

### 3 METHODOLOGY - HEURISTIC TENDENCIES WITHIN THE DISSERTATION

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This dissertation examines and analyses the narrative of creativity in IT from a discourse analytical perspective. The thesis is therefore not intended to make a further attempt at defining a concept of creativity and neither aims to extend the numerous already existing proposals on creativity. It rather aims to expose the processes of (1) how creativity is *organised* and (2) how it is *understood* in large tech companies. This *organised* and *understood* thus means the expression and the corresponding effect of a discursive truth through a certain narrative.<sup>1</sup> As creativity is an evaluative term, it does not describe the term to a (supposed) quality of human and organisational action. Further, it has an ambiguous meaning since it is used with reference to very different theoretical understandings and discourses. The question of what creativity is does therefore not seem to be a suitable one, since questions about the “what” evoke rather essentialist answers. The interpretative and evaluative attribution of approaching the concept of creativity represents a suitable vehicle to abandon the deterministic question of *what* creativity is. Instead, the questions of *how-*, *when-*, *by whom-* and *why creativity* move in order to capture the practical situation (i.e., the actors, institutions and constellations) and the discursive context.

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- 1 For a more accurate comprehension, an analogy to artificial creativity research can be made, as an early approach towards the term defined artificial creativity in a way that places the impression of creativity above the question of what creativity actually is: “Computational Creativity is the study and simulation, by computational means, of behaviour, natural and artificial, which would, if observed in humans, be deemed creative. Cf. Anna Jordanous, “A Standardised Procedure for Evaluating Creative Systems: Computational Creativity Evaluation Based on What it is to be Creative”, *Cognitive Computation* 4, no. 3 (2012): p. 248, doi: <https://doi.org/10.1007/s12559-012-9156-1>.

This kind of approach pursues an approximation rather than a clarity of definition. This is an essential reason for the decision to discursively grasp the phenomenon of creativity in IT.

Therefore, and before the methodical approach as well as the further structure of this thesis are to be presented, I would like to emphasise the reasons that lead to a discourse analytical approach, as they can help to arrange and hence narrow down the otherwise very broad field of topics that are affected by my carried-out procedure.

### 3.1 WHY DISCOURSE

The discursive approach to the concept of creativity in IT has certain advantages in itself. The concept of creativity is as diffuse as it is ubiquitous. It is overly complex in its number of possible understandings, as well as underly complex in these very understandings – at least if it is meant to be a common and collective one. The meaning and entanglement of creativity in IT is therefore not comprehensible if only referring to *the* discourse on creativity in IT. This is also due to the fact that secondary literature was unable to generate a handy concept of discourse from Foucault's writings. Discourse analysis enables a multiplying view; therefore, it becomes possible to perceive the complexity of the concept of creativity with regard to IT. Discussing discourse analysis, the term toolbox sometimes comes up from which the appropriate tools can be chosen and used.<sup>2</sup> Over time, the toolbox became larger

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2 See Brigitte Kerchner and Silke Schneider, „Endlich Ordnung in der Werkzeugkiste: Zum Potenzial der Foucaultschen Diskursanalyse für die Politikwissenschaft – Einleitung“, in *Foucault: Diskursanalyse der Politik*, in eds. Brigitte Kerchner and Silke Schneider (Wiesbaden: VS Verlag für Sozialwissenschaften, 2006), p. 9. This source can also be found in a footnote section at Klaus Röhl, "Diszipliniert Foucault: (K)ein Hammer, genannt Diskurs", *RSOZBLOG.de, Weblog von Prof. em. Dr. Klaus F. Röhl, Ruhr-Universität Bochum* (blog), last modified 16th March, 2015, <https://www.rsozblog.de/diszipliniert-foucault-kein-hammergenannt-diskurs/#fn4-3465>. However, Röhl himself considers it interesting how the Foucault reception converges over such standard quotations, by mostly referring to (and quoting) themselves, therefore creating core sentences of secondary origin. Cf. *ibid*.

and more versatile. The initially vague methodological approach to discourses evolved into a large number of analytical approaches.<sup>3</sup>

It therefore appears to be appropriate to initially address the concept of discourse in more detail. For both discourse and creativity are concepts of greater magnitude than could be left as such: the concept of discourse is all too diverse and fragmented that no more precise specification is needed, and the concept of creativity is too diffuse and charged to refer to something like *the* discourse on creativity in large IT enterprises without further remarks (this relates – as will be shown – not only to the quantities of discourses, but also to their quality, their type). For a better discursive orientation, the concept of discourse<sup>4</sup> itself will be dealt with as opposed to focusing on the analytical part of discourse. According to Gardt, the concept of discourse can be considered in three categories: theory, method and stance.<sup>5</sup> However, theory will only be of inferior relevance in this section.

Concerning the theory only the following: the discursive consideration of this work's topic is based on the concept of discourse introduced by Foucault.<sup>6</sup> This allows for a certain perspective that would not have been feasible or hardly accessible otherwise, as the discourse of creativity in IT does not only describe but determines. It defines and constitutes a social reality of

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3 According to Keller, (private talk in Berlin) it is also allowed to select comparatively liberal from these offerings.

4 The concept of discourse within this dissertation essentially follows Michel Foucault's conceptions and subsequent research.

5 Andreas Gardt, "Diskursanalyse–Aktueller theoretischer Ort und methodische Möglichkeiten", in *Diskurslinguistik nach Foucault. Theorie und Gegenstände*, ed. Ingo H. Warnke (Berlin/New York: de Gruyter, 2007), p. 23. Gardt further notes that although the concept of discourse appears in very different research directions, there are various similarities among them. To him, a discourse is, in summary, a discussion of a topic that is reflected in statements and texts of all kinds, that is supported by more or less large social groups, that both reflects and actively shapes the knowledge and attitudes of these groups to the topic in question and thus has a guiding effect on the future shaping of social reality. Ibid., p. 26.

6 Jürgen Habermas in particular also uses the concept of discourse, but in a completely different way. According to Jürgen Link, two opposing concepts collide with a loud bang in the word discourse. With reference to Habermas and Foucault, he proposes to distinguish between *discourse (h)* and *discourse (f)*.

what a concept of creativity can be and has become.<sup>7</sup> It shapes the very thing it describes.<sup>8</sup>

Concerning the analysis and in order to create structure in the various strands of discourse related to creativity in IT, a further differentiation is needed. Following Jürgen Link, a distinction between special discourses and interdiscourses can be applied. The special discourse is oriented towards Foucault's understanding of discourse: it is about special areas of knowledge that regulate and institutionalize knowledge. Direct access to discourse is reserved for particularly legitimate actors.<sup>9</sup> A special discourse is predominantly a scientific discourse, such as the technical debate about the concept of creativity in the development of artificial creativity represents, whose technical language (i.e., knowledge) can only be legitimately pronounced by IT engineers and scientists. The example of artificial creativity, however, shows that the topic is not covered by one single special discourse. Instead, numerous special discourses address the concept in their respective angles. Together they form a heterogeneous and interdisciplinary *field*, with technical disciplines such as electrical engineering or computer science, as well as neurosciences or psychology and the popular scientific risk assessment of artificial creativity. In addition, a public awareness of the special discourses arises above a certain size. Due to the number and diversity of special discourses on one topic, they overlap and do not remain isolated. The discursive environment increasingly detaches itself from being single special discourses alone and extends into an interdiscourse.<sup>10</sup> The interdiscourse is hybrid and comprises the knowledge of individual special discourses. It is a streamlining, thus mediating type of discourse that is therefore able to produce common knowledge, used on a day-to-day basis. The interdiscourse forms the everyday subjective evaluation or descriptive expression of a term's presumed general understanding without

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7 This argumentation follows Dietrich Schwanitz' notes on Foucault's discourse theory. However, the question of the extent to which discourses represent or constitute reality are treated with different accentuations depending on the definitions. Cf. Gardt, „Diskursanalyse–Aktueller theoretischer Ort und methodische Möglichkeiten“, p. 27.

8 Jürgen Link, “Noch einmal: Diskurs. Interdiskurs. Macht”, *kultuRRvolution. Zeitschrift für angewandte Diskurstheorie*, no. 11 (1986): p. 5.

9 Ibid., p. 4.

10 As already mentioned briefly, the term *interdiscourse* (*Interdiskurs*) is coined by the German literary scholar and discourse researcher Jürgen Link. Due to his research focus and collaboration with Siegfried Jäger, interdiscourse initially found particular use in historical discourse analysis and critical discourse analysis (CDA).

it being clearly defined or described. In addition to special discourses, society therefore needs an interdiscourse that (extremely selectively) reintegrates special discourses into the social debate. Interdiscourses are what cultures are based on.<sup>11</sup> Yet, special discourses do not cease to be obsolete under the roof of an interdiscourse but continue to exist as such. Rather, they affect the interdiscourse in a variety of ways, sometimes more, sometimes less intensive.<sup>12</sup>

Hence, if *the* discourse on creativity in major IT enterprises is mentioned without further explanation in the following course, it refers first and foremost to the interdiscourse, taking into account all special discourses as they too have a home in the concept of discourse presented here.<sup>13</sup> In addition, the interdiscourse not only accommodates all the participants of the special discourses but adds many other actors with different levels of knowledge about both the discourse itself and the respective specialist discourses. Similarly, observers and participants of the interdiscourse may have an affinity to certain special discourses without being part of these.

Discourse thus helps not only to uncover the semantics and organisation of creativity in IT, but also permits a particular reflection driven by a certain stance. For a more detailed explanation of *stance*, Gardt uses a dichotomy that Noam Chomsky has made his subject: the distinction between a descriptive and explanatory approach. Descriptive, for Chomsky, only refers to the surface structure of a phenomenon whereas an explanatory approach focuses on

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11 Link, „Noch einmal: Diskurs. Interdiskurs. Macht“.

12 There is, however, a third type of discourse in Link's disposition, called the elementary discourse (*Elementardiskurs*). Waldschmidt et al. point out that in comparison to the other two types of discourses described by Link, the elementary discourse is not as elaborate as the descriptions of special- and interdiscourse, with a boundary to the concept of interdiscourse remaining indistinct to a certain degree. Cf. Anne Waldschmidt et al., "Discourse in Everyday Life – The Everyday Life of Discourse: Towards an Empirical Grounded Methodology of Discourse Research in Social Sciences," *Forum Qualitative Research* 8, no. 2 (2007). According to Link, the elementary discourse is fed both by of historical-specific knowledge with strongly reduced complexity and by anthropological everyday knowledge. For this dissertation, anthropological everyday knowledge is included within the concept of interdiscourse. This follows Siegfried Jäger (1997), who does not mention the third type of discourse at all but only distinguishes between special discourses and interdiscourses.

13 The awareness of the special discourse' participants of the possibility to simultaneously be participants of a superordinate interdiscourse is of course not necessarily given and cannot be assumed.

the underlying principles.<sup>14</sup> It is this reflexive focus on underlying principles that this dissertation strives for and the reason for using the following approaches, gathered under the discourse-analytical umbrella as a mixed set of methods.

### 3.2 APPROACH

In the following, the structure and the methodical approach of this dissertation is outlined. In Chapter 4, the context in which the topic is positioned is first laid out and explained. This will reveal the distinctive quality of the discourse on creativity in IT and at the same time underline the relevance as well as the contemporary nature of the topic.

Following the contextual positioning, the evolution of the concept of creativity in IT in relation to time will grasp the term in change by means of a diachronic analysis, exploring historical prerequisite<sup>15</sup> and identifying which ideas of creativity are used in IT and how they complement or replace each other. To this end, a distinction is made between the geosocial development on the one hand and the self-portrait of IT on the other hand. Silicon Valley can be identified as a geosocial nucleus and is examined here for its inimitable factors (by means of events, actors, political and social implications, to name but a few) that decisively determined the development of the creativity narrative in IT. Subsequently, the diachronic analysis detaches itself from the geographical location and focuses on those aspects in the course of time that have shaped the specific narrative beyond the influence of the Silicon Valley. These are rather external factors and developments in society as a whole all

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14 For Chomsky, explanatory work is superior to 'only' descriptive work, because only then does linguistics become 'true science', as Gardt points out. Cf. Gardt, „Diskursanalyse—Aktueller theoretischer Ort und methodische Möglichkeiten.“ Cf. Noam Chomsky, “On the Nature, Use and Acquisition of Language, in *Mind and Cognition*, ed. William G. Lycan (Cambridge, Mass.: Basil Blackwell, 1990).

15 It should be noted that diachronic analysis is not synonymous with historical analysis. Diachrony is therefore not necessarily related to the past. A study that predicts the future development of a language can also be a diachronic one. It is hence not the goal to expose a formerly dominant understanding of creativity. Rather, the implications of the developments are to be made fruitful for current and future considerations of the concept of creativity in IT.

of which have had a constitutive effect on the logic of IT – and therefore on the creativity narrative as well.

After these two rather comprehensive subchapters, the direction is changed towards the export of the creativity narrative, and thus the process that represents the path to the IT narrative's predominant dictum of creativity. As a concluding diachronic part, the emergence and development of the phenomenon of artificial creativity will be presented in a concise manner and its influence on the conjuncture of the creativity narrative in IT will be analysed.

Following the diachronic analysis, the representation and organisation of the previously researched creativity narrative in IT will be analysed. In addition to a detailed analysis of material produced by IT itself that illustrate how IT uses and demands creativity as an attribute in equal measure, informal sources (i.e., sources other than IT's own discursive statements) are also examined, which reflect not so much the representation but the organisation of creativity in IT. This includes statements by former employees as well as press releases and other external reports. An essential methodological element contributing to this is the autoethnographic approach where I can draw on my insights, experience and observations with regard to creativity in IT during my more than 50 months at IBM Research.

Autoethnography as a research method is a quite young approach to qualitative research, rooting from the 1970s “insider ethnography” that focuses on researchers as members of a specific group.<sup>16</sup> But it was not until the late 1980s that an application of the term autoethnography became more and more common. Today, it is still a rather niche method, mostly used in the Anglo-Saxon research community of ethnographers. The main and obvious differentiation of autoethnography to ethnography is the added *auto*, the “I”, the *self*. It uses self-reflection and personal experience “to describe and critique cultural beliefs, practices, and experiences”,<sup>17</sup> revealing “personal investments, interpretations, and analyses”<sup>18</sup> in order to “connect the autobiographical and

16 David M. Hayano, “Auto-Ethnography: Paradigms, Problems, and Prospects”, *Human Organization* 38, no. 1 (1979): 99-104, doi: <https://doi.org/10.17730/humo.38.1.u761n5601t4g318v>.

17 Tony E. Adams, Stacy Holman Jones and Carolyn Ellis, *Autoethnography: Understanding Qualitative Research* (New York: Oxford University Press, 2015).

18 Walter Goldschmidt, “Anthropology and the Coming Crisis: An Autoethnographic Appraisal”, *Anthropologist* 79, no. 2 (1977): 293-308, doi: <https://doi.org/10.1525/aa.1977.79.2.02a00060>.

personal to the cultural, social, and political".<sup>19</sup> As with other (rather new and comparatively uncommon) methods, there are several possible approaches to autoethnography. For this dissertation, it is useful to separate between two types of autoethnographic methods: the analytic (1) and the evocative (2) approach.<sup>20</sup> While the latter seeks to evoke emotional responses, including "conflict-driven drama"<sup>21</sup> and is very much about the personal narrative of private accounts, the analytic approach focuses on developing theoretical explanations of broader social phenomena. Therefore, the analytical approach was chosen to be most suitable for this thesis.

In complement to the remainder of the methodological approach and in the course of my autoethnographic perspective, discussions were held with individual experts. The knowledge of meaning gained in these discussions is of interest here, through which subjective views or interpretations of the experts help to strengthen my line of argumentation.

In addition, I hope that by choosing this approach I will not only be able to bridge the research gap, but also, as mentioned in Chapter 1, provide a complementary perspective for future thinking on the phenomenon of creativity. This will be presented in a concluding discussion in which the explored and developed creativity narrative will be critically introduced to further discourses on creativity.

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19 Carolyn Ellis, *The ethnographic I: A methodological novel about autoethnography* (Walnut Creek: AltaMira Press, 2004), p. xix.

20 Laura L. Ellingson and Carolyn Ellis, "Autoethnography as constructionist project", in *Handbook of Constructionist Research* in eds. J.A. Holstein and J.F. Gubrium (New York: Guilford Press, 2008)

21 It is a main goal of the evocative autoethnographic approach to put the readers in the shoes of the autoethnographer. Private struggles are translated into public concerns that become culturally essential. Cf. Arthur Bochner and Carolyn Ellis, *Evocative Autoethnography: Writing Lives and Telling Stories* (New York: Routledge, 2016), p. 87.