



Methods for Change
**Diffractive
Genealogy**

Professor Natasha Mauthner
Newcastle University

Corresponding Author
natasha.mauthner@ncl.ac.uk



Diffractive Genealogy

A Diffractive Genealogy is a relational method used to study research phenomena in terms of the complex tangle of relationships in which these phenomena are embedded.

It starts from the assumption that the social issues we study – e.g. gender inequality, work-life balance, political disaffection, mental health, technological change, environmental sustainability, globalisation – are best understood by analysing their interconnected human and non-human dimensions. Where much conventional social research foregrounds individual people, and their experiences and perspectives, a Diffractive Genealogy emphasises relationships between people and other living and non-living entities, for example, communities, institutions, policies, laws, technologies, nature.

A Diffractive Genealogy is a method in which researchers, and other relevant parties, map and analyse these relationships. This mapping exercise is undertaken by reviewing a wide range of materials about the research phenomenon. These can be academic outputs, policy documents, practitioner guidelines, blogs, films, visual materials – anything of relevance and interest. Empirical research, using qualitative and/or quantitative methods, can also be conducted to gather further insights into the social issue. We analyse these documents, materials, qualitative/quantitative data to understand how social issues are often framed in terms of the ‘individual’ and to show how a focus on relationships can change our understanding of social issues and how we tackle them.

A Diffractive Genealogy can be used for theoretical and/or empirical research across disciplines.



Diffractive Genealogy

How does a Diffractive Genealogy create or contribute to change?

A Diffractive Genealogy starts from the assumption that to make sense of people's experiences, behaviours and practices we need to understand the relationship and contexts in which they are embedded. This is because people are relational beings who co-exist, and are interdependent, with other humans and non-humans: family, friends, pets, colleagues, communities, institutions, buildings, nature, place.

A Diffractive Genealogy assumes the way people live their lives, and how societies are organised, today are linked to, and emerge from, past systems and relationships. Understanding the past is therefore important for understanding the present.

A Diffractive Genealogy recognises that researchers, their theories and their methods shape how we do research and its outcomes. Because we are part of, and influence, the systems we study, we must situate ourselves in our research, and make explicit the values underpinning our research and measurement tools.

A Diffractive Genealogy is a method for studying these complex relationships. It focuses on the relational systems people are part of, rather than on individuals. This can change how we understand people's lives and social issues, and the kinds of interventions we design to address societal problems.

What ideas or concepts influence this approach?

The method of Diffractive Genealogy draws on the concept of relationality. Relationality attributes properties to relationships rather than independent entities. Through this concept, Diffractive Genealogy emphasises interdependent relationships amongst and between human and non-human systems, and how these co-emerge and co-create each other. Genealogy is a way of studying interdependent historical, cultural, social, economic and other systems through time and space. It is associated with the poststructuralist philosopher Michel Foucault, who believed the network of past relationships in which a system evolved—its history—helps understand how a system works today. A Genealogy shows how the present dynamically emerges from the past.

Diffraction in physics refers to how waves change direction as they encounter an obstacle. A cloud's silver lining – when sunlight bends around the edge of a cloud – is an example. This bright outline occurs when light is diffracted by cloud droplets along the cloud's outer edge. Feminist scientists and philosophers, Karen Barad and Donna Haraway, use diffraction as a metaphor for recognising how researchers, and their research instruments, are part of the network of systems and relations - people, places, communities - they study. It emphasises that our research does not discover or reflect the true nature of the world. It interacts with it to produce something new, just as the light interacts with the cloud to produce the silver lining.

Diffractive Genealogy



Why might I want to use a Diffractive Genealogy?

- Diffractive Genealogy can be used as a tool to help **identify the different worldviews, values and beliefs** held by people, groups, communities or organisations, and can be used by researchers, policy-makers and practitioners. It helps us explore how we think about and frame a social issue in the first place; how this informs how we theorise and measure social issues; and how the actions we take in relation to social issues are shaped. It helps us understand how specific ways of thinking about social issues get built into, and are reproduced by, our theories, methods, policies and practices. Exposing these worldviews, values and beliefs makes it easier to challenge them.
- Diffractive Genealogy encourages us to experiment with new ways of thinking and see where these lead us. This makes this method useful in situations or organisations where we can get stuck with certain ways of thinking or doing things, and where tweaking existing approaches is not working.
- Diffractive Genealogy starts from the assumption that we live in a relational world where all living and non-living entities are connected. It is well suited to projects trying to understand a social issue from a relational perspective which focuses on relationships between people and the wider social and natural environment in which they live. It would also be useful for projects wanting to challenge taken-for-granted binary ways of thinking about and addressing social issues.
- Diffractive Genealogy is useful for researchers working in interdisciplinary and transdisciplinary teams, especially research where academic and non-academic partners are working together to co-produce knowledge and change.
- Diffractive Genealogy works with diverse topics, populations and geographical and socio-cultural contexts. Researchers, as well as policy-makers, practitioners, and activists can use it to analyse assumptions at work in their own domains.

Diffractive Genealogy



Step by step guide to using a Diffractive Genealogy:

- 1. Identify a social issue:** What is the social issue you are curious about and want to investigate? What are different ways of thinking about this social issue? Are some ways more dominant than others? Is this social issue thought of as a 'problem'; if so, why?
- 2. Map the social issue.** Create the genealogy by making a relational map of the various aspects of this issue, the different human and non-human parties involved, and its distributed (temporal and spatial) scales. The starting point for making the map is somewhat arbitrary. You can use various modalities to make the map: a drawing, a sculpture, a diagram, a table, a collage, a piece of writing, a film, etc. As part of this genealogy, you can also conduct empirical research such as documentary analysis, ethnography, interviews, focus groups, a survey, analysis of secondary quantitative or qualitative data.

Map the social issue

What are the people, communities, places, institutions, policies, laws, technologies, media reports, organisational documents, personal stories, scientific discourses, geopolitical contexts connected to the social issue you are investigating?

- 3. Analyse one or more aspects of the social issue:** It is not possible to analyse all the threads and connections mapped in step 2. Choices must be made about what to explore in more detail. There may be different reasons for making these choices. For example, is there an aspect of this social issue you find puzzling or intriguing? Do you have a burning question about this social issue? Have the thinking, policies and practices concerning a social issue changed or reached a dead end?

Analyse one or more aspects of the social issue.
In this step, you follow one or more threads with the following questions in mind:

- 1. How is the social issue being framed in this thread?*
- 2. How has this thread and its framing developed across time and space?*
- 3. What key ideas, values and assumptions underpin this thread and its framing?*
- 4. What broader historical, social, cultural, economic, political and intellectual currents have shaped this thread and its framing?*
- 5. What/who does the current framing privilege and what/who does it marginalise?*
- 6. Have there been competing framings across time and space, and specific junctures where some ideas took root and others fell by the wayside?*
- 7. Can you frame this social issue differently?*

Diffractive Genealogy



4. Map and analyse your own practices. In this 'diffractive' step, you highlight how your own practices (e.g. methods and theories) are part of the network of relations you are studying and how they contribute to framing the social issue in a particular way. You use steps 2 and 3 to undertake this analysis and mapping exercise. Step 4 provides a way of understanding the values and assumptions embedded in your practices, and how they too are shaping what you study. Making this explicit is regarded as a form of ethical research practice.

Map analyse your own practices

For academics, this might be exploring the philosophical approach, theories and methods used in the research; the characteristics of the researchers; the disciplinary norms shaping research practices; the geo-political location of the research; the funding sources supporting the research; and so on.

For non-academic practitioners, this might be examining funding sources, geo-political context, and organisational policies and practices

- It maps both human and non-human parties involved in the social issue: research participants and communities, policymakers, practitioners, but also the natural and physical environment. This is also done by following steps 2 and 3.
- It highlights not only how the researcher shapes the research and its outcomes, but also the influence of research methods and theories. This is achieved by following step 4. Decentring the researcher does not mean the researcher is objective and detached from the research phenomenon. Rather, it involves investigating the phenomenon through more than the subjectivity of the human researcher and/or research participants, to analyse its temporal and spatial dimensions, human and non-human elements, and how it is shaped by the research itself

6. Produce a Diffractive Genealogy:

Undertaking steps 1 to 5 is a way of using the method of Diffractive Genealogy to analyse a social issue. Because a genealogical method recognises the relational nature of the world, one thread leads to another. This means at some point we must stop the analysis for the purposes of writing up the genealogy, while recognising the arbitrary nature of where and when we make this cut. Writing up the results of these steps is a way of producing a Diffractive Genealogy: a relational analysis of a social issue and how your own practices contribute to framing it in a particular way.

5. Decentre the researcher. By framing and studying a social issue in relational terms, a Diffractive Genealogy decentres the role of the researcher in three ways:

- It foregrounds the distributed (temporal and spatial) scales of a social issue: the historical, social, cultural, political and economic forces and practices that contribute to its emergence. This is done by following steps 2 and 3.

Diffractive Genealogy



Example(s) of Diffractive Genealogy in social science research:

A Diffractive Genealogy of data sharing in the social sciences:

Researcher:

Professor Natasha Mauthner
Newcastle University

Identifying the data sharing movement as a social issue

I use Diffractive Genealogy to study the emergence of the data sharing movement in the social sciences. I embarked on the project in response to a change in data policy. Until the mid 1990s, social researchers were expected to destroy empirical data within five years of their collection. A new data policy was introduced in which researchers were expected to share their data, by depositing them within a social science archive, making them available to other researchers.

Mapping the data sharing movement

I read widely to understand its historical emergence in a global context; its manifestation across geographical and socio-cultural contexts; and its articulation across different social and natural science disciplines, and in relation to different forms of data. My sources included: academic publications; academic and non-academic conference reports; policy documents issued by inter- and non-governmental organisations; data sharing policies issued by research funding organisations, academic journals and universities; information-sharing legislation; library and data repository websites; and blogs about data sharing. I mapped the genealogy using diagrams and written text.

Analysing one or more aspects of the data sharing movement

I was interested in rationales for regulating and institutionalising data sharing; their underpinning values and assumptions; and discourses around 'transparency' and 'replicability'. This led me to explore compliance issues amongst researchers in natural and social science; ethical and epistemological challenges researchers were facing; and solutions proposed by researchers, policy makers and archivists and the extent to which they addressed the challenges.

Mapping and analysing my own practices I situate my genealogy by accounting for my own research practices and the role they play in helping to make the specific Diffractive Genealogy of the data sharing movement I produce. I explain the relational thinking underpinning my research and the Diffractive Genealogy methodology I have developed to put into practice this relational approach. This makes visible the lens through which I read and analyse my materials and how it materialises data sharing as a contested new professional norm and not simply a marker of scientific progress.

Decentring the researcher

I decentre the researcher by inviting a focus on the historical, social, cultural, political and economic processes at distributed temporal and spatial scales involved in making the data sharing movement; and foregrounding how my research approach and method shape how I frame and understand data sharing.

Producing a Diffractive Genealogy of the data sharing movement

Writing up the results produces a genealogy of data sharing. Situating this genealogy by writing about the influence of my own research practices produces a Diffractive Genealogy. My Diffractive Genealogy of the data sharing movement focuses on its underlying philosophical, moral, economic and political values and how these give rise to the contested nature of data sharing as a new professional norm. This research is contributing to a reassessment of data sharing initiatives to make them more inclusive of diverse understandings of, and approaches to, research.

Diffractive Genealogy



Where else could a Diffractive Genealogy be used?

A Diffractive Genealogy is a useful method for studying social phenomena as relational systems and for understanding the relationships shaping our own research practices and their impact on what we study. I have used a Diffractive Genealogy to study postnatal depression as a relational phenomenon. In contrast to medical models of depression, which attribute the condition to the individual mother, a diffractive genealogy situates depression in a societal and cultural context. Depression is understood as embedded in a relational network of human and non-human systems, that all play a part in creating the condition.

These include the social, political, material, structural, and cultural conditions of women's lives; and the role of psychiatric methods (e.g., screening devices, diagnostic tools, clinical guidelines) in reinforcing the idea of depression as an individual problem. The method can help bring about change by broadening the scope of interventions, encouraging health professionals to look beyond treatments focused on individual women and take into consideration the relationship between mental health and the wider environment. I have also used a Diffractive Genealogy to study how families use technology, and to understand technology use as more than about individual family members, their experiences and their practices. I see technology use as part of broader human and non-human systems including discourses about technology in the media, popular culture and academia; moral panics about technology; concerns about the effects of technology on children; technology design, development and marketing. All those involved with these phenomena – researchers, technology developers, policymakers, legislators – are implicated and have collective responsibility for emerging technologies and their effects on society and families.

Top Tips

- 1. Be open.** A key aspect of this method is being prepared to think very differently about the world we live in. Be open to challenge yourself and your own assumptions.
- 2. Embrace slow method.** The method is a slow way of working because it takes us on a journey following many different threads of an inter-connected network, not knowing where these will take us and what rabbit holes we might end up in! It is also the case that the change brought about by using this method will be slow.
- 3. Adapt the method.** Methods are not static. They evolve and change over time. Researchers make them their own as they put them into practice. Use the step-by-step guide as a starting point for further innovations and adaptations.
- 4. Accept being uncomfortable.** Working with this method can take us to places where we feel uncomfortable. This can be because we cannot find our way through the interconnected web; we may not be sure which threads to follow; or we simply cannot find answers to our questions. Occupying these kinds of spaces can be uncomfortable.
- 5. Trust the process.** Related to this is a willingness to lose ourselves and let go of our impulse to drive forward our projects in a directed and intentional way. We need to surrender to the process and trust it will take us to the place we need to get to even though we do not yet know what that place is.

Diffractive Genealogy



Further reading

- Geerts, Evelien and van der Tuin, Iris (2016) 'Diffraction & Reading Diffractively'. New Materialism, 27th July 2016 Available from: <https://newmaterialism.eu/almanac/d/diffraction.html>
- Mauthner, Natasha (2014) 'Digital data sharing: A genealogical and performative perspective'. *Studia Socjologiczne*, 3(214), 177-186. Available from: https://www.researchgate.net/publication/271838973_Digital_data_sharing_A_genealogical_and_performative_perspective
- Mauthner, Natasha (2015) 'We don't need digital detox, but there is a need to rethink our relationship with technology'. *The Conversation*, 20th April 2015. Available from: <https://theconversation.com/we-dont-need-digital-detox-but-there-is-a-need-to-rethink-our-relationship-with-technology-40346>
- Mauthner, Natasha (2016) 'Diffractive Genealogies'. New Materialism, 8th September 2016. Available from: <https://newmaterialism.eu/almanac/d/diffractive-genealogies.html>
- Mauthner, Natasha (1997) 'Postnatal depression: How can midwives help?'. *Midwifery*, 13(4), 163-171. Available from: https://www.researchgate.net/publication/51308310_Postnatal_depression_how_can_midwives_help
- Mauthner, Natasha (2018) 'Screening, Diagnosing, and Medicating Depression: Psychiatric Methods and the Making of Mental Disorder'. *Women's Reproductive Health* 5:1, 32-36. Available from: https://www.researchgate.net/publication/324250178_Screening_Diagnosing_and_Medicating_Depression_Psychiatric_Methods_and_the_Making_of_Mental_Disorder
- Mauthner, Natasha (2021) 'Karen Barad's posthumanist relational ontology: An intra-active approach to theorising and studying family practices'. *Families, Relationships and Societies*, 10(1): 33-49. Available from: https://www.researchgate.net/publication/349283997_Karen_Barad%27s_posthumanist_relational_ontology_an_intra-active_approach_to_theorising_and_studying_family_practices
- Miceli, Charles (2023). 'Michel Foucault and Genealogy'. Train of Thoughts, YouTube Video, Available from: https://www.youtube.com/watch?v=oVKaeZZ0_kw

To reference:

Mauthner, N. (2023) 'Diffractive Genealogy' in Rodekirchen, M., Pottinger, L. Briggs, A., Barron, A., Eseonu, T., Hall, S. and Browne, A.L. (eds.) *Methods for Change Volume 2: Impactful social science methodologies for 21st century problems*. Manchester: Aspect and The University of Manchester.



To read about more exciting social science methods, the full range of Methods for Change 'how-to' guides can be found [here](#).