

IDENTIFICATION OF BARRIERS IN THE PROCESS OF COMMUNICATION



OF SPATIAL SOCIO-DEMOGRAPHIC INFORMATION

The aim of the project is to understand the mechanisms of cartographic communication between the authors of interactive visualizations and their users.



S. Popelka – T. Vaníček – Č. Šašinka – M. Beitlová – Z. Stachoň – L. Z. Suchá – A. Šašinková – K. Fačevicová – J. Čeněk – O. Kvarda – V. Voženílek

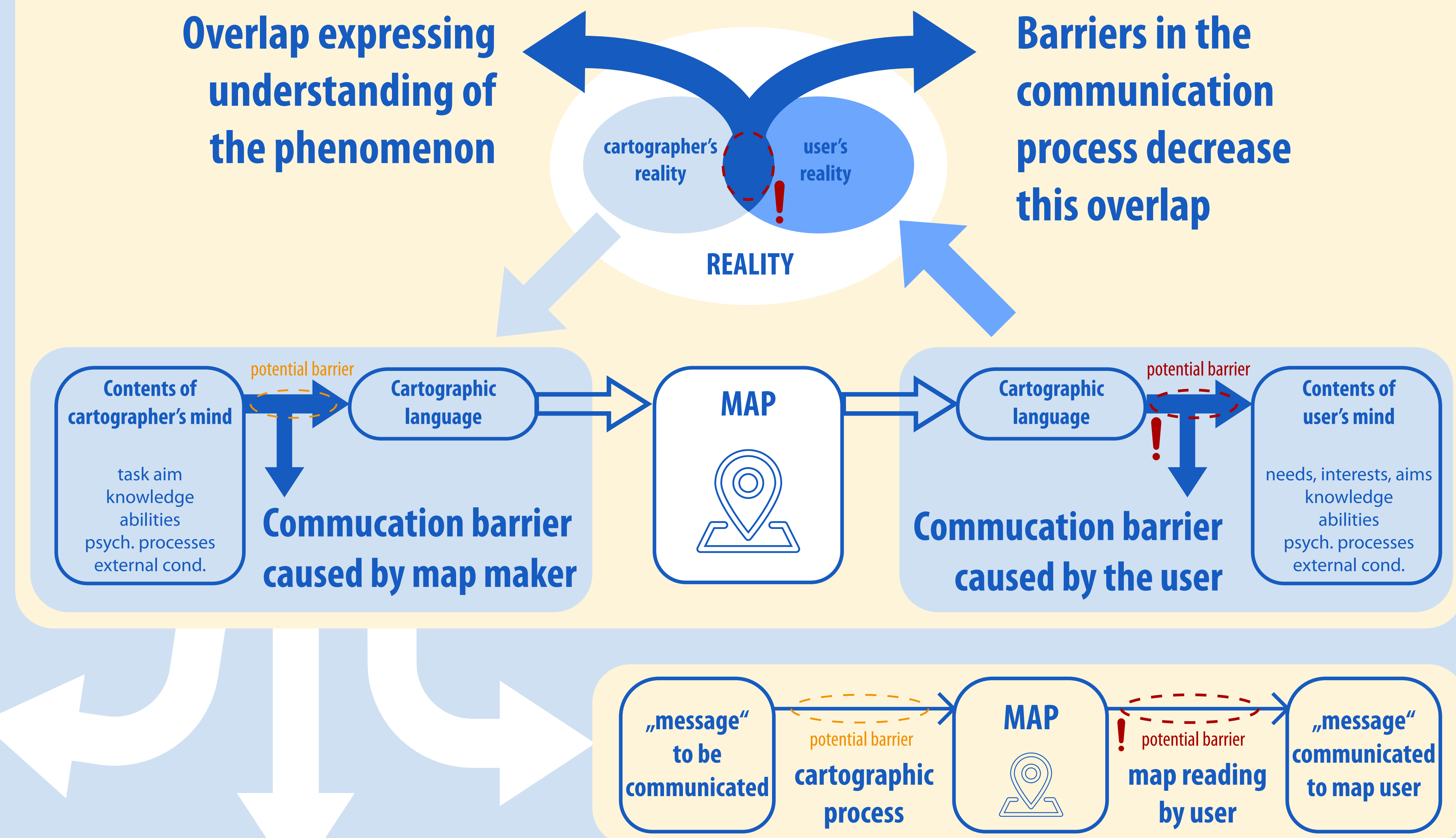
01/2023–12/2025



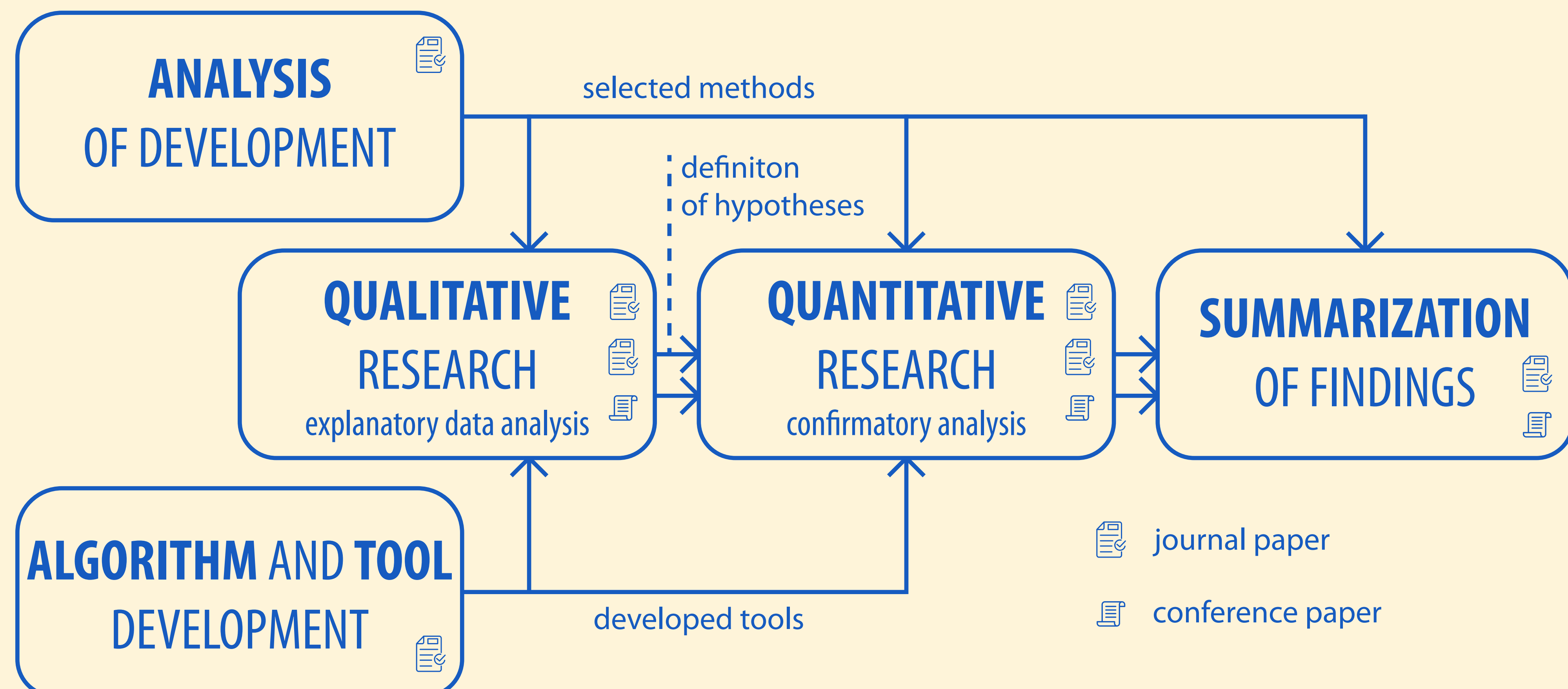
DEPARTMENT OF GEOINFORMATICS
Palacký University in Olomouc | Faculty of Science

The best way to convey spatial information is through maps, but their effectiveness depends on the visualization methods used. While static map interpretation is well-known, new **interactive approaches are emerging** due to technological advancements. To improve cartographic communication, we need to study **how interactive geovisualization methods impact users**, especially in fields like sociology and demography. Qualitative testing will identify barriers that disrupt information flow between visualization creators and users. Then, a quantitative approach will confirm these barriers across large populations. This research will reveal the mechanisms of cartographic communication.

Communication of cartographic information



Scheme of the project



Research questions

- What types of interactive visualizations are used by social scientists?
- What are the benefits of using interactive maps?
- In what context do they choose interactive and classical map displays?

...for qualitative stage:

- 1) How is information from interactive maps interpreted?
- 2) What types of mismatch are taking place in the interpretation process?
- 3) What are the barriers to understanding information from interactive maps in the interpretation process?
- 4) What other factors influence the success of the interpretation process?
- 5) How do barriers and interpretation mechanisms and strategies differ between professionals/laypersons?



Palacký University
Olomouc

MUNI

RNDr. Stanislav Popelka, Ph.D.
stanislav.popelka@upol.cz

Principal Investigator, researcher,
eye-tracking expert



poster created for the
25th Cartographic Conference

poster designed by Mgr. Tomáš Vaníček,
KGI UP: tomas.vanicek@upol.cz