

# Participatory Mapping of risk by, with, and for, children - what is ethical good practice?

Michael K. McCall<sup>a,\*</sup>, Alethia Vargas-Silva<sup>b</sup>,

<sup>a</sup> CIGA-UNAM, Universidad Nacional Autónoma de México, Morelia, [mccall@ciga.unam.mx](mailto:mccall@ciga.unam.mx)

<sup>b</sup> Universidad Michoacana de San Nicolás de Hidalgo, Morelia, [alethia.vargas@umich.mx](mailto:alethia.vargas@umich.mx)

\* Corresponding author

---

**Keywords:** children's space, place, risk, participatory children mapping

**Abstract:**

Mapping the realization of children's risk in space and place depends on identifying, understanding, giving value to, and representing the relations between children and space. Children have distinct quotidian and historical experiences of spaces and places, they are constrained by different boundaries and limits on accessibility, they occupy different territories, for different time periods, and with weaker power and authority than adults. Their sensitivities, vulnerabilities, risks and fears in space are not those of adults.

But children are not a homogeneous social category – the diversity of significant material differences *between* children, because of family economic context, cultural identity, religion. Two of these factors stand out, notably age and gender. Age is a key categorizer, as children age and develop, they interpret and structure space and time as their cognitive processes form and change (e.g. Blaut, 1997). Note an (epistemological) complication that the recognition of age norms varies between cultures. The other salient dimension is gender-specific, - the material differences in girls' quotidian direct experiences, and the consequent perception and place construction. (e.g. Ngidi and Essack, 2022; Torun et al., 2024).

The research aims are to interrogate experiences of participatory mapping with children, in particular, mapping risk space. What priorities and principles, what approaches and what tools correspond to ethical good practice for mapping with children. Both dimensions - the differences between children and adults, and, the divergences amongst children – are matters beyond academic interest in child behaviour; they affect equity and inclusivity in all adult-child interactions.

Prominent in participatorily mapping children's formation of space, are questions of trust, authenticity, agency and representativity which affect all the knowledge-gathering process (McCall, 2021). Then come fundamental issues of how to represent children's voices, how do children interpret their life-spaces, territories, spatial risks, fears and happy places? What framing?, in what formats? Re. risk mapping, note William Bunge's radical lens for mapping children in Detroit's ghettos (Bunge, 1969).

There are the consequent implications for including children in spatial planning, (e.g. Berglund, 2008; Kytta et al., 2018), such as the many constraints set by adult society and institutions that police children's use of space, and the weak credibility afforded children's knowledge in most adults' interpretations.

The methodological frame is to critically consider what approaches and what tools correspond to ethical good practice for mapping with children. Any review must consider the wide range of spatial (mapping) methodologies needed to respond to the diversity of children and the diversity of situations. Many mapping methods have been applied, and critiqued: egs. Ethnographic qualitative tools, child's eyeviews, freeform mapping, mapping on GE images, child-led video and sound recording, mobile apps on smart

phones, making 3D models, interactive games, performance (dance, songs, music, play), dedicated or generic web platforms (OSM, Green Maps) or popular social media, and specialized mapping with disadvantaged children. (e.g. De et al., 2020; Preto et al., 2016). Initially this is a critical literature review; it also draws upon field experiences with children and in workshops in urban Mexico (McCall, 2022-2025; Vargas-Silva & Martínez-Ruiz, 2024). The meta questions are what are the criteria for choosing amongst methods, and where do these criteria come from? How to question the criteria for selecting tools, and thus for choosing between methodological approaches for different applications in child participatory mapping? The framing of the criteria to fit the ethical good practice needs of participatory risk mapping with children form the concluding part.

#### Acknowledgements

We acknowledge the support of UNAM DGAPA funds.

#### References

- Berglund, U. (2008) Using children's GIS maps to influence town planning. *Children, Youth and Environments* 18 (2) 110-132 / 197-205
- Blaut, J.M. (1997) Forum – the mapping ability of young children: children can. *Annals, Assoc. of American Geographers* 87, 152-158.
- Bunge, W.W. (1969) Detroit Geographical Expedition, Field Notes, Discussion Paper No. 1. Michigan State University, Dept. of Geography, (*Society for Human Exploration*).
- De, L. Le; J-C. Gaillard; A. Gampell; N. Loodin; and J. Cadag (2020) Participatory mapping 2.0: New ways for children's participation in disaster risk reduction. *Australian Journal of Emergency Management* 35 (2): 34-42.
- Kyttä, M.; Oliver, M.; Ikeda, E.; Ahmadi, E.; Omiya, I.; and Laatikainen, T. (2018) Children as urbanites: mapping the affordances and behavior settings of urban environments for Finnish and Japanese children. *Children's Geographies*. Carfax.
- McCall, M.K. (2021) Participatory mapping and PGIS: Secerning facts and values, representation and representativity. *IJEPR International Journal of E-Planning Research* 10 (3) 105-123.
- McCall, M.K. (ed.) (2022-2025) Mapeando el viaje a la escuela con jóvenes – Lugares agradables, lugares preocupantes. Mapeo de seguridad, los peligros, y los lugares atractivos ..... con niñas y niños. Morelia: CIGA-UNAM,
- Ngidi, N. Daluxolo; and Essack, Z. (2022) Mapping the unsafe school journey: rural primary school children's perspectives on dangerous social geographies in South Africa. *International Journal of Educational Development*, 94, 102655.
- Preto, I.; M.K. McCall; M. Freitas, and L. Dourado (2016) Participatory mapping of the geography of risk: Risk perceptions of children and adolescents in two Portuguese towns. *Children, Youth and Environments* 26 (1) 85-110.
- Torun, A. Ozbil; Ilayda Zelaal Akın; H. Bingol, M. A. Defeyter; and Y. Can Severcan (2024) Children's perspectives of neighbourhood spaces: Gender-based insights from participatory mapping and GIS analysis. *Urban Planning* 9.
- Vargas-Silva, A.; and Martínez-Ruiz, T. (2024) Being a child in Morelia: child spatial mobility over the years. *Children's Geographies* (2024): 1-13.