SCIENZE DEL TERRITORIO. ISSN 2284-242X. no. 3 REBUILDING THE CITY, pp. 391-399.

Science in action

Shadowing and qualitative GIS: tools for urban narrations - *Full English version*[1]

Angela Alaimo, Marco Picone[2]

1. Urban representations

The city of today appears an evermore vague and indistinct object, and is hard to define univocally. This short article aims at describing, or maybe 'narrating' the city through two qualitative research techniques: shadowing and qualitative GIS. These may appear two very different topics: shadowing is a qualitative research method that implies following someone (SCLAVI 2003, 53), with the goal of building reflexive and dialogic narration on the move (MCDONALD 2005; CZARNIAWSKA 2007); it belongs to those on-the-move ethnographic methods called "go-along" (DELYSER, SUI 2012, 297). A GIS, on the other hand, is by tradition located within the field of quantitative and technical analyses, and even the expression 'qualitative GIS' may appear an oxymoron.[3] By referring to qualitative GIS we mean the use of qualitative data (coming from mental maps)[4] within a GIS, as will be thoroughly discussed in section 4.

The goal of this paper is to show the *trait d'union* between the shadowing technique and qualitative GIS. We believe this lies in the ability to know, tell and 'act' the city through multiple and inclusive points of view, in order to empower new participatory planning tools (DELYSER, SUI 2014).

By discussing some examples taken from research experiences, we will evaluate the limits and possibilities of these techniques.[5] We want to show how practicing qualitative and participatory methods can generate plural representations, useful to act in different urban contexts.

The conceptual framework of this paper is located within the broad field of urban studies, but the techniques presented here also come from urban anthropology, organizational studies and geomatics. They are now common assets for the several disciplines dealing with territories, and have proved to be essential for building "biographies of places" (MAGNAGHI 2001).

[1] Revised by Angelo M. Cirasino.

[2] Angela Alaimo is research fellow in Geography at the University of Trento. Her research interests are border regions and qualitative Geography. Among her publications: *La geografia in campo. Metodi ed esperienze di ricerca* (2012). Email: angela.alaimo@unitn.it. Marco Picone is assistant professor in Geography at the University of Palermo. His research interests are cities and critical geopolitics. Amongst his publications: *Quartiere e Identità. Per una rilettura del decentramento a Palermo* (with F. Schilleci, 2012). Email: marco.picone@unipa.it.
Although the paper should be considered a result of the common work and reflection of the authors, Angela Alaimo took primary responsibility for sections 2, 3 and 5, Marco Picone for sections 1 and 4.

[3] Some critical GIS scholars have defined participatory and qualitative GIS an "oxymoron" (ABBOT ET AL. 1998; HARVEY ET AL. 2005). See COPE, ELWOOD 2009.

[4] Mental maps would deserve a whole article by themselves. For reasons of space, we will just recall the works by LYNCH 1960; GOULD, WHITE 2002; COVERLEY 2006.

[5] In this paper we are referring in particular to a field research experience in Palermo whose main topic was a new proposal of decentralization (PICONE, SCHILLECI 2012), and another experience in Tunisia on the spatial transofrmations due to the coming of textile manufactories from Veneto (ALAIMO 2010).

2. Passwords

Influenced by feminist epistemology and the 'cultural turn', contemporary methodologies have been increasingly focused on the importance of the researcher's subjectivity, his/her involvement in the study's environment and the growing need of active participation in urban contexts (Sclavi 2006; DeLyser, Sui 2014). Some scholars define this shift as a "participatory turn" (Kindon 2010). Considering human and idiosyncratic elements of knowledge (Cope 2010, 23), together with the nature of situated knowledge (Haraway 1988), this turn reveals the centrality of the researcher and the focus on the context of knowledge production. All these achievements contribute to the development of the so-called Qualitative Methods (Crang 2002; 2003; 2005; Bailey 2006; DeLyser et al. 2010; Sui, DeLyser 2012; DeLyser, Sui 2014).
This is particularly true for Urban Studies, where researchers deal with a complex and intricate spatialized system of human relationships, and where the situated, bordered and delimited nature of the context of action, which encloses the researcher, is the starting point to develop a critical and reflexive approach. Today the historical and controversial division between quantitative and qualitative methods seems to be over: there is a general claim for a mixed methodology, and for a hybrid and smoothly "case study oriented methodology" (Peck 2003, 730; Johnston 2009), which is able to offer new creative developments relying on the differences between quantitative and qualitative approaches themselves (Sui, DeLyser 2012). Nevertheless, at least two issues are still open and both linked to field-working: the first one deals with how to meet changing, contradictory and fluid human realities, characterized (as the urban ones are) by ceaselessly evolving binds and interconnections; the second deals with how to reproduce the multiplicity of voices collected on the field (experiences, personal remarks, group meetings, urban *flânerie*, shadowing, mental maps, etc.), in order to give room and legitimacy to all the concerned actors.
Two answers could be shadowing techniques and qualitative Gis applications. Let us see how.

3. Ethnography 'on the move': shadowing the urban

Among all the existing ways of approaching the field (neutral observation, participant observation, active participation, action-research), shadowing particularly endorses movement, since it traces some selected actors and follows them throughout their daily routine for a given span of time (within a range going from one day to several months).[6] This methodology needs time and listening skills; it allows the researcher to go through places and spaces of relationships, while taking the selected actor's narratives and thoughts as a guide and meeting other social actors.
It not easy to say who 'invented' shadowing, since it has appeared across different disciplines and research contexts (Gobo 2005), but its emergence underlines the general dissatisfactions towards the techniques used so far in ethnographic observation. Its applications to fieldwork have been heterogeneous, going from social exclusion (Capote 1975)

[6] It is not easy to retrace the origin of shadowing because different form of mobile observation, spread in distant disciplines, used 'following in movement' without using the specific term 'shadowing'; think, for instance, to Schein's (1999) "empathic walk". In Italian social sciences, shadowing was introduced by Marianella Sclavi (2003; 2005; 2006), who contributed to disseminating and practicing this technique in urban anthropology. For an in-depth analysis see Gobo 2005 and Czarniawska 2007.

to consumers' practices (Miller 1998), students' life (Sclavi 2005), family practices (Lareau 2003) and much more. So that some speak about different forms of ethnography on the move, exerted in diverse research contexts (DeLyser, Sui 2012).

We can consider shadowing as an evolution of participant observation, expressing new sensitivities that are often related on one side to the specific requirements of multi-located surveys (Marcus 1995; Delyser et Al. 2010) and on the other to the need for more adequate ways of assessing the growing complexity of contemporary social practices, which are often misunderstood by traditional methods (Czarniawska 2007). If Malinowski's participant observation (Evans 1988; Corbetta 1999; Bailey 2006; Semi 2010) aimed at opposing the traditional 'observe and report' process, by promoting the idea that the researcher should become part of the observed system, shadowing tries to restore a symmetry, through a dialogue focusing on the necessity of "outsidedness" (Bachtin 1981).[7]

It is not a matter of establishing whether it is the internal point of view (the one of the social actor and of the autochthonous) or the external one (the researcher-observer's/stranger's one) that is the most worthy, but to highlight the dialogue between the two. The diversity of points of view allows catching different perspectives, whose gap permits new possibilities of knowledge. Hence, symmetry is re-established in the reciprocal respect of involved actors. Shadowing becomes then not only a technique, but a knowing attitude (Czarniawska 2007, 21).

In different fields of application, shadowing allows the exploration of the space in motion, by following 'special guides' observed within their main daily interactions. This advantage, which is a limitation at the same time, gives the opportunity to share a particular point of view, while observing from one's own perspective. Dialogue is extremely important: researchers do not pretend not to be there, but ask for explanations through questions which can make the 'shadowed' assume a reflective attitude towards their own habits, producing interesting analytical hints that make their self-representation part of the observation activity (Czarniawska 2007, 2). The repetition of these observations and the long time lapse spent together are a guarantee against possible misunderstandings. Moreover, to study urban contexts, this activity is often repeated by choosing different people belonging to comparable contexts (Sclavi 2005).

Talking on the move, following a person, gives the opportunity to activate non-verbal communication, analogical code and emotional language (Alaimo, Picone 2009, 75) while observing practices, relationships, power relationships and conversations while unfolding in space. Shadowing is an exciting activity for the flurry of feelings and achievements given all at once. During a shadowing experience, it is possible to collect a variety of information, such as written notes on dialogues and situations, to participate in formal and informal meetings, to interview persons met on the road, to collect different documents, to engage in informal conversations. This activity can also concern the personal life of people. For these reasons, researchers must be flexible, they need listening skills and an open-mind attitude in observation. During a shadowing survey the daily relationship creates a deep, closed and profound knowledge and gives the chance to observe the multiple human, social and territorial aspects of the investigated issue. At the same time, this proximity has to be watched over with reflexivity, in order to be aware about personal involvement and to avoid being overwhelmed by a wave of uncontrolled inputs (Alaimo 2012).

[7] This term is the translation of the Russian word "*vnenakodimost*", composed of "out" and the verb "stay", used by Bachtin to indicate the principle of externality or exotopy. "Staying outside" points out the importance to be in "another place" to understand, not by identification, but by recognition of differences and dialogue (Todorov, Bachtin 1990).

The choice of who should be shadowed depends on different rules related to the research objectives, but it has also a strong uncertain element, because not everybody accepts to be shadowed. In our experience, shadowing opportunities have often stemmed out from unexpected opportunities that we decided to seize upon once we felt the person was willing to interact. If a group of youth we approached in a neighborhood in Palermo easily accepted our shadowing proposal, as if it was a game, we found more difficulties in bolted research contexts, where information is accurately safeguarded. In such cases , shadowing can allow a strong and unexpected progress in the research process, as it happened in a fieldwork in Tunisia, when an entrepreneur, bored by the interviewing, stopped the conversation and asked the researcher to follow him, pretending to be his assistant. This was the beginning of one of the most productive shadowing activity we ever experienced, that allowed us to understand in a very short time (only three days) the structure of social and institutional networks intertwined in diverse productive and urban spaces; to observe the way in which the entrepreneur deals with other stakeholders in his context, to understand uneven power relationships, to feel discomfort in some situations, having to do with emotions that such swirling days produced. In other words, it has been possible to deepen different topics that had been kept out of the interview and the participant observation. The reason is that being together for a long time got the interviewed and the researcher much closer, even if they both had different positions, to which they finally returned once they ended the shadowing experience. This type of exploration was certainly hard, but it allowed us to reach out the unknown world of entrepreneurs, usually not open to investigation.

Obviously, the presence of the researcher introduces a foreign body in a common situation and the risk is to fudge the normal development of daily activities. But since it forsakes the paradoxical myth of an impossible neutrality, the researcher's presence can be used to stimulate reflections and produce new interpretations. Thus, as Czarniawska (2007) stated, the researcher's presence can only partially divert from normal daily activities, just like the sound recorder, which, after the first embarrassed moments, is easily forgotten.

Shadowing can be considered as a useful technique to collect urban tales on the move: the shadowed person can introduce stops in space as a form of punctuation on the research route, however the sharing of ideas, reflections and emotions produces a dialogic story that puts in deep contact the researcher and the shadowed person in the survey's context. The long time spent together forces both to move closer (physically, mentally, ironically, symbolically) creating extraordinary knowledge possibilities.

4. Conceiving a qualitative Gis

As we have stated at the beginning, it may sound strange to place shadowing, which is a mobile method (DeLyser, Sui 2014), side by side with Gis, and for a basic reason: Gis are generally linked to quantitative analyses, since they have been developed to highlight the presence or absence of distinctive spatial traits (presence of facilities, infrastructures, etc.), or to quantify the dimensions of spatial data (buildings, green spaces, etc.). As goes for all maps, being just their most recent and perfect manifestation (Harley 1990), a Gis follows the "cartographic logic" (Farinelli 1992; 2003) and seldom leaves space to the plurality of points of view; rather, it superimposes a single and clichéd thinking to reality.

Whatever is represented in a GIS (LODOVISI, TORRESANI 2005), as De Martonne said for traditional maps, must be real: if something is not present in a GIS, it is not present in reality. A GIS actually projects all data into an Euclidean, geometric *space*, which is ill suited to represent the qualitative aspects of *places* (narrations, life experiences, etc.).

Thus, Marianna Pavlovskaya's (2009) statement that every GIS is always qualitative might seem quite defiant. This argument would require a long explanation,[8] but in short a GIS can and must include qualitative data: ethnographic interviews, participant observations, planning for real (SCLAVI 2002; PICONE 2012), etc.. Moreover, a qualitative GIS must support qualitative analyses of data, i.e. hermeneutic models connected to the grounded theory (ELWOOD, COPE 2009, 2-4). This will help in founding a collective and inclusive construction of geographic knowledge.

The challenge linked to the creation of a qualitative GIS, therefore, leads us farther than the writing of some lines of code in software programming. It is not just about creating a toolkit that can take qualitative data into account and insert them into a GIS. On the contrary, we have to rebuild the scientific and cultural paradigm of digital cartography itself, by pursuing an integrated and mixed approach between quantitative and qualitative methods (SUI, DELYSER 2012, 115). This means creating a GIS that is able, in line with the criteria of qualitative methods, to generate plural representations of the same place. But how?

Amongst the several sources of qualitative data that can be used within a GIS we have chosen, as stated in the introduction, to use mental maps. These are inevitably the results of individual perceptions and cannot - nor should they - represent reality as it is. Rather, each mental map tells the tale of a different city, as seen through the lenses of his or her drawer. Can we insert mental maps into the rigid and quantitative structure of a GIS and connect these two apparently antithetic systems (the quantitative and the qualitative)?

In order to practically illustrate how mental maps, being qualitative data, can help modifying the GIS paradigm, we will now briefly discuss a recent research experience on the neighborhoods of Palermo (PICONE, SCHILLECI 2012). Within the course of 5 years we have collected hundreds of citizen- sketched mental maps; these citizens were asked to represent their own neighborhood as they saw fit.

The next step, which was tricky but essential for our work, was to merge the various mental maps into a single, collective drawing full of the most recurrent traits according to the citizens (GIANNOLA 2014). For instance, if most mental maps of a neighborhood would stretch the role of the central market square, we have tried to emphasize that role by enlarging the dimensions of the square, even in contrast with the scale ratio. If most citizens perceived the boundaries of a neighborhood in a similar way, our drawing would highlight these boundaries instead of the administrative limits, imposed by the Municipality. The output of this process were some maps that, although drawn by a pool of experts[9] who were perfectly aware of the scientific rules governing GIS, would radically differ from standard digital representations.

[8] The literature on qualitative GIS is abundant. For reasons of space, we cannot analyze all these works as they would deserve, but see at least DENNIS 2006 (on the use of qualitative GIS with children); FERRETTI 2007; COPE, ELWOOD 2009; WILSON 2009; AITKEN, KWAN 2010 (bridging a gap with broader considerations on qualitative methods); ELWOOD ET AL. 2011. For a more thorough analysis of qualitative GIS, see PICONE, LO PICCOLO forthcoming.

[9] Some geographers and urban planners have played a key role in this work: amongst them we would at least mention Bruno Buffa, Chiara Conte, Elena Giannola, Maria Luisa Giordano.

We have subsequently inserted our redrawn mental maps into the GIS (*fig. 1*). Our aim was to push the boundaries of that traditional representation so that it was forced to comply with the points of view of the citizens. If, in the former case, the square had to be enlarged, our GIS would have to warp the standard representation to include the new dimension of that element. We have tried several technical deformation tools (BALLAS, DORLING 2011), and have finally chosen the *Cartogram* add-on for ArcGIS (GASTNER, NEWMAN 2004; *fig. 2*). The final representation would differ from the original one, as we requested (*fig. 3*).
What is the use of a GIS that is deformed according to the points of view of the citizens? According to our theoretic framework, they can cartographically represent the city from non-standard points of view. They can therefore spread a non-hegemonic vision of reality and multiply urban narrations, by enriching them with innovative visions. This aim, however, is not purely rhetorical. On the contrary, it implies that, by looking at deformed mental maps, GIS experts and users (technicians and politicians first of all) may realize how important it is to adopt heterogeneous and multiple points of view. In other words, qualitative GIS can represent a city that is very real, but does not exist in maps: they are part of the imaginary of citizens, and take life in social interactions. They help defining what a city is, in an epoch which seems to be abandoning the idea that only a single way of thinking may exist.

5. Conclusions

In this brief paper we aimed at revealing the joint potential of two different research tools that, when combined, offer a deep comprehension of urban transformations and of their plural narratives. These techniques are radical, since they involve all social actors in order to develop several dialogical practices of representation and to experience new forms of urban narratives. In this framework, each narrative has its own value, and becomes plural as soon as it encounters the other narrators. The mutual intersection between various listening phases and their continuous redesigning create the scores of a unique polyphony, which can lead to new creative forms of representation, just like in shadowing or in the mental maps of qualitative GIS. These two forms of qualitative analysis, which are only apparently dissimilar, have actually a strong contact point: they encourage to conceive the city from a polyphonic and inclusive point of view.
Using these qualitative techniques is important not only in a conceptual and a theoretical way, but also for urban planning. For example, a planner who is designing a spatial transformation (in our case on a neighborhood) could take a great advantage from data collected in a qualitative GIS, because this strong technical instrument would allow him/her to mix the traditional representation with alternative views proposed by the inhabitants. Similarly, shadowing some important stakeholders could allow to know crossing and urban life practices from inside, highlighting a more complex perspective than the one provided by a static tool like interviewing. Moreover, shadowing offers new expressive opportunities that are also suitable for those inhabitants who are not at ease with verbal expression, but whose point of view is nevertheless indispensable.
To be understood, conceived and transformed, the city needs to develop creative experimentations, to foster new tools which can approach some sort of hybrid knowledge and overtake the hegemony of dominant and authoritarian representations that grant no space to dialogue and encounter. Even more radically, these kinds of experimentation are in search for a break to get out of unevenness, to make the research leave the "working on" and embrace a "working with" perspective (DELYSER, SUI 2014, 299).

This issue is crucial as it stands for a continuous mediation process which characterizes any scientific study dealing with territorial transformations, in line with what feminist theorists have been widely discussing (McDowell 1992; Katz 1994; Rose 1997; Valentine et Al. 2001) and whose fulfillment is committed to each researcher's choices. Actually, a critical approach to such choices deeply refers to the political nature of fieldwork and is worth being debated.
Much is still to be done, but even though the presented tools have got deficiencies, the challenge is to engage in new shared and open forms of plural representation, which make it possible to reconnect with places and with the people who inhabit, live in and transform them day by day through various expressive forms.

References

Abbot J., Chambers R., Dunn C., Harris E., de Merode T., Porter, G., Townsend J., Weiner D. (1998), "Participatory Gis: opportunity or oxymoron?", *PLA Notes*, vol. 33, pp. 27-28.

Aitken S.C., Kwan M. (2010), "Gis as Qualitative Research: Knowledge, Participatory Politics and Cartographies of Affect", in DeLyser D., Herbert S., Aitken S., Crang M., e McDowell L. (eds.), *The Sage Handbook of Qualitative Geography*, Sage, London, pp. 287-304.

Alaimo A. (2010), *Il territorio preso dalla rete. La delocalizzazione veneta in Tunisia*, PhD thesis, Scuola di Dottorato in Territorio, Ambiente, Risorse e Salute, Indirizzo "Uomo e ambiente", Padova.

Alaimo A. (2012), *La geografia in campo. Metodi ed esperienze di ricerca*, Pacini, Pisa.

Alaimo A., Picone M. (2009), "Sopralluoghi didattici", in Marengo M. e Lisi R.A. (eds.), *«Dentro» i luoghi. Riflessioni ed esperienze di ricerca sul campo*, Pacini, Pisa, pp. 71-89.

Bailey K.D. (2006), *Metodi della ricerca sociale. III: I metodi qualitativi*, il Mulino, Bologna.

Bachtin M.M. (1981), "Discourse in the novel", in Holquist M. (eds.), *The dialogic imagination. Four essays*, University of Texas Press, Austin, pp. 259-422.

Ballas D., Dorling D. (2011), "Human-Scaled Visualizations and Society", in Nyerges T.,

Capote T. (1975), *Music for chameleons*, Abacus, London.

Cope M. (2010), "A History of qualitative research in Geography", in DeLyser D., Herbert S., Aitken S., Crang M. e McDowell L. (eds.), *The Sage Handbook of Qualitative Geography*, Sage, London, pp. 25-45.

Cope M., Elwood S. (2009), *Qualitative Gis. A mixed methods approach*, Sage, London.

Corbetta P. (1999), *Metodologia e tecniche della ricerca sociale*, Il Mulino, Bologna.

Coverley M. (2006), *Psychogeography*, Herts: Pocket Essentials, Harpenden.

Crang M. (2002), "Qualitative methods: the new orthodoxy?", *Progress in Human Geography*, vol. 26, n. 5, pp. 647-655.

Crang M. (2003), "Qualitative methods: touchy, freely, look-see?", *Progress in Human Geography*, vol. 27, n. 4, pp. 494-504.

Crang M. (2005), "Qualitative methods: there is nothing outside the text?", *Progress in Human Geography*, vol. 29, n. 2, pp. 225-233.

Czarniawska B. (2007), *Shadowing and other techniques of doing fieldwork in modern societies*, Liber, Malmö.

DeLyser D., Sui D. (2012), "Crossing the qualitative-quantitative chasm II: Inventive approaches to big data, mobile methods and rhythmanalysis", *Progress in Human Geography*, vol. 37, n. 2, pp. 293-305.

DeLyser D., Sui D. (2014), "Crossing the qualitative-quantitative chasm III: Enduring methods, open geography, participatory research, and the fourth paradigm", *Progress in Human Geography*, vol. 38, n. 2, pp. 294-307.

Delyser D., Herbert S., Aitken S., Crang M., McDowell L. (2010 - eds.), *The Sage Handbook of Qualitative Geography*, Sage, London.

Dennis S. F. (2006), "Prospects for Qualitative Gis at the Intersection of Youth Development and Participatory Urban Planning", *Environment and Planning A*, vol. 38, n. 11, pp. 2039-2054.

Elwood S., Cope M. (2009), "Introduction: Qualitative Gis: Forging Mixed Methods through Representations, Analytical Innovations, and Conceptual Engagements", in Cope M., Elwood S. (eds.), *Qualitative Gis. A Mixed Methods Approach*, Sage, London, pp. 1-12.

Elwood S., Schuurman N., Wilson M. W. (2011), "Critical Gis", in Nyerges T., Couclelis H., McMaster R. (eds.), *The Sage Handbook of Gis and Society*, Sage, London, pp. 87-106.

Evans M. (1988), "Participant observation: the researcher as a research tool", in Eyles J., Smith D.M. (eds.), *Qualitative Methods in Human Geography*, Polity Press, Cambridge, pp. 118-135.

Farinelli F. (1992), *I segni del mondo. Immagine cartografica e discorso geografico in età moderna*, La Nuova Italia, Firenze.

Farinelli F. (2003), *Geografia. Un'introduzione ai modelli del mondo*, Einaudi, Torino.
Ferretti F. (2007), "La verità del suolo: breve storia del Critical Gis (1983-2007)", *Storicamente*, n. 3, <http://www.storicamente.org/02_tecnostoria/strumenti/ferretti.html> (ultima visita: Aprile 2014).
Gastner M. T., Newman M. E. J. (2004), "Diffusion-based Method for Producing Density-Equalizing Maps", *Proceedings of the National Academy of Sciences*, vol. 101, pp. 7499-7504.
Giannola E. (2014), *Digital mapping e giustizia sociale,* PhD thesis, Scuola di Dottorato in Architettura, Arti e Pianificazione, Indirizzo "Pianificazione", Palermo.
Gobo G. (2005), "The Renaissance of Qualitative Methods", *Forum: Qualitative Social Research*, vol. 6, n. 3/42, <http://nbn-resolving.de/urn:nbn:de:0114-fqs0503420> (ultima visita: Marzo 2014).
Gould P. e White R. (2002), *Mental Maps*, Routledge, London.
Haraway D.J. (1988), "Situated Knowledges: The Science question in feminism and the privilege of partial perspective", *Feminist studies*, vol. 14, n. 3, pp. 575-599.
Harley J.B. (1990), "Cartography, Ethics and Social Theory", *Cartographica*, vol. 27, n. (2), pp. 1-23.
Harvey F., Kwan M.-P., Pavlovskaya M. (2005), "Introduction: Critical Gis", *Cartographica*, vol. 40, n. 4, pp. 1-4.
Johnston R.J. (2009), "Methodology", in Gregory D. et Al. (eds.), *Dictionary of Human Geography*, Wiley and Blackwell, London, pp. 457-459.
Katz C. (1994), " Playing the field: questions of fieldwork in geography", *Professional Geographer*, vol. 46, n. 1, pp. 67-72.
Kindon S. (2010), "Participation", in Smith S., Pain R., Marston S. et aAl. (eds.), *The Sage Handbook of Social Geographies*, Sage, London, pp. 571-545.
Lareau A. (2003), *Unequal childhoods: Class, race, and family life*, University of California Press, Berkeley.
Lodovisi A., Torresani S. (2005), *Cartografia e informazione geografica*, Pàtron, Bologna.
Lynch K. (1960). *The Image of the City*, MIT Press, Cambridge.
Magnaghi A. (2001 - eds.), *Rappresentare i luoghi. Metodi e tecniche*, Alinea, Firenze.
Marcus G.E. (1995), "Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography", *Annual Review of Anthropology*, vol. 24, pp. 95-117.
McDonald S. (2005), "Studying actions in context: a qualitative *shadowing* method for organizational research", *Qualitative research*, vol. 5, n. 4, pp. 455-473.
McDowell L. (1992), "Doing Gender: Feminism, Feminists and Research Methods in Human Geography", *Transactions of the Institute of British Geographers*, vol. 17, n. 4, pp. 399-416.
Miller D. (1998), *A theory of shopping*, Polity Press, Cambridge.
Pavlovskaya M. (2009), "Non-quantitative Gis", in Cope M., Elwood S. (eds.), *Qualitative Gis. A Mixed Methods Approach*, Sage, London, pp. 13-38.
Peck J. (2003), "Fuzzy Old World: a response to Markusen", *Regional Studies*, vol. 37, nn. 6-7, pp. 729-740.
Picone M. (2012), "Scienze sociali e progetto di territorio", in Schilleci F. (ed.), *Ambiente ed ecologia. Per una nuova visione del progetto territoriale*, Franco Angeli, Milano, pp. 119-135.
Picone M., Schilleci F. (2012), *Quartiere e Identità. Per una rilettura del decentramento a Palermo*, Alinea, Firenze.
Picone M., Lo Piccolo F. (forthcoming), "Ethical E-Participation: Reasons for Introducing a 'Qualitative Turn' for PPGis", *International Journal of E-Planning Research*.
Rose G. (1997), "Situating Knowledges: Positionality, Reflexivities and Other Tactics", *Progress in Human Geography*, vol. 21, n. 3, pp. 305-320.
Schein E. H. (1999), "Kurt Lewin's change theory in the field and in the classroom: Notes toward a model of management learning", *Reflections. The Sol Journal of Knowledge, Learning and Change*, vol. 1, n. 1, pp. 59-72.
Sclavi M. (2002), *Avventure urbane. Progettare la città con gli abitanti*, Elèuthera, Milano.
Sclavi M. (2003), *Arte di ascoltare e mondi possibili*, Bruno Mondadori, Milano.
Sclavi M. (2005), *A una spanna da terra. Una giornata di scuola degli Stati Uniti e in Italia e i fondamenti di una metodologia umoristica*, Bruno Mondadori, Milano.
Sclavi M. (2006), *La signora va nel Bronx*, Bruno Mondadori, Milano.
Semi G. (2010), *L'osservazione partecipante. Una guida pratica*, il Mulino, Bologna.
Sui D., DeLyser D. (2012), "Crossing the qualitative-quantitative chasm I: Hybrid geographies, the spatial turn, and volunteered geographic information (VGI)", *Progress in Human Geography*, vol. 36, n. 1, pp. 111-124.
Todorov T., Bachtin M. (1990), *Il principio dialogico*, Einaudi, Torino.
Valentine G., Butler R., Skelton T. (2001), "The Ethical and Methodological Complexities of Doing Research with 'Vulnerable' Young People", *Ethics, Place and Environment*, vol. 4, n. 2, pp. 119-125.
Wilson M.W. (2009), "Towards a Genealogy of Qualitative Gis", in Cope M., Elwood S. (eds.), *Qualitative Gis. A Mixed Methods Approach*, Sage, London, pp. 156-170.

Captions

Fig. 1. Comparison in ArcGIS 10.0 between a mental map of Arenella neighbourhood in Palermo (left) and an orthophoto of Palermo corresponding to the same area (right; source: Esri Map Service). Processing by Bruno Buffa, Chiara Conte and Elena Giannola.

Fig. 2. Superposition of mental map and orthophoto obtained by using the 'AutoAdjust' command. The orthophoto points used as anchor elements were previously moved to correspond to the related points represented on the mental map; then, through the 'Adjust' command, the two maps have been overlapped according to the corresponding points. Processing by Bruno Buffa, Chiara Conte and Elena Giannola.

Fig. 3. Comparison between the original orthophoto (left), in which the administrative boundary of the district is marked, and the deformed one (right). Processing by Bruno Buffa, Chiara Conte and Elena Giannola.