

# **An Introduction to Postmodern Grounded Theory: A Method for Feminist Science Studies**

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## *Introduction*

In the following essay I will present a sociological method called Grounded Theory [hereafter: GT] which was pioneered by American medical sociologists, Barney G. Glaser and Anselm L. Strauss, as a social constructivist methodology to research medical sites. In the original framework their aim was to discover scientific insights with the aid of their method. As social scientists they intended to design a method that allowed them to produce objective scientific knowledge. This original positivist method was later developed by Kathy Charmaz and further developed by Adele E. Clarke for the purposes of postmodern feminist science studies research. After the postmodern paradigm shift grounded theorists investigate how partial, situated knowledges are produced through the interaction of human – non-human actors in scientific networks. The aim of my paper is to give an overview about the main distinction between modern and postmodern grounded theory and to review the suggested methodological tools for doing feminist research on hard sciences.

## *Positioning: Researchers and Informants at the Intersections of Scientific Discourses*

Norman K. Denzin, who is a leading researcher in the field of qualitative sociology, stated that “self-reflection in ethnographic practice is no longer an option” (1996, p. 352 cited in Clarke 2005, p. 12), by which he meant that after the ‘interpretive turn’ researchers have to position themselves as producers of knowledge, they have to reflect on several characteristics of their research: on the processes that lead to knowledge production, on their own context, on the context of their informants, and on the power dynamics which are at play in the analytical situation. After the ‘postmodern turn’ qualitative researchers have to position themselves so as to be held accountable for the consequences of their research. Adele E. Clarke, who developed grounded theory into a feminist postmodern methodology, also thinks reflexivity is crucial for applying constructivist grounded theory. For Clarke (ibid. p. 12) it is necessary to establish who is the researcher, who/what is the researched material, what are the consequences of the research and for whom, who paid for the research and why, and who/what is placed at risk by this research and who/

what is advantaged by it and how. And importantly, what knowledge counts to whom under what conditions.

Since the 1980s, feminist science studies and feminist knowledge production in general started to place emphasis on the absence of marginalized social groups from the process of knowledge production. Early works in the field of feminist science studies were interested in the absence of women as researchers, that is, in the androcentric biases in hard sciences, the effects of their absence on the focus of research topics and on the process of knowledge production; from this starting point feminist scholars have broadened their scope of research. Since the 1980s, when intersectional research gained ground, feminist scholars for example working on critiques of biology documented precisely the methods used by scientists to produce sexed, gendered, sexualized, racial or class differences in the fields of biological sciences. These feminist scholars were working against every form of biological determinism, which would affect negatively the lives of people living in marginalized social groups (Subramaniam 2009). Those feminist researchers whose primary training was in some of the hard sciences – such as Evelyn Fox Keller, a physicist, Donna Haraway, who is a biologist – were keen on preserving the values of sciences, and their aim primarily was to work out perspectives that have allowed researchers to integrate social values, and at the same time achieve greater objectivity in scientific research (Haraway 1988, Harding 1993). Donna Haraway's concept of situated knowledges refers to the situational nature of knowledge structures; this notion is crucial as it has allowed social constructivist researchers to open up their critiques to postmodern insights and incorporate scientific relativism into their critical works. By scientific relativism, scholars working in this framework understand the multiplicity of values and perspectives in creating knowledges, which differ from each other in their description of the world. But this approach does not mean that these different knowledge structures are valued equally by the postmodern social scientist, it means rather a democratic acknowledgment of differences in the produced knowledges and it also means a stressed emphasis on making explicit the values which are playing a defining role in producing knowledges (Clarke 2005).

In the mid-1990s in science and technology studies a shift occurred, in the sense that the research focus shifted from the constructed nature of scientific knowledges to the analysis of the relationally differing materialities (Law 1994, Barad 1998, Mol 2002). It was no longer an issue that scientific knowledge is constructed; researchers became interested in analyzing the intersectional problems of techno-scientific contexts, that is, what entities emerge at the intersections of interrelated networks in different techno-scientific worlds. The feminist onto-epistemological approach (Haraway 1997, Barad 2007, Hekman 2008, Van der Tuin 2011) is a

new strand of research which is interested in mapping the materialities of scientific encounters with nature. In the following I will lay out the basic framework for what it means to do grounded theory research in feminist science and technology studies today. I will explain the postmodern constructivist perspective, which is still the underlying theoretical framework for onto-epistemological research, and why it views the knowledge produced by natural sciences as necessarily partial, that is situated, local knowledge.

*Postmodern/Constructivist Grounded Theory: A Method for Integrating Human and Non-Human Actors*

Traditional positivist grounded theory was developed by the sociologists Barney G. Glaser and Anselm L. Strauss and was introduced through their book *The Discovery of Grounded Theory* (1999 [1967]). Although Glaser and Strauss worked together to articulate the original version of GT, their views on how to conduct qualitative research within their originally proposed framework diverged and they developed their methodological theory further in separate directions. These directions had been consolidated by the 1990s and referred to as Glaserian-grounded theory and Straussian-grounded theory; the latter was developed by Strauss with the contribution of Juliet Corbin (Dey 1999, Higginbottom & Lauridsen 2014). The central difference in doing grounded theory research according to Glaser is to generate theory from the data – a classical positivist stance – while, according to the Straussian model, the GT method is verificational (Charmaz 2003, p. 255). In the following I will present the guidelines for doing traditional GT research in order to distinguish it from the succeeding constructivist framework.

The traditional GT method can be characterized as positivist for a number of reasons. It presupposes that an external reality exists and awaits the discovery of the researcher; it aims for objective – in the sense of value neutral – descriptions of the world; and its terms and concepts are deduced from the analysis of empirical work. In their original work Strauss and Glaser sought to work out a method which is applicable to discovering theories from systematically conducted social research. To obtain this goal they argued that social scientists have to start their research without predetermined hypotheses, by which they certainly did not mean that researchers should not enter the research process without any theoretically derived ideas about why it is promising to conduct a particular research study; their point is to keep these ideas flexible so that they will eventually allow the theory to emerge from the material. In other words, research should not rest on preconceived theorizing; for grounded theorists, research is not theory-testing, instead theories must emerge from the empirical material (Bryant 2007, p. 107). Bryant further argues that

in traditional GT the emphasis is placed on the objectivist representation of the world; in this framework representation will not pose problems for the researcher once a neutral point of reference is established.

Although the traditional GT method is endorsed by Glaser and Strauss, their ideas significantly diverged: Glaser's views are still in the positivist paradigm, while in the Straussian variation, we can see the roots of constructivism. In his article, which was written as a response to Kathy Charmaz's elaboration of her constructivist grounded theory method in opposition to the methods of objectivist grounded theory (Glaser 2012 [2002]), Glaser argues that the remodeling of GT by constructivism is not desirable. Whilst Glaser does not abandon the objectivist framework, Strauss (1987) and Strauss and Corbin's works (1990, 1998), opened up the original method for constructivist researchers. Jane Mills and her colleagues (2006) argued that the roots of Charmaz's constructivist grounded theory method were already present in their work. Mills, Bonner, and Francis (2006) based their arguments on the explicit standpoints of Strauss and Corbin and how they think about the process of theorizing, about the researcher's role in grasping reality, and about the role of the researcher in this process. In their work Strauss and Corbin equate theorizing with construction itself, they claim that this process is the interpreting of different perspectives which are produced from the researched material (Mills et al. 2006, p. 4). "Strauss and Corbin clearly stated that they do not believe in the existence of a "pre-existing reality 'out there.' To think otherwise is to take a positivistic position that ... we reject ... Our position is that truth is enacted" (Strauss and Corbin 1994, p. 279 cited in Mills et al. 2006, p. 3). Despite this explicitly articulated constructivist standpoint, Charmaz claims that Strauss and Corbin's take on the GT method is positioned in the post-positivist frame; they acknowledge the existence of objective external reality; they think that grounded theorists must aim at unbiased data collection and, according to their stance, truth claims about objective reality can be verified (Charmaz 2003, p. 254). Besides the above critique, Charmaz acknowledges that Strauss and Corbin's position moved out of the positivist frame towards post-positivist theorizing, inasmuch as they are proposing to give voice to their respondents. Their aim is to represent their interviewees as accurately as possible taking into account how their views of reality – their own and their respondents' – differ from each other. Kathy Charmaz developed this strand of theorizing further by proposing to apply the constructivist GT method, which "assumes the relativism of multiple social realities, recognizes the mutual creation of knowledge by the viewer and the viewed, and aims toward interpretive understanding of subjects' meaning" (Schwandt 1994 in Charmaz 2003, p. 250). Her approach differs from the post-positivist leanings of Strauss and Corbin's method in the sense that her aim is to transform GT so that it is more

open-ended; for her the emphasis is much more on the emergent elements of the method.

For Charmaz the key to differentiating her constructivist method from the preceding variants is directly linked with the mutual interplay of the researcher and the researched material. Charmaz argues that the viewer is part of the viewed material, there is no breaking point within their interaction, and they mutually constitute each other. What is crucial for her is the process of interpretation versus discovery. For constructivists, or interpretivists, the material is open to the interpretation of the analysts; their engagement with the material creates the data. As a result, constructivist GT researchers see their analytical work as a process, which is always shaped by their own socio-cultural contexts (Charmaz 2003, p. 273).

Adele E. Clarke goes further than Charmaz in her work in arguing that GT has always already been around the postmodern turn (2005). While the goal of Charmaz is to work out a constructivist frame for grounded theorists, she also acknowledges constructivist leanings within the works of Anselm Strauss and Juliet Corbin. Clarke however claims that within GT itself, attentive researchers can find characteristics which have been binding the method to postmodernism since its inception. The characteristics that Clarke finds crucial are perspectives or situatedness, materialist social constructivism, deconstructive analytic interpretation through open coding, its focus on social processes and contingencies, a range of variation as a feature of difference, and the structuration of social worlds (2005, p. 6). These are the foundational elements for doing GT which were incorporated into the traditional methodology itself and hence make the method compatible with postmodern perspectives.

The concept of perspective or situatedness is a key starting point for Clarke's genealogy of grounded theory since she claims that the work of Margaret Mead underpinned the early Chicago school of sociology until the emergence of social constructivism with the work of Peter L. Berger and Thomas Luckmann entitled *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (1966). Clarke's aim in pointing out the links between Mead and the social constructionist sociology is that interpretive interactionism was grounded on these already existing and powerful theories in American sociology. Another crucial tenet of grounded theory, at least for Clarke, is its materialist social constructionism. She asserts that it is a misinterpretation of social constructionism that it is only interested in the symbolic world: for social constructionists the human and non-human elements are both key in theorizing; for constructionist theoreticians it is merely how we humans think about our access to the world that is different – our realities about the world are constructed through language and are available

to us through a shared linguistic universe. Another important characteristic of GT, which pushes the method to the edge of positivism is its analytic tool of open coding. For Clarke this perspective within the method enables researchers to read their data along multiple logical lines of interpretation. For postmodern interpretive researchers there is no single essential interpretation of the material; instead they think that knowledge constructions are themselves historically and geographically situated. In the Straussian version of GT, Clarke sees a strong orientation towards an analytical process by which grounded theorists can point towards ruptures, turning points and trajectories. This is crucial for pointing out contingencies: that is, the analytic process highlights how things are and how they could have been otherwise. Difference is tied to this characteristic as well, since early grounded theorists were also looking for variations in human activity; Clarke aims to build on this characteristic in her methodological theory, by proposing to create situational maps. With the help of situational maps researchers are able to make non-dominant differences visible and make silences speak about unvoiced differences in a hegemonic discourse. The Straussian concept of social worlds/arenas serves as the starting point for Clarke to develop her situational approach, which is the core of her postmodern GT. Clarke values this methodological tool in GT since it provides an open, fluid, and discourse-based approach to the analysis of different configurations of collective action (Clarke 2005, p. 6-10).

Clarke advocates applying six strategies for doing postmodern GT. These are embodiment or the situatedness of the knowledge producer; using the situation itself for grounding the analysis; shifting the research focus on to complexities, differences, and heterogeneities; sensitizing concepts as an analytical strategy; doing situational maps during the research process; and using narrative, visual, and historical discourses to expand the domain of social life (Clarke 2005, p. 19). By applying these six strategies researchers can consolidate their work within the constructivist/postmodern framework. The most crucial move for doing postmodern grounded theory research is acknowledging the situatedness of our position as researchers and the situatedness of our informants (Clarke 2005, p. 20-21). With this move constructivists are able to produce knowledges, which represent heterogenous, contextually grounded perspectives that mirror the intersectional subjectivities of knowledge producers. Postmodern constructivist scholars are aiming to counter the aperspectival knowledge claims of researchers whose position-taking is unvoiced and whose identities are rendered invisible through the methods of their positivist framework. The third tenet of Clarke's strategy is directly linked to situated knowledges. Here she places emphasis on situations, and on how researchers have to approach the study of situated research problems. The concept of situation refers to the broader relatedness of the studied

phenomenon and relations among situations in the Straussian sense (for more on this see Clarke 2005, p. 23).

In addition, Clarke prompts researchers to design research questions which address situational problems, and as a consequence, researchers must embrace the limitations of their work. For postmodern social scientists the situatedness or the explicit limitations of their research is considered one of the strengths of their method. From the limited nature of doing postmodern research it follows that analysts can focus on differences, complexities and multiplicities. GT allows researchers to fracture their data and as a consequence it allows for multiple interpretations which enable a researcher to focus on differences as opposed to the representations of normativity and homogeneity in traditional positivist sciences. What is crucial here is the focus on the heterogeneity of the world: researchers need to recognize normative conceptualizations in modernist knowledge structures and they have to de-reify them through empirical research. Instead of constructing theory from data, researchers should aim at theorizing through sensitized concepts constructed through interpretive analysis. Analysts should aim at writing thick analyses from their data, making situated analytic claims that allow them to avoid over-generalization and over-abstraction. In conjunction with the previous analytical strategy Clarke suggests that we do situational maps as a visual strategy that helps create connections among the elements of our research, which in turn fosters relational analyses. The last strategy that Clarke proposes for pushing grounded theory around the postmodern turn, and consolidating it as postmodern/constructivist method, is to analyze discourses of three kinds: narrative, visual, and historical. These all facilitate the idea of expanding the domains of social life that our research addresses (Clarke 2005, p. 28-31).

### *Mapping, Coding and Memo-writing*

Postmodern and constructivist principles are compatible with each other; in fact, Adele E. Clarke argues, that her situational analysis method, which involves mapping strategies, is complementary to traditional GT methods such as coding and memo-writing (Clarke 2005). Coding and memo-writing are pre-requisites for doing the analytical maps that Clarke advocates. But what does coding and memo-writing mean in a GT framework?

It is advised by Charmaz to go through three phases of coding procedures with constant comparative methods (Charmaz 2003, 2006). In the initial coding phase, a researcher can work his/her way through the text word-by-word, line-by-line, or incident-by-incident. In this initial phase, it is useful to apply these strategies interchangeably, and get to the point from where it is possible to look at how

certain scientific realities are produced, and consequently in this phase the aim is to locate and compare these production processes with each other from different locations. In this phase it is useful to develop active short codes to describe the actions which are retailed by the interview participants. After this first step, it is advised to continue with focused coding, which means to return to the initial codes and work out new descriptions which would best describe what is emerging from the analytical work. At the final stage of the coding work Charmaz suggests to develop out of these two-phase codes theoretical codes which enter into the sphere of concepts which provide the skeleton of the analytical work. These codes are regarded as necessary for working out analytical perspectives, that is, these codes facilitate the fragmentation and re-structuring of the empirical material through the logic of the constructed concepts.

For Charmaz memo-writing is an intermediate step between coding our material and completing the first draft of our analytical work (2003 p. 261), while for Clarke, memo-writing is a crucial tool throughout the analytical procedures (2005). Clarke suggests writing memos as a part of the comparative work that we are doing while we are analyzing our material in every phase of the research, including in the phase of working out situational maps. Memo-writing facilitates thinking about our codes about relationships within our project, and as a result it allows us, to rethink our work while we are constantly engaged with our material. Charmaz suggests that during memo-writing we write detailed descriptions of the processes, assumptions, and actions which are implied by our codes. During coding, we have to come up with active codes, because active codes facilitate comparison between different research problems. During memo-writing researchers have to detail what they and their informants mean by the codes, what these codes designate in their field of research, and as a result researchers are better able to see how these diverse, but related elements fit into the larger picture (Charmaz 2003 p. 261). Detailed coding and memo-writing lead the researcher to start his/her work with situational maps.

### *Situational Maps*

Three main types of situational maps and analyses are proposed by Clarke (2005, p. 86): these are (1) situational maps, (2) social worlds / arenas / discourses maps, and (3) positional maps. Developed by Clarke, these are intended to be used for opening up the raw data for analysis, and then to facilitate easier movement within the data which we are interrogating. Clarke considers the biggest advantage of creating maps for analytical purposes to be that they provide the researcher with “the big picture” (ibid. p. 85). That is, maps are helpful in locating the project/

situation in the world. Let me elaborate the differences between them below. To do situational maps researchers have to locate all the human and nonhuman elements as they are framed by the informants and by the analyst; the main task here is to draw up a picture about the situation that we are interested in. Human elements are individuals, groups, organizations, institutions, subcultures which emerge in our situation, while nonhuman elements are those actors (nonhuman elements as agents), which unavoidably force human elements to deal with them. Their interrelationship within our situation is not the question at the time we complete our map; the question is the nature of their relationships. In other words, the first phase within this methodological strategy is rather descriptive, the most important thing is quite literally to get a situational map which answers the questions (1) who and what is in our situation of concern; (2) who and what matters; (3) and what elements make a difference. When a situational map is ready the researcher can move onto the next phase which is the relational analysis of the situational map through memo-writing. In this phase, researchers have to take all elements one-by-one and find out what other elements they are related to, and during their memo-writing they have to determine the quality of their relationship to each other (Clarke 2005, p. 86-7). Once a situational map is completed, researchers can turn to construct their social worlds/arenas/discourses map.

Social worlds are quite simply universes of discourses in the Straussian sense – this fundamentally symbolic interactionist perspective, is applied in Clarke's analysis (Clarke 2005, p. 109-110), because these are the worlds where social groups actively take part in knowledge construction and researchers can observe their collective actions toward shared or conflicting interests. During social worlds analysis researchers can interpret how the unequal distribution of power is altering the balance among the elements in the situation of concern. With these maps the researcher can explore the diverse social actions in which the members of different worlds and groups take part: these are actions through which humans become members of each world; through these actions they performatively create their social positions. The stake in these interactions is how individuals express their belonging, their commitments, their values through their actions, and parallel to this, how discourses/social worlds play a role in defining their subjectivities. Two possible focuses are advocated by Clarke: (1) is on actions/processes as discussed above, and (2) is on units of actions, that is, the entities both human and nonhuman which are present in the analyzed situation. In sum, the analytical focus is on the processes that the elements enact collectively and, importantly, researchers can use this focus as a boundary-making tool to set distinctions among social worlds (Clarke 2005, p. 113). The first analytical step in creating a social worlds map is the identification of different social worlds, which come together

in our situation. During the analysis, researchers have to look for patterns of collective commitment; that is, we have to identify sequences of actions which are performed in order to achieve a shared goal. Related to this analytical focus, we have to interpret their perspectives so that we are able to identify their shared goal. It is necessary to characterize the human and nonhuman actors in each world with a special focus on the constraints, opportunities, and resources that they provide in that world (Clarke 2005, p. 110). The following step in the analytical process is to create positional maps which are useful for mapping the positions which are taken in the data.

The biggest emphasis is placed on making a distinction between positions of individuals, groups or institutions versus positions in discourses. Clarke presses the importance of “moving beyond the knowing subject” in the Foucauldian sense, and warns researchers that they must focus on mapping the positions, which are taken in the discourses in their analytical situation (2005 p. 126). These positions are about those topics, which emerge through our coding procedures. Clarke writes that the previously described processes, such as coding and situational mapping, are fracturing the data in such a manner that researchers are able to delineate positions and draw positional maps that adequately describe the major standpoints which are taken (2005 p. 128). In the process of constructing positional maps researchers have to look for “issues, positions on issues, absences of positions where they might be expected (sites of discursive silence), and differences in discursive positions central to the situation under study” (Clarke 2005, p. 126). During positional mapping, researchers have to locate all the positions which are taken in the discourse, but by doing that, Clarke notes, positions are not valued equally; this interpretation would be a serious flaw in understanding the central tenet of relativism (2005 p. 127). By locating all positions researchers democratically represent the major standpoints in the situation of concern, but as Clarke emphasizes, this does not mean that all of the positions are valued equally by the researcher. In fact, in postmodern grounded theory, the aim is to point out that values operate throughout any research, and in any kind of work, which means that individuals and collectivities reach different valuations which it is then possible to problematize. With this move, researchers are able to point toward power inequalities and raise questions by interpreting silences or silenced positions. For Clarke (2005 p. 136), the most important aspect of doing situational maps is locating those positions, which are not taken in the data: to make these silences speak through positional mapping. Fundamentally, the aim is the democratic representation of heterogeneity and the comparative analysis of these positions relative to each other in the situation.

### *Conclusion*

My intention with the above essay was to provide a review about the development of a widely used method in science studies research and its application for feminist scholarship focusing on the ontographies of natural sciences. Both the original modernist version and the postmodern version of GT were designed and primarily used to research the intersections of social and natural scientific worlds where scientific knowledges are produced. But the method is not limited to the field of science and technology studies. This is a method that incorporated tools from qualitative sociological and anthropological methodologies, which were used to research everyday cultural contexts. As such a method, constructivist postmodern grounded theory could also be applied to critically study cultural sites where other kinds of scientific knowledges are produced.

### **WORKS CITED**

- Barad, Karen. 1998. "Getting Real: Technoscientific Practices and Materializing Reality," *A Journal of Feminist Cultural Studies* 10. 2: 87-128.
- Barad, Karen. 2007. *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke UP.
- Berger, Peter L. and Luckmann, Thomas. 1966. *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*. London: Penguin Books.
- Bryant, Anthony. 2007. "Constructive/ist response to Glaser's "Constructivist Grounded Theory?" *Historical Social Research / Historische Sozialforschung* 19: 106-113.
- Charmaz, Kathy. 2003. "Grounded Theory: Objectivist and Constructivist Methods." In Denzin Norman K. and Lincoln Yvonna S. eds. *Strategies of Qualitative Inquiry*. Thousand Oaks, CA: Sage, 249-291.
- Charmaz, Kathy. 2006. *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. London: Sage.
- Charmaz, Kathy and Mitchell, Richard G. 1996. "The Myth of Silent Authorship: Self, Substance and Style in Ethnographic Writing" *Symbolic Interaction* 19. 4: 285-302.

- Clarke, Adele E. 2005. *Situational Analysis. Grounded Theory After the Postmodern Turn*. Thousand Oaks: Sage.
- Dey, Ian. 1999. *Grounding Grounded Theory. Guidelines for Qualitative Inquiry*. San Diego: Academic Press.
- Glaser, Barney G. 2012 [2002]. "A Constructivist Grounded Theory?" *The Grounded Theory Review* 11. 1: 28-38.
- Glaser, Barney G. & Strauss, Anselm L. 1999 [1967]. *The Discovery of Grounded Theory. Strategies for Qualitative Research*. Hawthorne N.Y.: Aldine de Gruyter.
- Haraway, Donna. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14. 3: 575-599.
- Haraway, Donna. 1997. *Modest Witness at Second Millenium. Female man meets oncomouse*. London: Routledge.
- Harding, Sandra. 1993. "Rethinking Standpoint Epistemology: What is Strong Objectivity?" In Alcoff Linda and Potter Elizabeth eds. *Feminist Epistemologies*. New York: Routledge, 49-82.
- Hekman, Susan. 2008. "Constructing the Ballast: An Ontology for Feminism." In Alaimo Stacy and Hekman Susan eds. *Material Feminisms*. Bloomington and Indianapolis: Indiana University Press, 85-119.
- Higginbottom, Gina and Lauridsen, Erica I. 2014. "The Roots and Development of Constructivist Grounded Theory" *Nurse Researcher* 21. 5: 8-13. Guba & Lincoln 1994.
- Law, John. 1994. *Organizing Modernity*. Oxford: Blackwell.
- Mills et al. 2006. "The Development of Constructivist Grounded Theory," *International Journal of Qualitative Methods* 5. 1: 1-10.
- Mol, Annemarie. 2002. *The Body Multiple. Ontology in Medical Practice*. Durham and London: Duke University Press.
- Strauss, Anselm L. 1987. *Qualitative Analysis for Social Scientists*. Cambridge: Cambridge University Press.

- Strauss, Anselm L. and Corbin, Juliet. 1990. *Basics of Qualitative Research. Grounded Theory Procedures and Techniques*. Newbury Park CA: Sage.
- Strauss, Anselm L. and Corbin, Juliet. 1998. *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks CA: Sage.
- Subramaniam, Banu. 2009. "Moored Metamorphoses: A Retrospective Essay on Feminist Science Studies," *Signs* 34. 4: 951-980.
- Van der Tuin, Iris. 2011. "New Feminist Materialisms" *Women's Studies International Forum* 34: 271-277.