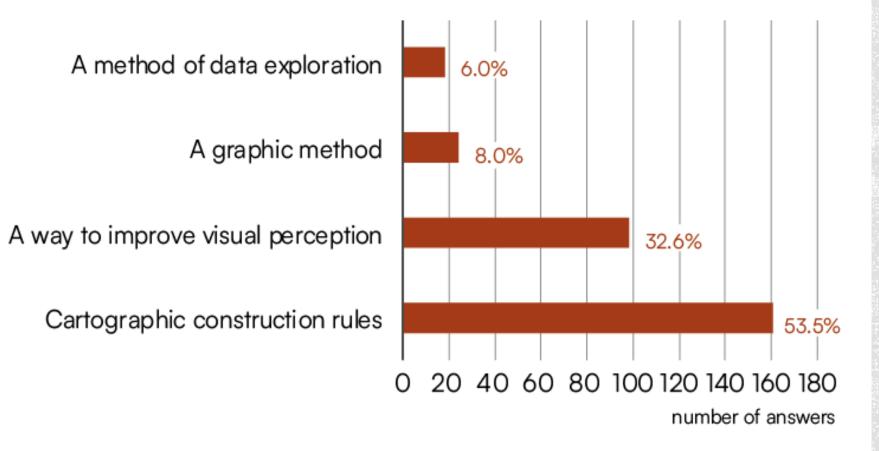


#### ....fundamental @

#### THE SURVEY

Q1- Do you feel that graphic semiology is...

N=300 NA=1

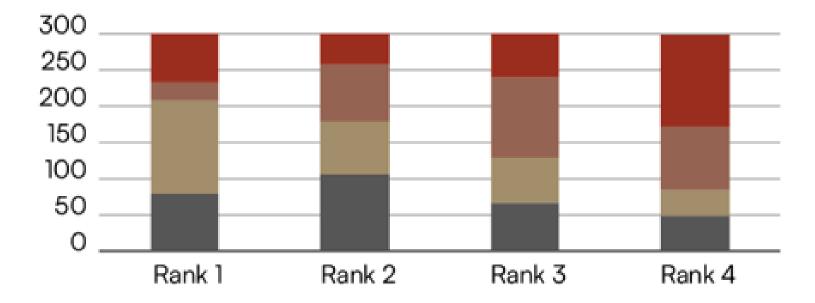


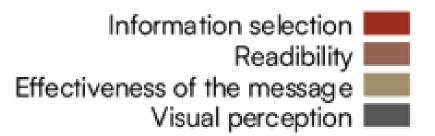
#### Rules for visual perception

#### THE SURVEY

Q2- Graphic semiology is...

#### number of answers





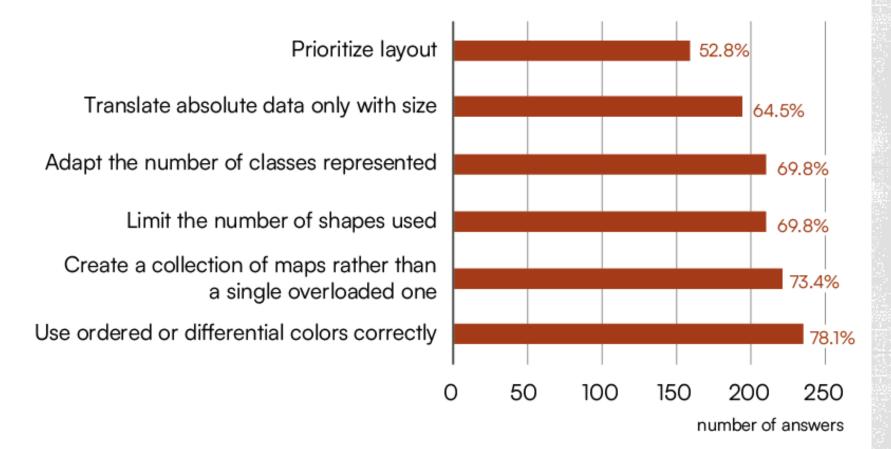
**Effectiveness** 

#### THE SURVEY

Q3-Which principles of graphic design do you consider to be the most important?

Rank from 1 to 4 with 1 = most important

N = 301

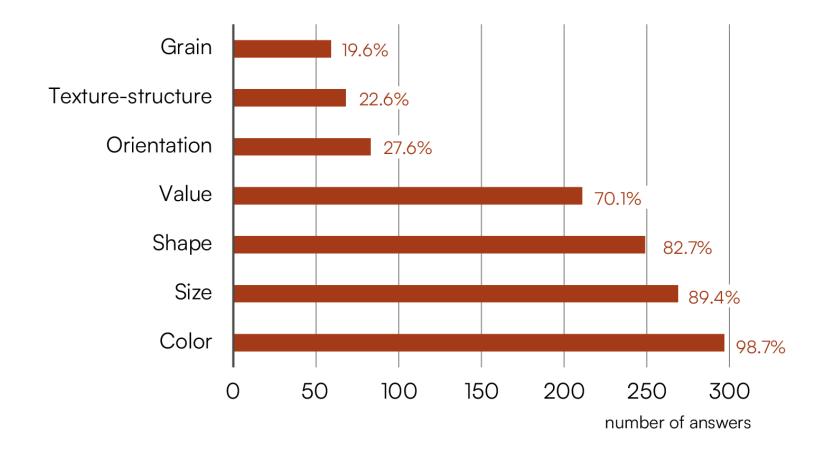


## Color! to order or classify ....

#### THE SURVEY

Q4-What elements of graphic semiology do you systematically apply?

N = 301

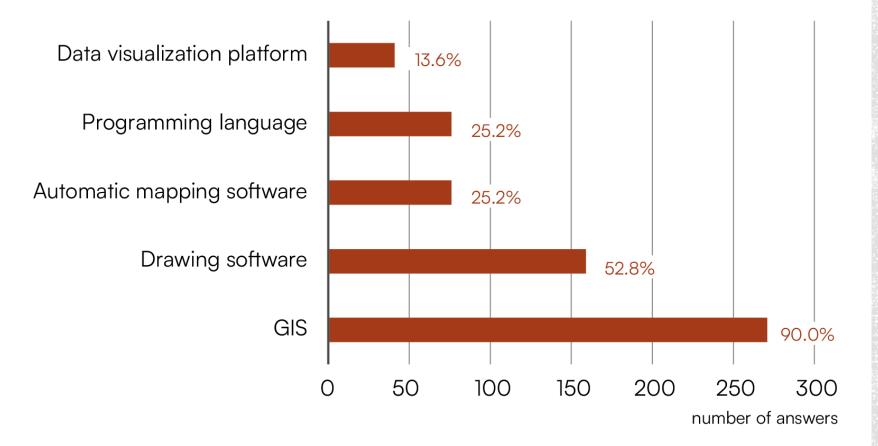


# Color again ... of course !!!!

#### THE SURVEY

Q5-Which visual variables do you mostly use?

N = 301



But first .... GIS!

#### THE SURVEY

Q6-What technical tools do you use?

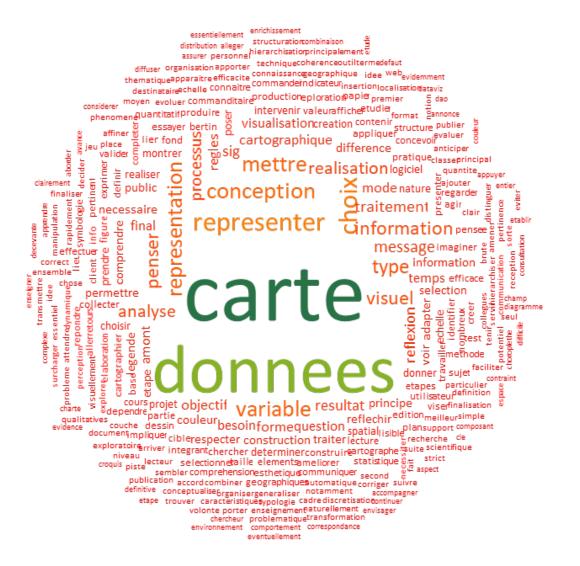
#### 875 Words

```
connaissancegeographique idee webevidemment
                                                      destinataireechelle connaître commanderndicateur<sub>insertion</sub>localisationiataviz
                                                 moyen evoluer commanditaire production eploration papier premier
                                                                                                                                                intervenir valeurafficheetudie
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                                                                                                                                     cartographique
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                                                                  pen
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#### THE SURVEY

Q7- At what point in the process of your cartographic design do you think about graphic semiology?

Explain how and when in a few words



Design Choice To represent To realize **Visualization** Thinking Information Analysis Message Variable **Process Analysis** 

5 software programs: Inkscape 1 time

**Illustrator** 2 times

**Qgis** 2 times

GIS 22 times

Other software 7 times (ppt, photoshop...)

3 cartographers were mentioned
Bertin 8 times
Brewer et Brunet 1 time

**54%** of words are only mentioned once

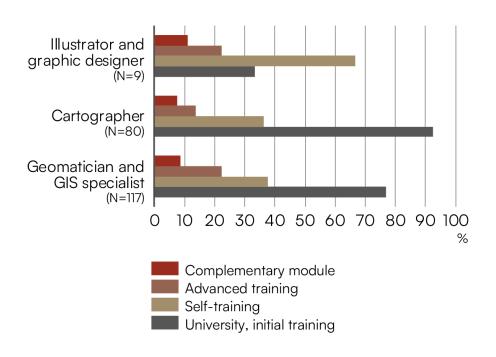
16% of words are mentioned more than 5 times

# DID WE ANSWER TO OUR QUESTION?

Graphic semiology is not a thing of the past, and remains one important clue for many cartographers,

but...

- The DEMOCRATIZATION of tools do not have to avoid KNOWLEDGE of graphic semiology rules
- Graphic semiology rules requires LEARNING



# AN EXPLORATORY SURVEY TO BE CONSOLIDATED...

- → Is there a link between job and type of training? Tool used?
- → What is the cartographic quality of recently defended geography PHD? of institutional reports? Or others documents?
- → Is graphic semiology still part of initial university training?
- → What research is being done about graphic semiology uses?

How can graphic semiology be adapted to new visualization tools and techniques? to on-screen digital cartography? to dynamic cartography? to interactive cartography?

(for example only 4 of the Bertin's visual variables are still useful)

# THANK YOU FOR YOUR ATTENTION

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