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GEOGRAPHIES OF KNOWLEDGE
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DEPARTMENT OF GEOGRAPHY

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The ‘discovery of the world’ has been a stereotypical focus of human geography. However, the research helped me to discover a new world for myself. The fragrance industry delineates a rich landscape of sensorial stimulations. I appreciated not only the experience of smelling perfumes in different environments and the ‘look behind the scenes’ but the diversity of approaches to perfumery in this artistic industry.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This study examines the international fragrance industry according to the practices of knowing and repositories and spatialities of knowledge. It is based on qualitative data from research interviews with industry experts in New York, USA, and Paris, France that were conducted between 2006 and 2008. The industry serves as an example to map sensible practices of knowing. Therewith, the study contributes to the developing field of practice-based studies of knowledge within economic geography. The study examines and documents that knowledge is produced in different learning places but also develops through the mobility of an emerging fragrance. Fragrances are epistemic objects that are mobilized in order to gain shape and this affects different practitioners and their ways of dealing with a scent. The study puts a focus on the epistemic object in certain learning places as well as its mobilizations. Furthermore, the study builds connections to the literatures on cultural-product industries and the geographies of emotion.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Over the last two decades, knowledge, innovation, and creativity have become significant objects of inquiry in the geographic study of economic activities. The understanding is that specific locales such as cities, regions, and countries benefit economically from the promotion of knowledge, innovation, and creativity. Knowledge in particular is often seen as a major contributor to economic success. The great interest in these objects of inquiry is not only characterized by different literatures that the discipline makes use of and contributes to but, vice versa, shows the contribution that the sub-discipline of economic geography makes through its spatial perspective.

The study of knowledge within economic geography has undergone two shifts over the last years. First, the traditional conceptualization of knowledge in economic geography recognized knowledge as located in and bounded to particular scales and locales such as the region (Thrift and Olds, 1996; Amin and Cohendet, 2004). Economic geography has seen an overwhelming richness of studies that investigate knowledge in specific locales. These studies have been summarized under the term "spatial innovation systems" (Mouleart and Sekia, 2003; Amin and Cohendet, 2004). This is due to the conceptualization of knowledge as a geographically coherent and immobile stock or asset. Recently, however, the concept of knowledge has become uncoupled from specific geographical scales (Amin and Cohendet, 2004; Vallance, 2007; Amin and Roberts, 2008a). Over the past few years a contrasting view emerged that has influenced economic geography: it conceives a different epistemology of knowledge (Amin, 2002; Grabher, 2002a; Amin and Cohendet, 2004; Grabher, 2004a, 2004b; Grabher and Ibert, 2006; Ibert, 2007a, 2007b; Amin and Roberts, 2008a, 2008b; Ibert, 2009). The study of practices has a long legacy in the social sciences (see the overviews in Gherardi, 2000; Schatzki, 2001; Nicolini et al., 2003; Thrift, 2005; Gherardi, 2006, 2009). It understands knowledge as a social practice that is always evolving and changing within and according to different socio-economic contexts. The comment that practices are always in flux – thus, evolving accomplishments, transient effects, and temporary alignments (Nicolini et al., 2003a) – implies that they are situated in specific geographical contexts that are developing and changing over time as well (Amin, 2002, 2003; Amin and Cohendet, 2004; Ibert, 2007; Vallence, 2007; Amin and Roberts, 2008a, 2008b; Gertler, 2008).

A second shift in focus is connected with the repositories and loci of where to examine knowledge (Bathelt and Glückler, 2003). In the past, economic geographers have been keen to study private corporations as containers of knowledge (Taylor and Asheim, 2001; Yeung, 2003; Grabher, 2004a). Knowledge was seen as an asset of individuals as members of firms. However, the firm has become only one repository for practiced knowledge. In contrast to this view, the focal relevance of a firm as a locale for knowledge eroded to the extent that economic geographers still look at firms but with the intention to investigate corporate and inter-organizational networks, communities of practice and practitioners, and individual careers as contrasting and additional examples of repositories where knowledge is done (Bathelt and Glückler, 2003; Gherardi, 2006; Amin and Roberts, 2008b; Gertler, 2008). Research on networks in economic geography has particularly contributed to a temporal and dynamic understanding of ties, connections, and connectivity (Grabher and Ibert, 2006).

These two re-orientations in research – the focus on practices of knowing and the understanding and investigation of diverse communities and social networks as temporal loci of knowing practices – have contributed to initially approach spatialities in novel ways that are contrasted by the preceding spatial fix of knowledge in firms and regions (Vallance, 2007; Amin and Roberts, 2008a). The previous centrality of a "scalar nesting" of knowledge (Amin and Cohendet, 2004: 93; Grabher, 2004b: 306) or a "territorial mooring" (Amin and Cohendet, 2004: 86) has been juxtaposed by a topological understanding of space (Latour, 1997; Law and Hetherington, 2000; Amin, 2002). The practice-based view of knowledge argues for a construction of specific (topological) spatialities after looking at agency (Amin, 2002; Amin and Thrift, 2007; Amin and Roberts, 2008b). However, while knowing in practice challenges the spatial fix of knowledge to specific geographical areas conceptually, the geographical contexts of knowing are not clear. Economic geography has only initially begun to study how and where knowledge is performed (Ibert, 2007a, 2007b; Amin and Roberts, 2008a).

1.2 Theme

The dissertation presents outcomes from a study of practices of knowing and spatialites of knowledge in the international fragrance industry. Economic geographers have studied many cultural industries (Scott, 2000a; Grabher, 2002b; Power and Scott, 2004; Pratt, 2004; Rantisi, 2005; Scott, 2005, 2006b; Power and Hauge, 2008; Watson, 2008; Pratt, 2009; Reimer, 2009). My research provides a detailed account by which I contribute to the understanding of knowledge in economic geographers' work on cultural industries (Scott, 2000a; Power and Scott, 2004; Pratt and Jeffcut, 2009) based on empirical material from an industry that has not been examined by geography.

Multiple actors contribute to the fragrance industry's creation of the cultural product of perfume. The study investigates two of the most relevant industry participants: the manufacturers of perfumes and the fragrance suppliers. An oligopoly of manufacturers (such as Proctor & Gamble, L'Oreal, Coty, LVMH, and Estee Lauder, for example; Curtis and Williams, 2001) dominates the global supply of perfumes. These manufacturers fashion perfumes according to brands (Burr, 2008). The intention behind the flexible multiplicity[1] of brands is to supply existing and newly created target consumer markets with fragranced products. However, the creation of a perfume is a collective creative process. Numerous companies participate in the production of a perfume and contribute their unique tangible or physical materials (a fragrance, a bottle) and intangible or metaphysical immaterials (an image, a word). Important components for the delivery of scents are the suppliers of fragrances. The structure of the international community of fragrance suppliers mirrors the one of the fragrance manufacturers: a small number of firms dominate the global market (Leffingwell & Associates, 2008). The fragrance suppliers employ perfumers who formulate fragrances and are considered the most creative actors within the supply process. Thus, a perfume

[1] The term "flexible multiplicity" implies the contracting of new brands and demission of older brands by the manufacturers of perfume. This is done in order to reach a wider consumer base and to profit from the popularity of certain brands.

can be characterized as both a material and a marketed and branded metaphysical representation. A fragrance is abstract, elusive, and non-representational in the sense that communication about it is difficult and a clear objective analysis is lacking (Blackson, 2008; Thrift, 2004). This indicates a need to study the symbolic and material becoming during the manufacturing process (Mansfield, 2003; Burr, 2008).[2]

The current investigation looks at the manufacturing of perfumes.[3] The fragrance industry produces various fragrant commodities; however, this study recognizes the product variety but narrows the discussion down to the example of perfume. This cultural artifact is the most lucrative product for manufacturers in the industry.[4] On the one hand, economic value in most cultural industries develops out of the promotion of signs and symbols in brands; branding is the development, interaction, communication, and promotion of these signs and symbols (Baudrillard, 1996, 1998; Power and Scott, 2004; Power and Hauge, 2008). However, a brand is abstract and brands "operate in a sea of inequivalence" because of their intangible nature (Lash, 2008: 7). "Yet every brand is different from every other [and] if a brand is not different from another it has no (brand) value" (Lash, 2008: 7). Thus, the manufacturer is urged to create a brand identity and particular brand equities in order to document its heterogeneity and unique place within the market (Wood, 2000).

[2] The study recognizes and, at times, relates to the significance of consumption as a driver of production but it will mainly look at the manufacturing processes. The fragrance industry and the manufacturing of perfumes are connected with processes and practices of consumption. For a long time, economic geography was intellectually led by a productive logic and the connection to consumption has been neglected (Pratt, 2004; Grabher et al., 2008). Both cultural studies (since the 1970s) as well as new cultural geographies (since the 1990s) have significantly contributed to the investigation of consumption and consumers.

[3] 'Manufacturing' is summarized through two significant sets of processes: branding (and marketing) perfumes as well as composing fragrances through creative fragrance formulations (Lash and Urry, 1994; du Gay and Pryke, 2002a).

[4] In this context, Burr (2008: xvi) talks about the perfume industry as an "one of the most insular, glamorous, strange, paranoid, idiosyncratic, irrational, and lucrative of worlds."

Brands are positioned and re-positioned, qualified and re-qualified on a regular basis (Callon et al., 2002). This is a challenge in an increasingly cluttered market. A scent is not a word: while the composition can be described in a chemical formula, verbal communication remains partial and it is often only one way of representation. Scents communicate viscerally. Communication about scents is even limited for professionals in the industry (not to speak about the final consumer). Such limitations exist in other cultural industries as well. However, the fragrance industry challenges traditional approaches toward cultural products that work solely in a visual and verbal context; individual differences in recognizing, characterizing, and critiquing a scent are likely to occur. Second, the perfumer as the composer of a fragrance is not simply mixing ingredients: within the currently fashion- and brand-driven perfume industry, she has to create based upon a brief and within a highly competitive market with other perfumers. Her trained creativity is increasingly streamlined through the brand dominance of manufacturers that are supplied with fragrances. Thus, a challenge lies in the coordination of various materials and, in particular, the creation of a fragrance for a brand. Professionals spend crucial amounts of time and money to correlate a fragrance to a brand and a brand to a fragrance (cf. Chapter 3 and 5).[5]

1.3 Research interest

The economic geography literature emphasizes visual and verbal (re-)cognition and only tangentially addresses the other three senses of touch, olfaction, and taste

[5] The goal of the professionals is that a scent signifies 'Hugo Boss', for instance. See also Burr's (2008: 194/195) discussion of L'Oreal's "precision engineering" to create brand unity in 'Armani' fragrances.

(Amin and Roberts, 2008a, 2008b). However, olfactory experiences affect people on instinctual, emotional, and associational levels because the presence of a scent evokes affective reactions (see the discussion of affects in, for instance, Amin and Thrift, 2007). The affections that are induced by olfactive materials are summarized in the concept of sensible knowledge which will be used as a guideline to understand practiced knowledge of creative individuals. Furthermore, perfumes develop agencies of their own. There is a certain agency that dwells in fragrance formulas and materialized fragrances (see Gherardi, 2009; also in Anderson and Wylie, 2009). This agency is connected to the materiality and materialization of fragrances; it informs and drives how knowledge is practiced. Neither do fragrance formulations remain silent and passive during their becoming in the manufacturing process nor during their consumption.[6]
In the following paragraphs I present rationales for investigating the international fragrance industry according to practices of knowing and spatialities of knowledge.

First, the epistemology of practice is in its infancy and demands, after its important theoretically-informed introduction into economic geography, empirical back-ups and proof. The study intends to elaborate on the specificities of the industry under investigation in order to contribute empirical insights to the nascent literature of knowledge practices in economic geography, organizational repositories of these practices, and the spatialities where knowing is done. At the same time, it studies the social relationships of involved practitioners in creating a new cultural product (Nicolini et al., 2003; Gherardi, 2008, 2009).

[6] For instance, Nicolini et al. (2003b: 22/23) mention that artifacts "participate actively in the stories, carry history, embody social relationships, distribute power, and provide points of resistance." Ellena (1991: 341), the current master perfumer at Hermes, speaks about "the action of each fragrant substance" which governs the work rhythm of materials in context to each other and the human creator.

In contrast to cognitive and mental accounts of knowledge that have been traditionally stressed, the example of the fragrance industry demands a conceptualization of sensible or aesthetic knowledge (Strati, 1999, 2007). In this context, human geography as well as economic geography has traditionally focused on industries that prioritize practiced and communicated knowledge that is verbal or visual. Cultural industries such as new media, television, art, music, advertising, design, fashion, and furniture have been studied (Grabher, 2001, 2002b; Power and Scott, 2004; Pratt, 2004; Pratt and Hesmondhalgh, 2005; Grabher and Ibert, 2006; Power and Hallencreutz, 2007; Pratt, 2008; Watson, 2008; Power and Jansson, 2009; Pratt, 2009). Literature from disciplines such as organization theory and economic anthropology, for instance, have started to examine that practice-based approaches to knowledge juxtapose the cognitive and mental ability and capacity to know with sensual and sensible practices of knowing (Cook and Yanow, 1993; Strati, 1999; Yanow, 2003; Ewenstein and Whyte, 2007; Strati, 2007; Ewenstein and Whyte, 2009). These practices are based on corporeal and bodily performances and experiences of knowing. A focus on practiced knowledge based on a sensible and aesthetic understanding of industry-specific artifacts and materials is underrepresented, particularly in economic geography.

This argument is related to questions that underline the specificities of the fragrance industry. A focus on the fragrance industry and the manufacturing of perfumes in particular intertwines, for instance, craft-based knowing of the perfumer with creative and expert knowing such as branding and marketing of the marketer and brand manager (Amin and Roberts, 2008a). The fragrance industry connects different forms of knowing in action (Amin and Roberts, 2008a, 2008b): the perfumer as an artist or craftsman composes scents (a form of craft-/task-based knowing), the brand manager works on the design and coordination of a brand (creative knowing, characterized by symbol analysis and construction, Reich, 1991), for instance. However, the ways and means how different forms of knowing in action are practiced as well as how these different practices relate to each other in this particular industry is far from clear (Amin and Roberts, 2008a, 2008b). While Amin and Roberts stress the socialization of community members through verbal and visual communication, as in the typical case of craft/task knowing, the example of the fragrance industry questions how members within different professional communities relate to each other in order to engage in social practice (Lave and Wenger, 1991; Cook and Yanow, 1993). "The capacity to effectively and creatively use the knowledge" (Reich, 1991: 182), which is characteristic for symbol analysts, is challenged because of the complexities of knowledge that is not cognitive but sensible.[7] Thus, the investigation of the fragrance industry according to the practice-based approach to knowledge also delivers a better understanding of the socio-economic connections in human relationships in an industry that unifies craftwork as well as (post-)modern marketing, for instance (Sennett, 2008: 289). Nicolini et al. (2003b: 22) argue in this context that "the sociality evoked by a practice-based linguistic repertoire is therefore very different from the refined, clean,

[7] The fragrance industry creates epistemic objects that juxtapose the higher and lower human senses (Classen et al., 1994; Knorr Cetina, 2001). However, besides this focus on the (characteristics of the) sense of smell, what is often neglected is that commodities articulate through multiple senses. Different manifestations of creativity have to be intertwined into a physical and symbolic good. The investigation of how this is done helps to unravel how cultural products are manufactured. The industry challenges traditional approaches toward emerging goods in a visual and verbal economy. Thus, the fragrance industry works with very complex components – the intangible brand and the evanescent fragrance, for instance – that are intertwined.

aseptic abstractions predicated by functionalist social scientists." Thus, the research challenges the functionalisms that are current in other industries studied by geographers.

Second, economic geography has approached the issue of knowledge in its spatialities within cultural industries only partially. Economic geographers investigated cultural industries and their economic relevance for particular places (cf. also the discussion for other cultural industries in Scott, 2000a; Greater London Authority, 2004; Pratt, 2004; Rantisi, 2004; Keegan et al., 2005; Scott, 2005; Cooke and Lazzeretti, 2008; Lorenzen and Frederiksen, 2008). The characterization of creativity and uncertainty in cultural industries, for instance, has led to spatializations that highlight the significance of geographical proximity for successful action. Most studies have described the locally-bounded manifestations of knowledge in particular locales such as Paris, Hollywood, or London according to the argument of agglomeration (Scott, 2000a, 2005; Ibert, 2007a; Watson, 2008).[8] However, against this characterization and argumentation of agglomeration (Ibert, 2007a), knowledge is not understood as a "local affair" (Amin and Cohendet, 2004: 99) but based on flows within and beyond corporate boundaries. The question of where practiced knowledge takes place and why that matters is not sufficiently answered. It is far from clear where sensible knowledge is practiced beyond such macroscopic sites as cities. The intuitive reading of "scent is the essence of physical presence" (Blackson, 2008: 6) implies that actors are place-based and close to each other in order to create a perfume; however, this argument appears merely suggestive and limited. The spatialities of knowledge are likely to be much more

[8] Economic geographers have tended to focus on a specific scale and investigated the economic activities in these "bounded regions" or "spatial innovation systems" that were defined and delineated by the characterizations of knowledge (Thrift and Olds, 1996; Mouleart and Sekia, 2003; Amin and Cohendet, 2004).

complex and only partially bound to singular learning places (Ibert, 2007a, 2007b). Thus, in contrast, the practice-based approach conceives the argument of place (Ibert, 2007a). That is to say it looks at economic action through a geographical lens, maps creative actions, and conceptualizes spatialities thereupon (Bathelt and Glückler, 2003; Amin and Roberts, 2008a). This approach enables the separate discussion of geographic space and economic activities, it highlights the mobility of objects, and the temporal creation of spatialities (Thrift, 2004, 2005). Furthermore, a focus is on socially-constructed sites that zoom in and out of urban areas and understand learning places with different reach and depth (Amin, 2002; Amin and Cohendet, 2004; Ibert, 2007a).

Third, the manufacturing and amalgamation of the material and immaterial components is performed across corporate boundaries. The upper argumentation hints at the challenges of collaboration in buyer-supplier links because of the materiality of fragrances. The fragrance industry is characterized by a high degree of division of labor within and between firms where the boundaries of the industry are permeable. The industry integrates diverse firms that are also active in other sectors. Mass manufacturers and their fragrance suppliers face an innumerable amount of niche manufacturers; this is typical for many cultural-product industries (Scott, 1996, 2000a; Pratt, 2009). However, with the focus on the significance of uncertainty because of the overall characteristics of the development of a fragrance, the practices of knowing how interaction takes place and the related spatialities of knowledge formation are hardly understood (Ibert, 2007a). In this context, a specific challenge lies in the globalizing processes that are initiated by the activities of international companies. The manufacturers of fragranced goods increase their involvement in emerging markets that show higher revenues and quickly increasing profit rates in comparison to traditional markets in North America and Western Europe. This corporate globalization goes along with a globalization of brands, olfaction, and beauty (Peiss, 2000).[9] At the same time, the globalization of brands and branding leads to an increasing homogenization in consumer habits at least in regions and cities that are inter-connected with lifestyles of industrialized countries; the Internet plays a crucial role in this context. These characterizations position the creation and coordination of the material and metaphysical components in a cultural product between the cornerstones of a homogenized global branded product and a localized idiosyncratic product. Besides questions regarding the challenges in terms of the coherence of the material and metaphysical components across space and over time it is yet to be answered what this actually means for the involved professionals and professional communities and their successful production during the internationalization of perfumes.

1.4 Structure of the dissertation

The dissertation consists of six chapters. Chapter 2 focuses on the discourse of knowledge in economic geography. I characterize the transition from a resource-based understanding of knowledge towards the performative view that conceptualizes practices of knowing. Chapter 2 connects the discussion of cultural industries with the view of practices of knowing through the conceptualization of sensible knowledge in

[9] In this form of neo-colonization, Western multinationals formulate, communicate, introduce, and transfer new concepts of beauty in the form of materials but also media onto developing markets. Different understandings characterize the individual consumer markets: Le Norcy (1988: 223/224), for instance, describes how perfume is understood as a collectible in Japan while the puritanical heritage in parts of South America and the US lead to an understanding of perfume as a chauvinistic accessory.

order to depict the complexities in creating cultural products. Furthermore, it discusses the impacts on the spatialities of knowledge that result from this epistemological shift. Thus, Chapter 2 embeds the focus on the fragrance industry within the theoretical discourse in economic geography. Chapter 3 investigates general characteristics of the fragrance industry. A historical perspective on the industry is presented, perfumes as cultural artifacts are approached, and an investigation of the most significant actors and processes is presented. Chapter 4 lays out the methodological approach. It explains the methodological layout of the study and characterizes the collection of the empirical material. Chapter 5 discusses the empirical findings. I cover the breadth of the industry by looking at practices within and between the manufacturer of perfumes and the fragrance supplier. In order to examine typical practices of knowing and the created spatialities of knowledge I follow the emerging epistemic object during its creative development. I characterize significant learning places of the meandering object in order to claim that practices are both accomplished at particular sites but also through the mobility and mobilization of the epistemic object. Finally, Chapter 6 is a summary of the findings and critically mentions the shortcomings and prospects of the dissertation.

CHAPTER 2

SPATIALIZING KNOWLEDGE PRACTICES

2.1 Introduction

Economic geographers have been investigating the significance and characteristics of knowledge in the economy for a while. This interest is paralleled by research in related disciplines that focus on socio-economic restructurings that developed towards conceptualizations and discourses about a knowledge economy, knowledge-based society, knowledge-intensive economy, and knowledge work to name a few examples only (Bell, 1973; Drucker, 1993; Leadbeater, 1999; DeFillippi et al., 2006). Overall, these concepts indicate change in how capitalism works, but also for the significance of knowledge in economic and societal terms. Knowledge in economic terms is usually understood as a proxy to remain creative and innovative (Gertler, 2008).

This chapter reviews the theoretical discussion of knowledge in economic geography. It characterizes the traditional view, as well as the currently developing view, of practices of knowing. In order to make sense of the concept of knowledge, a recent epistemological shift has re-conceptualized knowledge through practices of knowing (Amin and Cohendet, 2004; Ibert, 2007a, 2007b; Amin and Roberts, 2008a, 2008b; Gertler, 2008). Furthermore, the chapter delineates and differentiates typical spatialities that are related to knowledge conceptualizations. Towards the end of Chapter 2 I focus on the example of cultural industries and cultural products in order to explain how to approach a cultural industry such as the international fragrance industry.

I stress that it is central to understand the international fragrance industry according to how sensible knowledge is practiced (Lave and Wenger, 1991; Strati, 1999, 2003; Ewenstein and Whyte, 2007; Strati, 2007; Ewenstein and Whyte, 2009). Discussions in economic geography have started to focus on knowledge in cultural industries, but this focus remains still in its infancy (Scott, 2000; Power and Scott, 2004; Power and Jansson, 2008; Watson, 2008). However, more empirical research of cultural industries according to the epistemology of practice and how knowing in action takes place is particularly needed (Amin and Roberts, 2008a).

2.2 The discussion of knowledge and practices of knowing in economic geography

2.2.1 Introduction

Knowledge plays a central role in the discussion of the development of economic activity in current economies of the Western world. A major question is how and where knowledge can be conceptualized in order to investigate its role in industries with high degrees of creative activities (exceptions are Grabher, 2002a; Amin and Roberts, 2008a, 2008b; Lorenzen and Frederiksen, 2008; Power and Jansson, 2008; Watson, 2008). In this discussion, I examine and explore the “black box of knowledge” (David and Foray, 2003: 25). I distinguish between two major approaches that are currently *en vogue* in economic geography and beyond: a stock- and resource-based understanding of knowledge and a process-based conceptualization of knowledge.

Until very recently, economic geographers have conceptualized knowledge as a stock. This understanding has been developed and transferred from economics where the conceptualization of knowledge as a stock forms the mainstream view (Dolfsma, 2008). Accordingly, as some economic geographers point out, knowledge is mainly agglomerated in specific cities or regions. However, in the past decade the discussion has shifted to understand knowledge as something that is done: knowing as practice. Geographers have initially mapped and spatialized knowledge according to this distinction. However, the understanding of practices of knowing that are performed in specific spatialities lacks further empirical evidence.

2.2.2 The mainstream conceptualization of knowledge and its criticism

Historically, the discussion in geography has been led by an understanding of knowledge according to four preconceptions that are propagated by orthodox economists (Nicolini et al., 2003; Amin and Cohendet, 2004; Amin and Roberts, 2008b; Dolfsma, 2008). First, knowledge is understood as a stock or asset that results from an accumulation of information through a linear process. According to this idea, the knower and the known are split and there is no link between knowledge and action. Knowledge is a reconfiguration, more advanced form, or product of information that stems from processing data (Amin and Cohendet, 2004: 18). The processes of change occur in a linear fashion. Second, knowledge is a possession. Knowledge is understood as having been “formed in the minds of individuals or encapsulated in the routines of groups” (Amin and Cohendet, 2004: 30) and, therefore, “people are seen to possess knowledge” (ibid.). Thus, knowledge develops out of and feeds into a mental context. Third, all knowledge can be codified. The transfer and exchange of knowledge relates to and questions the forms in which knowledge travels. This aspect is coherent with the view that knowledge exists in different forms. Knowledge is categorized into different groups such as explicit versus tacit as well as individual versus collective knowledge. These categories of knowledge are, however, convertible. With the conviction that the transformation of tacit knowledge into codified knowledge is possible comes the belief that knowledge is easily and efficiently transportable. Orthodox economic theory and knowledge management appreciate the feature that knowledge is codifiable, mobile, storable, tradable, and that it can receive a monetary value (= economizable; Amin and Cohendet, 2004; Dolfsma, 2008). Amin and Cohendet (ibid.) differentiate between three different steps of conversion: creating models, creating language, and creating messages. The processes of codification depend heavily on the knowledge part that is supposed to be transformed, but also on the knowing agent who interacts in the process. Therefore, codification processes would allow that only parts of the tacit nature of knowledge could be codified. Finally, related to the third characterization is that knowledge is limited to individuals, Amin and Cohendet (ibid.) point out that according to economic theory, individuals are most often seen as the entities that are able to know.

These four major descriptions of knowledge have been criticized. The traditional approach to knowledge neglects the specific cognitive features and mechanisms of the receiving agent such as memory, pattern recognition, perception, and communicative skills that are, elsewhere, highlighted as important. This understanding implies that the creation of knowledge through information depends on context. Not only is the input a matter of critical concern, but also the characteristics of the considered organizational agents (= both the emitter and recipient of knowledge) are relevant. In that regard, there is no simplistic logic and connection between information and knowledge (and, beyond that, data and wisdom/belief; David and Foray, 2003). The concepts of data, information, knowledge, and wisdom/belief are all loaded with ambiguity and need interpretation; when it comes to its transfer, information could cause diverging understandings of different agents. A "differentiated feedback process" where data, information, knowledge, and wisdom/meta-knowledge mix and mingle is dependent on the capabilities of actors and not a characteristic of knowledge (Amin and Cohendet, 2004: 30). Furthermore, knowledge as a possession is criticized as only one part of the story how to make sense of knowledge (one epistemology; Orlikowski, 2002).

A second epistemology is presented as equally important. The so-called "epistemology of practice" (Amin and Cohendet, 2004: 30; see further discussion below) intends to answer questions about how knowledge evolves on individual and organizational levels, how it is acquired, saved, remembered, maintained, forgotten, and thus how changes in the stock take place. This is done through the epistemological shift that understands knowledge as practiced. Old considerations that knowledge can, for example, easily be outsourced, bought at arm's length on markets for a certain market price, stored, and, once again, fetched, are criticized. Knowledge is dependent on social relations and changes of agents.

Finally, knowledge creation and exchange is increasingly understood as a social process. With the expanded comprehension of knowledge as a collective social process, different repositories and units of shared, common, or organizational knowledge open up. The collectivity of knowledge is, as the authors show, often explained at the example of routines. Cohen et al. (1996: 683; in Amin and Cohendet, 2004: 26) describes a routine as “an executable capability for repeated performance in some context that has been learned by an organization in response to selective pressures”. Routines enable firms to generate collective action, and function as a cognitive device (i.e. they economize on the restricted information processing and decision-making capacity of agents). They are context-dependent and variable in that they might change through actions or external change in the future.

2.2.3 Traditional spatializations of knowledge

Since the early 1980s, economic geographers have struggled to explain economic restructuring which has led to globalization on the one hand and regionalization of the other hand (Storper, 1997). The latter aspect of a “regional world” (Storper, 1997) has created a plethora of ideas to deliver a better understanding of the economic success of localities that this literature investigated such as Route 128, Silicon Valley, or the Third Italy. Concepts such as new industrial spaces, industrial districts, learning regions, clusters, and the like indicate the substantial research efforts along these lines. The traditional literature on knowledge contributes heavily to the explanation of regional development based on agglomeration-specific and centripetal processes (Maskell and Malmberg, 1999; Gertler, 2003). Knowledge has played an important role to approach and grasp localized economic action (Maskell and Malmberg, 1999; Gertler, 2003; Morgan, 2004; Gertler, 2008). Ibert (2007a) characterizes this approach as based on the "argument of agglomeration" (also in Vallance, 2007). The focus on knowledge reflects the growing interest of scholars to explain economic growth through innovation in certain places, how to make this growth sustainable for the future, and how to imitate some of the parameters that, presumably, relate to this growth. Bathelt (2007: 1290) describes knowledge as the main reason for the "establishment, growth and reproduction of industry clusters." Thus, while some of the concepts emphasize regional development as an outcome of the ways by which objects are manufactured and produced, or – in another discourse – that certain types of strong or weak ties are connected with particular geographical scales (see discussion in Grabher, 2004b), current ideas focus on the understanding of knowledge that guarantees economic prosperity for cultural industries. In the following, I briefly introduce the currently dominant conceptualizations of how to make sense of knowledge in economic geography.

Knowledge used to be organized into different categories. The most frequently cited example of such a categorization is the differentiation between tacit knowledge and codified knowledge.[10] Economic geography has often 'glorified' tacit knowledge because of its economic potentiality. Furthermore, beneficial effects have often been understood as inherent; according to certain economic geographers, the plain spatial and organizational logics in terms of local stickiness and immobility creates 'simple geographies' on a geographically-defined, mostly regional level. Historically, the argument has been that tacit knowledge is difficult to communicate other than through

[10] Codified knowledge is knowledge that can be coded in texts, pictures, or videos – therewith, it is easy to move codified knowledge. Tacit knowledge is hard to communicate because, as Michel Polanyi famously phrased, 'we know more than we can tell.' Thus, this knowledge can hardly be communicated through certain materials but demands that other individuals are co-present in order to grasp knowledge that becomes visible in action (for instance, riding a bicycle or making a flute; Cook and Yanow, 1993).

direct interaction (Morgan, 2004; Storper and Venables, 2004; Vallance, 2007). Tacit knowledge therefore requires spatial proximity for its production and dissemination (Morgan, 2004). Gertler (2003: 85) underscores how “spatial proximity is the key to effective production and transmission/sharing of tacit knowledge, this reinforces the importance of innovative clusters, districts, and regions.” Thus, local industrial development benefits from the successful implementation of cluster-oriented policies that encourage interaction-based learning and the exchange of tacit knowledge (Gertler, 2003; see recent Special Issues on clusters in *Regional Studies* in 2008 [Vol. 42, No. 6] and *European Planning Studies* in 2009 [Vol. 17, No. 11]; Bathelt, 2007).

One consequence of this spatial stickiness of knowledge is that firms are encouraged and tend to locate in spatial clusters or agglomerations in order to both tap into and contribute to knowledge pools that emerge through interaction. These locations are often cities or metropolitan areas where highly-valued face-to-face contacts between a diversity of economic actors are most feasible (Bathelt et al., 2004; Cooke and Piccaluga, 2004; Morgan, 2004; Storper and Venables, 2004). Thus, locations develop through their centripetal forces as major ecologies where mobile human capital in-migrates.

A related school of thought in economic geography distinguishes among different forms of knowledge in their spatialities. Different forms of knowledge exist such as analytic, synthetic, and symbolic types of knowledge creation (Asheim et al., 2008; Gertler, 2008). The goal of this distinction is the explanation of “different geographies of innovation for different industrial sectors, classified into different types of ‘knowledge base’” (Asheim et al., 2008: 1043; see also Gertler and Asheim, 2005;

Moodysson et al., 2008). Some knowledge flows take place in a regional setting, others across distance. “Analytical knowledge predominates in those industries where new scientific knowledge is highly important” (Gertler, 2008: 9). This kind of knowledge includes sectors that are governed by scientific laws and methods and rational processes such as in biotechnology. In contrast, “synthetic knowledge (…) dominates industrial settings where innovation takes place mainly through the application or novel combinations of existing knowledge” (Gertler, ibid.). This type of knowledge is significant in industries that involve industrial engineering where development instead of research is at the forefront of economic action.[11] Finally, “symbolic knowledge is distinguished by its strongly aesthetic, affective, and semiotic nature” (Gertler, 2008: 10). This kind of knowledge is characteristic for cultural industries and service industries where the value lies in the production of signs and symbols instead of the physical production of a thing.

A more critical approach to the narrow focus on local economies and the tacit versus codified knowledge characteristics therein is the model of “local buzz and global pipelines” (Bathelt et al., 2004; Owen-Smith and Powell, 2004; Bathelt, 2007; Gertler, 2008); this view is related to the “local node – global network geography of innovation” (Asheim et al., 2008: 1041; see also Asheim and Gertler, 2005; Gertler and Levitte, 2005). The idea of a local buzz versus a global pipeline implies the following: while local buzz in characterized by a “thick Web [sic!] of information, knowledge and

[11] “‘Synthesis’ refers to the designing or construction of something in order to attain functional goals” (Moodysson et al., 2008: 1043). “‘Analysis’ refers to the understanding and explanation of features of the (natural) world” (Moodysson et al., 2008: 1043).

inspiration that circulate between the actors of a cluster" (Bathelt, 2007: 1290)[12], global pipelines allow connections beyond the boundaries of a region and lower the risks of lock-ins[13] (Bathelt et al., 2004; Bathelt, 2007). In contrast to local buzz, the external connections are associated with higher degrees or risk and uncertainty since aspects of trust and mutual correspondence are comparatively weaker. Owen-Smith and Powell (2004: 5-6) distinguish channels from pipelines. Channels "diffusely and imperfectly direct transfers between nodes, facilitating information spillovers (and other externalities) that benefit both loosely connected and centrally positioned organizations," while pipelines are "closed conduits, characterized by legal arrangements (e.g., nondisclosure agreements and exclusive rights) designed to ensure that only the specific parties to a given connection benefit from the information that is exchanged" (p. 6). The richness in mechanical analogies[14] calibrates the "local buzz and global pipelines"-approach to knowledge in clusters between, as Bathelt (2007) states, export-based models and traditional cluster-based approaches to regional development.

The general debate about local and regional economic development that is connected to the knowledge debate is closely related to the "proximity debate" in economic geography. Economic geographers have characterized different forms of proximity and ascribed varying social characteristics to these concepts (cf. Gertler,

[12] Bathelt (2007) explains the aspects of the "importance and quality of a cluster's buzz" (p. 1290); these characteristics are mutually supportive: the co-presence of specialized firms in the same region with the ability of face-to-face interaction; sameness as far as technical traditions, day-to-day routines, and problem-solving activities; diversity of relationships and contacts within a cluster; and the interpretation of local buzz and the use of it. However, like other recent concepts in economic geography, the measurement and operationalization of the concept of local buzz and global pipelines is described as fairly difficult.

[13] Grabher (1993) introduced the idea of a lock-in to economic geography in order to show the reliance of network ties in the Ruhr area that led to structural difficulties once the area was affected by deindustrialization.

[14] Bathelt (2007) integrates a number of ideas and concepts that are taken from other contexts such as roots (pp. 1291 and 1292) and pipelines, leaky function, and sprinklers (p. 1293).

2008; Ibert, 2009). While the idea of geographical or physical proximity favors learning through corporate links in propinquity, relational or organizational proximity integrates "long-distance communication and collaboration" into the picture (Vallance, 2007: 799). The differentiation has been introduced to economic geography in order to separate characteristics of knowledge creation and learning that takes place in proximity versus those across distance. However, the point of this discussion is to relate knowledge creation and exchange that is based on interaction to the geographic concept of proximity: of central concern is the question how close do actors have to be in order to exchange knowledge effectively and to be or remain innovative (cf. the discussion in Bathelt and Glückler, 2003; Gertler, 2008; Rychen and Zimmermann, 2008[15]; Ibert, 2009). Some economic geographers focus on the spatialization according to different proximity-characteristics. However, the following debate juxtaposes the centrality of space by the emphasis and identification of practices that are, arguably, necessarily examined before they are spatialized and spatialities are qualified.

2.2.4 The epistemology of practice

While the major view on knowledge is still on spatial proximity of involved actors in economic geography, a critical approach has developed. A different school of thought questions not only the association between tacit knowledge and the local scale but also that of a categorization and related spatialization of knowledge (Amin, 2002;

[15] Rychen and Zimmermann (2008: 768) present a rather critical account of the traditional cluster-concept when they stress that "clusters should be considered as coordination structures [that are] less constrained by space and time" and "local advantages of geographical proximity must be weighed against the global constraints and opportunities underpinning the performance of the firms involved."

Amin and Cohendet, 2004; Ibert, 2007b; Gertler, 2008). Representatives of this idea seek a more expansive understanding that recognizes the varied spatialities of knowledge in their "territorially unbound network formation" (Vallance, 2007: 798). Accordingly, a shift in geographic research on these spatialities is apparent. The term spatialities is, for instance, described in Amin's (2002) analysis of globalization. Amin (2002: 389) understands "spatiality in nonlinear, nonscalar terms, a readiness to accept geographies and temporalities as they are produced through practices and relations of different spatial stretch and duration" (see also Amin, 2003; Amin and Thrift, 2004; Barnes, 2004; Amin and Thrift, 2007).[16] I will discuss below that the epistemological shift has introduced literatures from proximate social sciences to economic geography.

A competing epistemology to study knowledge that investigates knowledge and learning with a specific attention to their contextual nature has developed in the last decade. Different literatures such as economic sociology, economic anthropology, and organizational studies become of significant influence for economic geography. The new epistemology radiates into and employs approaches from areas such as situated learning theory, activity theory, actor-network theory, and workplace studies (Cook and Brown, 1999; Gherardi, 2000; Law and Hetherington, 2000; Allen, 2002; Amin, 2002; Gertler, 2003, Nicolini et al., 2003; Amin and Cohendet, 2004; Gherardi, 2006; Amin

[16] Amin (2002: 389) adds his Actor Network Theory-informed conceptualization of space and place that is "a topological sense of space and place, a sense of geographies constituted through the folds, undulations, and overlaps that natural and social practices normally assume, without any a priori assumption of geographies of relations nested in territorial or geometric space." In the same vein, Amin and Cohendet (2004: 93) argue for a tracing of networks based on knowing practices that are trans-scalar and non-linear.

and Roberts, 2008a, 2008b; Gertler, 2008). Economic sociology and economic anthropology play an important role (Lave and Wenger, 1991; Wenger, 1998).[17]

In order to understand knowledge, research focuses on the specific work processes of 'how knowledge happens.' These processes are conceived as knowing that is understood as a social practice (Amin and Cohendet, 2004; Ibert, 2007a; Amin and Roberts, 2008a, 2008b). Thus, I will discuss the terms 'practice' and 'knowing' below.

First, discussions of the history of the term practice are presented in Schatzki (2001), Nicolini et al. (2003a, 2003b), and Amin and Roberts (2008b), for instance. 'Practice' has a long legacy within different schools of thought: Gherardi (2000, 2009; also in Nicolini et al., 2003a; Bjørkeng et al., 2009), for example, distinguishes between a phenomenological approach, a Marxist approach, and a Wittgensteinian approach (see Schatzki, 2001; Nicolini et al., 2003; Gherardi, 2006, 2009). A unified practice theory or practice-based approach does not exist. In contrast to this point, a development of practice-based studies and practice theories in the plural takes place (Gherardi, 2008; Bjørkeng et al., 2009; Gherardi, 2009). Academic work in the interdisciplinary area of investigating practices is of particular relevance also for economic geography.

Gherardi (2009) differentiates between theories of action and theories of practice in order to examine and elaborate on the individual idiosyncracies of the two theoretical approaches. Theories of action focus on intentionality of actors that make actions meaningful.[18] In accordance with Amin and Cohendet's (2004) description of routines, this contrasts the openness and non-intentionality of practices. On the other hand,

[17] This is significant in the detailed and sympathetic discussion of the social-anthropology-of-learning approach to knowledge in Amin and Cohendet (2004).
[18] Miettinen and Virrkunen (2005) discuss in their study of epistemic objects the relevance of routines as socially and organizationally stabilized ways of action.

theories of practice understand distributed agency among humans and non-humans where action is not intentional but "being performed through a network of connections-in-action, as life-world and dwelling" (Gherardi, 2009: 115). Thus, practice is understood as "embodied, materially mediated arrays of human activity centrally organized around shared practical understanding" [19] where the term 'embodied' integrates the human body as a mediator (Schatzki, 2001: 2). [20] Gherardi defines a practice "as a mode, relatively stable in time and socially recognized, of ordering heterogeneous items into a coherent set" (Gherardi, 2006: 34). She presents four major elements of practices: the qualitative and holistic aspect of a practice (i.e. how a set of activities acquires meaning; the attribution of meaningfulness), its relationship with temporality (i.e. the continuous repetition over time[21]), its social recognition (i.e. the institutional setting where practices take place), and its being a mode of ordering the world (i.e. ordering of human and non-human relations; Gherardi, 2006: 34-39). The investigation of practices in this context is closely related to an ethnomethodological understanding of reality (see Garfinkel, 1967; Bergmann, 2000; Gherardi, 2009).

Second, knowing is understood as a conscious activity (Gherardi, 2008, 2009). The terms 'practice of knowing,' 'knowing in action,' and 'knowing-in-practice' are equivalents since knowledge can only be studied though the understanding of doing (Amin and Roberts, 2008a; Gherardi, 2009). "Practice is a *topos* that connects

[19] Lounsbury and Crumley (2007: 995) distinguish between the two terms of "activity" and "practice" in the following way: "activity involves acts that are generally devoid of deeper social meaning or reflection, such as pounding a nail, while practice, such as professional carpentry, provides order and meaning to a set of otherwise banal activities."

[20] Schatzki (2001: 2) discusses that there is no one practice theory; rather, practice theorists are working in different research areas to study different "fields of practice," i.e. "the total nexus of interconnected human practices." In addition, he stresses the significance of non-human artifacts, hybrids, and natural objects that mediate practices as embodied activities.

[21] Actually, *to practice* means to perform a social order but, similarly, to change and continuously re-establish this order (Bjørkeng et al., 2009).

‘knowing’ with ‘doing’” (Gherardi, 2008: 517); it is recognizable through research on what humans and non-humans do in action and practical accomplishment (Nicolini et al., 2003a). Theories of practice understand knowing through activities that are distributed between different entities of humans and non-humans. Gherardi stresses: “to know is to be able to participate with the requisite competence in the complex web of relationships among people, material artefacts [sic!] and activities” (Gherardi, 2009: 118; see also Gherardi, 2008: 517). The inclusion of agency by non-humans implies that activities alternate and are in flux on a regular basis based on the co-evolutionary agency of non-humans. This emphasis situates the investigation of practices in post-social/post-humanist studies (Knorr Cetina, 1999; Gherardi, 2009) and challenges the aspect of intentionality in theories of action and studies of routines through the signification of materiality (Miettinen and Virrkunen, 2005; Gherardi, 2009). In general, knowing is conceived as only partially mental and cognitive but based on social practice that depends on the relevant industry context (Lave and Wenger, 1991; Gherardi, 2000; Nicolini et al., 2003).[22] Knowing is characterized as a practice of knowledgeable action and purposeful intervention (Ibert, 2007a, 2009). Knowledgeable action can be understood as “recurrent processes governed by specific scientists of preferences and prescriptions” (Knorr Cetina, 2001: 175); the term ‘knowing’ implies that something happens and what happens is meaningful in a particular (social) context. The becoming of a practice – i.e. the making of it by practitioners and researchers – is investigated by Bjørkeng et al. (2009) who suggest that the mechanisms of authoring boundaries, negotiating competencies, and adapting materiality are essential for the recognition of a

[22] The related concept of sensible knowledge that is presented below actually highlights these aspects and connects them to the point that knowing is also corporeal (Strati, 2009).

practice. Thus, a practice of knowing (differentiated from all other practices) is based on the collective recognition of knowledgeability of how and what involved practitioners do right or wrong (Bjørkeng et al., 2009). Thus, the aspect that processes recur implies that a knowledge practice has to be understood as “institutionalized knowledge and practicing as institutionalizing process” (Gherardi, 2008: 518).

Nicolini et al. (2003b) summarize and idealize four paths to study the practice of knowing namely according to a cultural interpretive framework, social learning, cultural and historical activity theory, and the sociology of translation (= actor network theory); Gherardi (2008: 522) provides a description of the historical development of streams of practice-based studies. This dissertation is particularly sympathetic to the first and second approach. A number of similarities of practice-based studies are listed in Nicolini et al. (2003b: 21-25) such as the use of a dynamic and process-based vocabulary to stress that developments are in the process of becoming as well as the involvement of materials and the situatedness of all practices. With the diverse approaches to examine how knowing is practiced, Amin and Roberts (2008a) stress the variety of the term according to the different socialities of practices of knowing. The authors argue for a careful terminology and speak for the particularities of research on knowing in action per industry and participating members. They differentiate between task/craft-based, professional, epistemic/creative, and virtual knowing as four types of practices of knowing. They differ according to the used and produced knowledge, the nature of social interaction, the kind of innovation, and the organizational dynamic of interaction. Amin and Roberts (2008a) point out that different practices of knowing mingle in the process of meeting specific objectives. This study underlines this.

Thus, rather than focusing on knowledge as a representationalist conception, resource, or mode/form, a pragmatist or performative view on knowledge focuses on social processes of knowing (Gherardi, 2009). Knowledge is conceptualized as mobile, flexible, and always changing within various organizational forms (Brown and Duguid, 1991; Wenger, 1998; Gherardi, 2000; Nicolini et al., 2003; Styhre, 2003; Gherardi, 2006; Ibert, 2007a; Yanow, 2004; Amin and Roberts, 2008). With the examination of knowing as a practice, the concept of knowledge is not completely neglected. The re-conceptualization and interaction of knowledge and practices of knowing appears suitable because instead of abolishing the term "knowledge" it adds dimensions of change to it. Gherardi (2000: 218/219) argues that knowledge is "fabricated by situated practices of knowledge production and reproduction, using the technologies of representation and mobilization." Ibert (2009) mentions three characteristics of knowledge according to a practice-based understanding: knowledge is pragmatic (it is 'true' when it is effective for practical purposes), incommensurable (new knowledge might contest and delegitimize existing knowledge), and situated in time and space (thus, based on practical action at a specific moment in a specific locality). The two concepts of knowledge and knowing perform a "generative dance" so that neither concept can exist without the other (Orlikowski, 2002; Amin and Cohendet, 2004). Therefore, it is legitimate to study practices of knowing and the specific spatialities of knowledge that are created accordingly. Based upon these elaborations, I define a practice of knowing as

> 'a practice of knowing is an institutionalized accomplishment of knowledgeable action between competent practitioners that includes material objects as actants.'

2.2.5 Practicing sensible knowledge

The literature on knowledge in economic geography has focused on a specific set of industries. Geographers studied industries such as biotechnology, banking, nanotechnology, and professional services, for example (Mattsson, 2006; Ibert, 2007b; Faulconbridge, 2008; Hall, 2008; Jones, 2008; Faulconbridge and Hall, 2009; Ibert, 2009). Particular foci of these studies reveal the interest to approach 'knowledge' from different directions; for instance, foci of research are the professionalization and the interaction of professionals in order to understand the emergence of knowledgeability (Hall, 2008; Faulconbridge and Hall, 2009); the development of different kinds of communities amongst the industry participants (Amin and Roberts, 2008b; Gertler, 2008); and, more generally, the manifestation of networks and their particular organizing logics (Grabher, 2001, 2002; Grabher and Ibert, 2006). A minority of these studies follows the epistemology of performed knowledge. However, the specificity of the above studies lies in how knowledge is done: companies that offer professional services such as law firms and consultancies as well as firms in the finance industry differ in terms of the qualities of practiced knowledge from cultural industries. Practices in these industries tend to be ratiocinative with verbal communication that is comparatively straightforward (Strati, 2007).[23] Cultural industries tend to be less ratiocinative but based on what is introduced as 'sensible knowledge' below. Research on these industries is lacking but promising in order to investigate individual and

[23] Strati (2007: 62) refers to two contrasting sets of 'knowledge' and conceptions of 'the world:' "sensible knowledge is directed towards 'sensible' worlds (…) it is a form of knowing – and acting – profoundly diverse from the knowledge gathered and produced through the logical and ratiocinative cognitive faculty directed towards 'intelligible' worlds."

collective action. While economic geography has benefitted from contributions and insights of practices from the literature in other social sciences (Cook and Yanow, 1993; Strati, 1999; Yanow, 2003), the sub-discipline can, vice versa, bring a spatial perspective to the table to uncover the spatialities of where action is performed, how action differs, and why it matters to integrate places for creation in the discussion (Hall, 2007; Faulconbridge, 2008; Ibert, 2009).[24]

Cultural-product industries are characterized by high degrees of product novelty that challenges existing formulas of how to run manufacturing processes. While skill- and habitus-based tasks correspond with the development of 'best practices' (Knorr Cetina, 2001; Gertler, 2003)[25], the uncertain invention of cultural products demands a recurring reconsideration of existing practices. The differentiation of charismatic and idealistic activities and a typology with four groupings of knowing in action (Amin and Roberts, 2006; 2008a) provides a valid litmus test for the manufacturing of cultural products. Craft/task-based knowing as well as creative/expert knowing and the constitution of related professional communities characterize many cultural product-industries and the fragrance industry as well (see also Scott, 1996). The fragrance industry and the example of perfumes will be approached in greater detail in the following chapter. However, I will contextualize the example at this point in the light of the previous theoretical discussion about knowledge in order to discuss the major challenges of practices of knowing. Fragrances are conceptualized as epistemic objects that are

[24] Therefore, the potential contribution of economic geography to practice-based studies lies in the documentation that space, place, and mobility actually matter for practices and the understanding of how and why practices work (Gherardi, 2009).

[25] In sociology, the term 'habitus' goes back to Pierre Bourdieu who denotes that reality as an outcome is reflexively created by and affecting how action is taking place.

> "objects of knowledge (…) in terms of a lack in completeness of being that takes away much of the wholeness, solidity, and the thing-like character they have in our everyday conception [that] appear to have the capacity to unfold indefinitely. They are more like open drawers filled with folders extending indefinitely into the depth of a dark closet" (Knorr Cetina, 2001: 181).[26]

The fragrance industry creates cultural products as epistemic objects that juxtapose the higher and lower human senses (Classen et al., 1994; Classen, 1998; Knorr Cetina, 2001). A characterization of cultural products and cultural product-industries will be discussed at the example of the fragrance industry below. Thus, an object remains always partial, incomplete, and provisional – depending on the viewpoint and viewer – and has a changing ontology (Knorr Cetina, 2001; Ibert, 2007a, Ewenstein and Whyte, 2009). This is a valid description of a thing that is flexible and unfolding during the process of its becoming; in addition, it holds its incompleteness and flexibility also during the latter stage of consumption.[27] The conceptualization of an epistemic object is beneficial in order to abstract a fragrance from its situatedness and move and integrate it into the theoretical discourse for investigation.

However, at this point I discuss the concept of sensible knowledge, how it is practiced, and how sensible knowledge can be envisioned geographically (Strati, 1999, 2007). Thus, in order to understand the becoming of a perfume as a cultural product, the concept of sensible or aesthetic knowledge is introduced. In particular, Strati's

[26] Knorr Cetina (2001: 182) adds that "the defining characteristic of an epistemic object is this changing, unfolding character – or its lack of 'object-ivity' and completeness of being and its nonidentity with itself [where the] unfolding ontology of objects foregrounds the temporal structure, and, to put it into the original Freudian terms, the Nachträglichkeit in definitive existence of knowledge things (their post-hocness), which is difficult to combine with our everyday notion of an object." According to Knorr Cetina, an object remains always partial – depending on the viewpoint and viewer – and has a changing ontology.
[27] In contrast to technical objects that reach a point of closure (i.e. the point where the epistemic object stops to unfold and becomes stable and defined), perfume remains to be an epistemic object also during its consumption (Ewenstein and Whyte, 2009).

contributions (1999, 2003, 2005, 2006, 2007) are useful (see also Ewenstein and Whyte, 2007, 2009; Lave and Wenger, 1991; Nicolini et al., 2003). Sensible knowledge is not a category or form of knowledge[28]; furthermore, approaching sensible knowledge is not restricted to (particular) cultural products or sets of industries but serves as a way of reading and understanding the characteristics and requirements of work in industrial settings (Strati, 2007). Sensible knowledge is knowledge that is perceived, judged, produced, and reproduced through the senses (Strati, 2007: 62; cf. the discussion of perception for human geography in Rodaway, 1994, for example). Thus, the human senses, sensuality, and sensation receive a renewed and particular relevance for the manufacturing of a cultural product (Rodaway, 1994; Howes, 2003). Strati qualifies sensible knowledge through three arguments (Strati, 2007: 62-64): first, sensible knowledge develops out of the "intimate, personal and corporeal relation with the experience of the world:" it is not about the immediate sensation through an object, but the integration of the experience within the universe of all past and present experiences. Second, sensible knowledge emphasizes that non-human materials 'touch back' – it is not about a uni-linear affection in one direction (from the producer to 'the thing' through her action) but about the interaction and a 'talk' with sensory materials. Third, sensible knowledge highlights the individual comprehension that differs between individuals. This identification of a significant epistemological idiosyncracy qualifies both the concept of sensible knowledge and the challenge to work on the production of cultural products. To summarize, sensible knowledge stresses the importance of sentience, emotion, and affect/affectivity for action (see also Cook and Yanow, 1993;

[28] However, similarities to the concept of symbolic knowledge, which can be understood as a category of knowledge, exist (Gertler, 2008).

Nicolini et al., 2003; Yanow, 2003; Amin and Thrift, 2004, 2007; Burnett and Hutton, 2007; Gherardi et al., 2007; Kerner and Pressman, 2007). Sensible knowledge "generates dialectical relations with action and close relations with the emotions of organizational actors" (Strati, 2007: 62). The sensitive understanding of the world and the judgments of it are based on the "body's thought" and not only the logical and cerebral faculties of the mind (Strati, 2007: 64). Thus, sensible knowledge implies the 'reading of the Other' on a sensual in contrast to a mere objectified, logical, and cerebral level (Strati, 2007).

The ideas of situatedness and corporeality stand in the center of sensible knowledge. Activities such as knowing and learning are situated within the whole human body that is affected by materials through sensual stimulation (Lave and Wenger, 1991; Ewenstein and Whyte, 2007; Gherardi, 2008; Ewenstein and Whyte, 2009). Corporeality implies that sensible knowledge is not uniform between individuals and between the situations where it emerges and changes (Lave and Wenger, 1991). This distinction characterizes how manufacturers and consumers approach cultural products during their becoming. The following brief passage conceptualizes how to approach situatedness and corporeality in sensible knowledge. In essence, the two aspects hint to the conceptualization of sensible action – aesthetic knowledge "comprises the ability to develop a professional 'vision' in the broad sense" (Gherardi, 2008: 521) – and sensibility through passion. Amin and Thrift (2007: 147) stress passion as a force that mobilizes and sustains "drive in contemporary capitalism." The authors trace the concept of passion and stress the significance of the work of Baruch Spinoza and Gilles Deleuze, for instance (Amin and Thrift, 2002, 2007). Essential components of passion are, first, that it drives people's engagement with the world, second, human imagination and emotion always exist together with rational decisions and, third, that cities serve as examples of places of passions through their movement, different potentialities, and intensities of life (Amin and Thrift, 2002). Passion emerges out of cognitive unconscious processes and develops at an instinctual level (Amin and Thrift, 2002). I will come back to the concept of passion further below when I describe the perfumer as a passionate and sensible practitioner (both artist and craftsman) where passion is an individual driving force for engagement. However, I mention passion at this point to emphasize the non-rational and instinctual relation to a specific experience of a cultural product. The first characteristic that Amin and Thrift (2007) highlight is relevant for the understanding of sensible knowledge during the processes of manufacturing. Strati (2005) states that sensible knowledge demands action since it requires the active "(conscious or otherwise) participation of whoever is involved in managing as designing" (2005: 920). Thus, passion is a motor to engage in practices with sensible knowledge. Thus, the previous definition of a practice of knowing can be augmented with the demands to conceptualize knowledge that is sensible and aesthetic within the fragrance industry. For this reason, I define a practice of sensible knowing:

> 'a practice of sensible knowing is an institutionalized accomplishment of knowledgeable action that is fueled by recognition that is perceived, judged, produced, and reproduced through the senses between competent practitioners and material objects as actants.'

The research questions of this study target, first, the processes of manufacturing and, second, the ways and means by which the manufacturers are enabled to create cultural products through sensible knowledge or, actually, sensible knowledgeability.

First, since cultural-product industries do not work according to the sole talent and the creative genius (Bilton, 2007; Boden, 1994), creativity has to be investigated as a collective engagement (Santagata, 2004; Bilton, 2007). The focus is on questions regarding how work is done in industries where sensible knowledge and related practices of knowing are central. Sensible knowledge is (just like the category of tacit knowledge) hard to express verbally, specifically in the context of the presented example of the fragrance industry (Strati, 2007). Furthermore, sensible knowledge is ambiguous and not objective; it is geographically uneven and "we can conclude that the meaning associated with symbolic knowledge varies widely between places" (Gertler, 2008: 10; see also Scott, 1996, 2000a; Power and Hauge, 2008). The presented idea of sensible knowledge and how it is practiced demands significant interaction of the manufacturers of perfumes with internal and external suppliers in order to create perfume as a coherent cultural product. Perfumes come in an aesthetic, visceral form; they are not an entity in a cognitive form that can be analytically known (Lash and Urry, 1994; Allen, 2002).

In this context, a major point for discussion is the question how cultural products such as a perfume are aestheticized. Perfumes face the general challenge that a smell is, as Synnott (1991: 440) and Ellena (in Burr, 2008: 34) explain, not aesthetic in itself.[29] Smell is a social construction (Corbin, 1986; Synnott, 1991; Classen et al., 1994) and perfumes are *made* aesthetic. This is done through the interaction of different materials

[29] Ellena (1991: 335) points out that "there is no particular aesthetically ranked sequence established in odours: the noble character of a raw material, the value it represents when the perfume composer finds analogies with more costly odours, is of no interest. How 'to use an odour best' is the determining factor: the result of an exchange, of the *sympathy* felt between the 'object', the fragrant substance, and the 'subject', the perfume composer." Burr (2008: 34) describes the interaction between Jean-Claude Ellena with his daughter Céline (also a perfumer) where he cites him that "there [are] no good and bad odours" but just work of the perfumer.

and materialities that are integrated in a perfume. Final consumers recognize an aesthetic cultural product holistically. It is about the production of something that is a "holistic aesthetic" (Kerner and Pressman, 2007: 98) that helps to create uniqueness in contrast to other products on a market. Manufacturers of aesthetic products are, in fact, connecting and relating aesthetic and cognitive-intellectual aspects in a cultural product. Furthermore, the aspect of cognition is connected with the argument of intentionality.

A point for discussion is how to connect intentionality and coincidence with each other in aesthetic production. Kerner and Pressman (2007: 105-107) exemplify this at the case of Barneys New York[30]. Barneys is an upscale retail store in Midtown New York City that was aesthetically reengineered and set into contrast to competitors on a holistic basis. Reengineering and re-branding took place in general and even on a micro-geographical level on the specific site. Against the trend of the time, Barneys decided to display rather less than more merchandise; the open-air staircase in the store was designed to represent an important part of the brand's characteristic namely the signification of openness and purity. At the same time, the staircase developed some kind of functional value for consumers: "people are voyeurs and an open-air staircase allowed for incredible people watching" (Kerner and Pressman, 2007: 107). Accordingly, people remained longer within the store with a positive effect on sales and the general attitude towards Barneys. The staircase as a material belongs to the aesthetic interior of the store and creates a specific atmosphere (see also Wilson, 2009). The crucial question is around the point if the staircase was arranged with the intention to

[30] Barneys New York is one of the flagship stores of Barneys, which is a luxury products retail chain that belongs to Istithmar World Capital; it holds flagship stores in the major retail locations and cities in the US (Wilson, 2009).

create the specific atmosphere and understanding (= intentionality of design; practice of brandscaping) or if the social practice of looking-while-walking was an emergent effect that dwelled in the staircase and emerged out of it (= non-intentionality of design; dwelling in materials). This differentiation is important in order to understand the accountability of planning versus the openness of aesthetic creation and inscription of meaning by the consumer. Postrel argues for the relevance of beauty and mentions that aesthetics are more about showing than telling and delighting than instructing (Postrel, 2003: 6). Consumption might be analyzed cognitively afterwards but upfront consumption of aesthetic products is immediate, perceptual, and emotional – thus, non-intentional. Thus, these arguments speak for aesthetic coincidence in the sense that effects of planning dwell within materials, materializations, and their spatialities. However, it is far from clear where intention starts and coincidence ends. The example of Barneys New York's staircase highlights the point that sensible knowledge emerges out of intention and coincidence in various mixes and connects the sensuality of the body with an exterior atmosphere. This holds true for the case of perfume as we will see.

To finalize the discussion of how a cultural product such as a perfume is aestheticized, I briefly refer to the concept of indexicality that was introduced by the ethnomethodologist Garfinkel (1967; see the presentation in Gherardi, 2008: 519; also in Gherardi, 2006). Gherardi summarizes Garfinkel's ideas that individuals confer meaning on the social world through the three features of indexicality, reflexivity, and accountability of situated practices. The characteristics of indexicality are particularly relevant. "The indexicality of social actions means that actors do not usually have problems in understanding each other, largely because comprehension is a constant and contingent achievement which depends on their interpretive work" (Gherardi, 2008: 519).[31] Thus, the work of practitioners on the manufacturing of cultural products is based on recurring corrections, negotiations, and sense-making through the interpretation of work in the work environment. The materiality, professionalization of practitioners, and locality of involved agents makes the manufacturing discursive and necessitates and enables interpretations and negotiations. A discussion of these aspects follows below.

2.2.6 Repositories of practices of knowing

The units of analysis where sensible knowing is practiced has shifted in accordance with the above shift in focus: not individuals or clearly-defined organizations but "socially distributed activity systems" (Amin and Cohendet, 2004: 30; Amin and Roberts, 2008a; Gertler, 2008) are the repositories that social scientists increasingly investigate. In general, the viewpoint has shifted from the focus on firms as containers of knowing practices towards a characterization of knowing practices in networks (Grabher, 2004).[32] Thus, firms are dis-integrated into "circulatory networks" (Amin, 2002: 394). Those networks develop at the crossroads of different social, legal, and organizational repositories such as firms, projects, and individual careers (Amin

[31] Gherardi (2008: 519) continues to stress that "understanding situated practices therefore requires understanding of how individuals successfully use indexical behaviours and expressions whose meanings are constantly negotiated and renegotiated in the course of interaction."
[32] The work on knowledge and the knowledge economy contributes to the agenda to open up the 'black box' of the firm (cf. Taylor and Asheim, 2001).

and Roberts, 2006; Grabher and Ibert, 2006; Arthur, 2008). Multiple organizational repositories where knowing takes place exist (Nicolini et al., 2003).[33]

The recent focus in economic geography has stressed the relevance of communal bonds for knowing (Grabher and Ibert, 2006; Amin and Roberts, 2008a, 2008b; Gertler, 2008). The term community has received (renewed) attention (Amin and Roberts, 2008a, 2008b; Gertler, 2008). Economic geographers increasingly study specific professions and communities where knowledge and knowing are based on participation, negotiation, and reproduction (Nicolini et al., 2003; Faulconbridge, 2008; Hall, 2008). Thus, the so-called social-anthropology-of-learning approach to knowledge which understands knowledge as practiced focuses on the generation, change, and transmission of knowledge through social practices in working communities (Lave and Wenger, 1991; Amin and Cohendet, 2004; Amin and Roberts, 2008a, 2008c). Communities are constructs that exist on an internal and inter-organizational level (in functional groups and corporate departments as well as between same professions beyond one firm). Two forms of communities are often distinguished: epistemic communities and communities of practice (CoP; Brown and Duguid, 1991; Wenger, 1998; Knorr Cetina, 1999; Brown and Duguid, 2001; Amin and Cohendet, 2004; Amin and Roberts, 2008a; Gertler, 2008). Epistemic communities "compromise agents who work on a mutually recognized subset of knowledge issues, and who at the very least accept some commonly procedural authority as essential to the success of their

[33] Since knowledge becomes visible in practice and is not only located in organizations with defined boundaries, the already balkanized (internal) structures of the firm becomes even more permeable. The narrow focus on firms for the investigation of knowledge is criticized because organizational features (such as hierarchies which create closeness/ego-centrism) limit inter-organizational interaction; other organizational forms such as collaboration in joint ventures or projects, on the other side, are problematic because of their temporality (Grabher, 2002a).

collective building activities" (Amin and Cohendet, 2004: 75). Communities of practice are oriented to enhance individual competencies rather than common goals in the epistemic communities. The dimensions of joint enterprise, mutual engagement (= establish norms and relationships of its members), and shared repertoire (= language, routines, artifacts, and stories; Amin and Roberts, 2006; Wenger, 1998) are central. CoP cover the "social interactive dimensions of situated learning" (Amin and Roberts, 2006: 2; Wenger, 1998). The focus on communities puts a view on (inter-)organizational cultures and learning- and knowing-in-doing. Social interaction and communication grounds knowledge in knowing and de-mystifies the stocks of knowledge.[34]

Most recently, a sympathetic critique of the CoP-literature challenges the orthodoxy and homogeneity of communities of practice (Amin and Cohendet, 2004; Grabher, 2004a). Amin and Roberts (2008a) claim that it is important to study practices of knowing and look at the communities that develop thereupon (see Bathelt and Glückler, 2003, who understand economic activities in a spatial perspective). Gherardi (2006: 110) presents a similar idea in that she looks at practice, first, in order to study community as "an effect, a performance, realized through the discursive practices of its members." The sympathetic critique of the CoP-literature indicates a range of different forms of communities and knowing practices (Amin and Cohendet, 2004; Grabher and Ibert, 2006; Amin and Roberts, 2006, 2008a). The ability and necessity to participate in a specific community of practitioners is, in the case of the fragrance industry, dependent on the competencies and capabilities to interact with other community members in a

[34] This approach to knowledge works with weak degrees of rationality. What do the authors mean with that in detail? "The anthropology-of-learning approach does not explicitly refer to cognitive mechanisms or, in general, embrained knowledge as a source of learning and innovation. The emphasis on embodiment, practical action, and social interaction displaces the need to explain the behaviour of individuals as the product of cognition and consciousness" (Amin and Roberts, 2006: 7).

knowledgeable way (Gherardi, 2006). Research on practices seeks to understand the ways and means by which individuals know in networks (Faulconbridge, 2007). Thus, the locus or repository of the human body (implying cognitive and sensible competencies) that has to be trained and getting experienced in order to become and stay a communal member is stressed. It is crucial to recognize the different loyalties within the networks that an individual belongs to; Grabher and Ibert (2006), for instance, show that an individual is representing and developing her own career, her projects that she is involved in, and her company. Thus, individuals develop loyalties to different authorities with diverging interests in mind. These loyalties overlap within and across different kinds of organizational forms and geographical spaces. Empirical research on the characteristics of these practices and repositories is lacking within economic geography.

2.2.7 Spatializing practices of knowing

Knowledge spaces are often reduced to a specific geography of territories such as learning regions and regional innovation systems (Amin, 2002, 2003; Amin and Cohendet, 2004). However, these territorially-defined knowledge spaces are – according to the diverging epistemology of knowledge – seen as only one example of the geographies in and through which knowing activities take place. In territorially-based knowledge spaces, actors are enabled to come together on a regular or irregular basis (see the discussion of temporal clusters; Bathelt et al., 2004; Maskell et al., 2006; Power and Jansson, 2008). Agglomerations such as specific cities or regions – often characterized as nodes in networks – are an example of regional networks that have been studied by geographers for a while (Amin and Roberts, 2008c). These networks are still relevant but only one example of how the geographies of knowledge can be represented and mapped. In contrast to the territorial view, knowledge is seen as practiced across space, creating multi-faceted networks where the spatialities of knowledge are multiple and constantly unfolding (Amin, 2002, 2003). Amin and Roberts (2008b) as well as Gertler (2008) conceive of situated practices of knowing as developing and coming up in "many spatial forms and intensities, involving entanglements of knowledge that cannot be reduced to the local/global choice" (Amin and Roberts, 2008c: 29). The "geography of situated knowledge" (Amin and Roberts, 2008c: 30) and the "spaces of knowing" (Amin, 2003: 123-128; Amin and Cohendet, 2004: 86-111) are based on a combination of interactions among involved participants in knowing. Thus, economic geography examines spatialities on the basis of social action (Bathelt and Glückler, 2003; Amin and Thrift, 2007; Ibert, 2009).

Geographies that develop out of the epistemology of practice are exemplified and summarized according to the "argument of place" (Ibert, 2007a). This argument consists of two foci. First, "engagement in practice" stresses the role of context-dependent learning places where a specific "physical manifestation of a corresponding practice of knowledge formation" demands practicing in a place (Ibert, 2007a: 109; e.g. a laboratory or a specific machine; see also Lave and Wenger, 1991; Knorr Cetina, 1999). Second, "participation in practice" sees the specificity of practice as unbound from a particular learning place but connecting different agents of the same profession, for example, across space. Thus, the argument of place does not consider the relevance of geographical proximity in the qualities of the involved knowledge but in the demands of the relevant practice of knowing. In contrast, the previous determinacy and integration of knowledge in spatial containers is challenged by the idea of learning places that juxtapose this logic by arguing for an understanding of practices first and spatialities second. Thus, spatialities have the potentiality to change and unfold: this aspect challenges mapping practices (Thrift, 2004, 2005) because it highlights new spaces based upon the necessity of their involvement, and characterizes thematic maps that are far from stable. However, in this study I will examine and highlight the specific learning places that emerge out of the practices on different geographical scales. A 'learning place' (see also Ibert, 2007a, 2007b) can be conceptualized and defined as a

> 'place of sedimentation of practices of knowledge that materialize as such when knowledgeable practitioners, infrastructures (i.e. a passive locality), and materials or materializations (i.e. active ingredients) are accomplishing work at the same time.'

Thus, these learning places are locales of knowledge creation (Livingstone, 2003). The study also discovers that practices of knowing do not only occur at these clearly demarcated learning places but also through the mobilized and moving epistemic object that travels in order to gain its olfactive and aesthetic shape. These rather loosely demarcated spaces are locales of knowledge interaction (Livingstone, 2003).

The idea to examine and map spatialities where knowing is practiced has different purposes. First, the intention is to describe and analyze a picture of the globalizing world in its heterogeneity of geographical and relational proximity (Amin and Cohendet, 2004; Amin and Roberts, 2008a, 2008b; Ibert, 2009). This picture does only partially work according to traditional argumentations of scales and bounded systems such as regions (Thrift and Olds, 1996; Latour, 1997; Law and Hetherington, 2000). Geographies are not seen as simply there, they depend on the understanding and demands of practices. These demands can, as the discussion of epistemic objects explains, remain mobile and immobile during the different stages of becoming (Knorr Cetina, 2001; Ibert, 2007a, 2007b). The spatialities of knowledge production depend on how and where social practices are performed in order to work on the unfolding epistemic object. Therewith, the spatialization of practices develops, second, a deeply contextual legitimation that is rooted in the understanding that knowledge is a contextual process. Against the understanding of globalizing practices and processes, the geographical study of where practices materialize helps to account for the specificity and the qualities of locales.

2.3 Summary

Chapter 2 introduced the major theoretical context of the dissertation. Economic geography is characterized by an epistemological transition from the understanding of knowledge as a stock and asset that is found as a resource in particular locales toward knowledge as practiced action where the spatialities are multiple and context-dependent. The contextualization at the example of cultural industries and the introduction of the specific case of perfumes in the international fragrance industry relates to an understanding of sensible knowledge and how it is practiced by perfume manufacturers. The next chapter discusses the characteristics of the fragrance industry and covers both historical and current features of perfumery.

CHAPTER 3

THE INTERNATIONAL FRAGRANCE INDUSTRY: SETUP, PRODUCTS, AND PROCESSES

3.1 Introduction

In this chapter, I introduce the major characteristics of the fragrance industry with the explicit example of perfumes. I start with a characterization of the overall cultural-product industries in order to describe perfumes as cultural products, summarize the history of perfumery, present characteristics of the market and of major industry participants, and discuss the most important processes in the fragrance business. This characterization helps to understand the major setup and constellation of the industry. The production of perfume is a financially very lucrative business and a good example to discuss what actors in the fragrance industry manufacture (Burr, 2008).[35] Perfume represents an example that unifies and amalgamates material and symbolic characteristics. In order to be successful on the market, the understanding within the industry is that a connection of a brand with the brand equity of smell increases the likelihood of trustful bonds and repetitive purchases by the consumer (Falk, 2007a, 2007b; Gobe, 2007; Falk, 2008). Cutting-edge research on the alleged beneficial brand-scent coherence is only one example why the investigation of the fragrance industry is promising to understand current knowing practices in a cultural industry.

[35] Burr (2008: xvii), for instance, explains that in 2003, 18% of the total revenues of the Italian jeweler Bulgari came from perfumes; however, Burr also shows that these percentages differ significantly between companies. On the other hand, Synnott (1991: 438) explains that the fragrance industry is a big business but makes only 20% of the total aroma and olfaction industry. The profit margins within a perfume are, as Turin (2006: 13) explains, also significant.

3.2 The context: cultural-product industries

The fragrance industry belongs to the cultural-product industries where the center of economic activity is the creation and maintenance of semiotic, aesthetic, and, in general, qualitative attributes (Scott, 2000a, 2005, 2006a) or, more generally, symbolic and sign values instead of use or exchange values in products (Power and Scott, 2004; DeFillippi et al., 2007; Pratt, 2009; see the general turn of focus in Baudrillard, 1998).[36] Use values emphasize the functional characteristics, the usefulness of a good or service, and the satisfaction of utilitarian needs. Exchange values centralize the exchange of one good for another or, more typical in capitalist societies, for money. Symbolic values understand the value of a good or service as based upon a particular set of symbols that is related to a product. Sign values emerge out of what a good or service signifies – wearing a particular wrist-watch, for example, might signify a specific taste, class, or style that is not only dependent on the watch by itself.[37] The industries where symbolic and sign values are dominant are summarized under the term cultural-products industries or cultural industries (Scott, 2000a, 2000b; Power and Scott, 2004).

[36] This distinguishes cultural from manufacturing or service industries (DeFillippi et al., 2007; Pratt, 2009). Here, the terms 'cultural-product industries' and 'cultural industries' are used synonymously; however, the term 'cultural-product industry' emphasizes the creative conceptualization and manufacturing of products that are considered as 'cultural products' in contrast to the term 'cultural industries' that also implies non-product related tasks such as dance or theater.

[37] Cultural products transcend the monetary values of the physical material that was necessary for the production of the cultural good. Cultural products are based on an individualized value creation in terms of the hermeneutic perception, interpretation, and experience. Traditionally, the significance of economic value in classical political economy has been related to the creation of use and exchange values. The latter one became prominent because of the ability of abstraction in terms of monetary value. In contrast, the rise of sign values is intertwined with the rise of representational or symbolic goods that "serve, at least in part, the purposes of personal edification, entertainment, adornment and decoration, self-affirmation and so on" (Scott, 2000: 568; see also Lash and Urry, 1994; Baudrillard, 1998). This means at least two things: first, symbolic goods carry specific immaterial attributes with them (e.g. the attribute of the label "Made in France") which eventually may become significant enhancers of exchange values, and, second, these goods challenge the traditional scheme of what the terms "productive" and "consumptive" characterize.

The mosaic of current economies is assembled by multiple cultural product-industries (Scott, 1996, 2000a; Scott and Power, 2004; Amin and Thrift, 2007).[38] Those industries have grown to be of economic significance (Lampel et al., 2006; Lash and Lury, 2007). DeFillippi et al. (2007: 513) mention artistic core sectors such as "art, theatre, publishing, music (…) but also craft and design" as prime examples (Allen, 2002; Amin and Thrift, 2004; Power and Scott, 2004; Lash and Lury, 2007). Scott (1996: 309) highlights the significance of the term 'craft' to stress that the manufacturing of cultural products demands "large inputs of multivalent human labor."

In general, the idiosyncracies of the different industries are quite high. Beyond the enormous diversity and heterogeneity of cultural products that are developed in cultural industries, they show similar characteristics that differ from non-cultural products in that (i) they lack utilitarian value and receive value from signs and symbols attached or related to them, (ii) they lack an objectively-valid depiction of quality, (iii) consumer spending on cultural goods rises exponentially with income, (iv) cultural products focus on interpretation and experience-as-consumption, and, relatedly, (v) they are maintained in an atmosphere where value is co-created by the consumer so that consumption and production blend (Lampel et al., 2000; Power and Scott, 2004: 3-4; Lampel et al., 2006; DeFillippi et al., 2007). Furthermore, the aspect of industrialization within the term cultural industries implies that cultural products are mass-produced (Pratt, 2009). Competition increases accordingly so that even mundane products are

[38] Throughout this paragraph as well as the dissertation the term cultural *product* is preferred in contrast to a cultural *good*. Callon et al. (2002: 197/198; also Callon and Munieza, 2005) elaborate on the difference between a good and a product. A good highlights and corresponds with a specific moment of an objectified thing in a never-ending process; a product relates to the transformative process of production (involving manufacturing, circulation, and consumption). Thus, a good becomes visible and is located at specific points during the career of a product (Callon et al., 2002). Hesmondhalgh (2002), for instance, discusses the major schools of thought to approach and investigate cultural industries.

aestheticized, beautified, or, as Leslie and Reimer explain (2003: 427), fashioned, in order to stand out (Postrel, 2003). Lorenzen and Frederiksen (2008: 162) mention that "cultural products combine elements of aesthetics, design and narrative content, often in complex mixes." Thus, the value of cultural products emerges out of the aesthetic and semiotic content (Lash and Urry, 1994; Scott, 2000, 2006a; DeFillippi et al., 2007).

Cultural industries are to a large extent based on economies of the invisible (Bolz, 2005). It is not about the tangibility and pure materiality of a cultural product but, just like in the fragrance industry, about the creation and maintenance of images (Burr, 2008). In general, researchers of cultural industries attempt to understand and conceptualize the production and consumption of symbolic and aesthetic values for the meaning of commodities. Beyond the focus on representation, meaning, experience, and the significance of brands, Mansfield (2003) stresses that the production of goods is about "both meaning and materiality" (Mansfield, 2003: 191) – it is about the forms and transformations of materials and symbols across time-spaces – and how they are intertwined in the specific examples under investigation (see also Lorenzen and Frederiksen, 2008; Anderson and Wylie, 2009; Ewenstein and Whyte, 2009).[39]

Economic geographers have examined several cultural industries (Scott, 2000a, 2000b; du Gay and Pryke, 2002; Amin and Thrift, 2004; Power and Scott, 2004; Pratt, 2004, Scott, 2005, 2006b; Pratt, 2008; Watson, 2008; Pratt, 2009). The major interests were to study creative labor from different theoretical angles in specific cultural industries such as multimedia/film production (Scott, 2005), fashion (Rantisi, 2004; Crewe, 2005; Weller, 2007), advertising (Grabher, 2001, 2002b; Faulconbridge, 2007),

[39] Mansfield (2003: 191) stresses: "Material production remains important, and should not be relegated to an innocent materiality or an economically removed production."

and music (Power and Hallencreutz, 2004; Watson, 2008; see a general introduction to the theme by Power and Scott, 2004; Pratt and Jeffcut, 2009; Pratt, 2009).

In this context, the conceptual clarity of the term ‘cultural industries’ is often blurred by the integration and interconnection with the term ‘creativity’ so that the terms ‘cultural industries’ versus ‘creative industries’ are confused both conceptually and semantically (Pratt, 2008).[40] The traditional view is, just like in the knowledge debate above, that a number of cultural industries show a tendency to be affected by agglomerative forces and co-locate in specialized clusters (Power and Scott, 2004: 3-4; Scott, 2006a, 2006b; Pratt, 2008; Lorenzen and Frederiksen, 2008). Geographers have sought to explain why some places can be considered more creative than others. As Scott (2006a: 84) puts it: “why (…) do certain places at certain times develop as foci of remarkable creativity in the form of exuberant entrepreneurship and innovation?” The logic behind that is one of economic prosperity: creativity in cultural industries has to be promoted and enhanced in order to let cities or regions remain or grow in their

[40] Bilton (2007) and Pratt (2008, 2009), for example, disentangle the conceptual mix to show that creative industries, particularly in the United Kingdom, developed under the idea of a new entrepreneurial regime within the ‘New Labor’-movement. The development of national and regional economic policies and agendas towards the creation and development of competitive creative industries in the UK of the late 1990s (Leadbeater, 1999; Caves, 2000; Hesmondhalgh and Pratt, 2005) and the more recent interest in the concept of creativity that has invaded and informed conceptualizations such as creative cities, creative city regions, and urban cultural districts represents that centrality of creativity (Scott, 2000a; Florida, 2002; Power and Scott, 2004; Scott, 2006; Cooke and Lazzaretti, 2008). Political initiatives as well as policies that strengthen the regional economic development through creative industries are signs of an accelerated interest in understanding and enhancing creativity. In another vein, Richard Florida’s work on the creative class provides a cornerstone that has made creativity en vogue for the study of human capital mobility among human geographers, economists, and policy makers (Florida, 2002, 2004; Pratt, 2008). Being creative mirrors the understanding of a Schumpeterian innovative actor: creativity is a characteristic of an individual and creativity originates in the individual’s mind (cf. the discussion in Boden, 1994). Thus, locales that are described as centers of the creative class have done particularly well in attracting and keeping individuals that are considered creative (see also Scott, 2000a; Cooke and Lazzaretti, 2008). However, this focus neglects a better understanding of, first, the development of how individuals become or are creative, second, on the social orchestration and enablement for creativity, and, third, it simplifies geographic characteristics of creative human labor. Human geographers criticized Florida’s analysis, prescription, and cookbook approach of how to develop creative environments and enhance economic viability and competitiveness (Peck, 2005; Amin and Thrift, 2007; Pratt, 2008).

economic relevance (Florida, 2002). The argumentation for the localization of cultural industries in agglomerations lies in economic efficiencies but also in operations that are transaction-intense (see also Power and Scott, 2004; Lorenzen and Frederiksen, 2008). Co-location in proximity lowers costs and enhances mutual understanding. "Outputs that are rich in information, sign value and social meaning are particularly sensitive to the influence of geographic context and creative milieu" (Power and Scott, 2004: 7). However, this view tends to neglect interactive creative processes between multiple individuals and actors that occur outside an agglomeration.[41]

Therefore, a recent focus in economic geography has been on spatially dispersed creative processes that take place in relational proximity (Ibert, 2007a; Amin and Roberts, 2008a, 2008b; Gertler, 2008; Ibert, 2009). Economic geographers started to analyze how creativity works and how being creative is achieved in particular industries (Thrift, 2005). The focus is more on the understanding and grasping of capabilities, practices, and social dynamics to become and remain creative. Therewith, creativity changes from being understood as a resource to a practice. With this term, the concept of creativity is actually intertwined and connected to the concept of knowledge. Amin and Roberts (2006; 2008a), for instance, describe creative or expert knowing as one example of a practice of knowing. It is beneficial to explore creativity epistemologically and methodologically, like knowledge, as an activity that is 'done in practice.'

[41] According to Proctor & Gamble's Mike Addison (in Dodgson et al., 2005: 47), organizational innovation is enhanced through connectivity and subsequently leads to product innovation. Making new connections and connecting knowledges across organizational boundaries in order to create a distributed innovation system is a way to push innovation. Proctor & Gamble (P&G) is one of the largest global manufacturers of consumer goods (Dodgson et al., 2005) and one of the main representatives of the fragrance industry. Not only is the firm's innovativeness enhanced through connectivity, but creativity is also likely to be affected by increased exposure to new organizational constellations, situations, and environments where not only a planned choreography but also improvisation is a key characteristic.

3.3 The cultural product of perfume

This section characterizes, conceptualizes, and abstracts perfumes. Furthermore, it approaches perfume as a cultural product in order to understand how and where its values are created and which major processes are relevant for the creation of values. While the conceptualization of a fragrance as an epistemic object (Chapter 2) will be used in Chapter 5 again to examine the mobility and incompleteness of it, I will present two diverging approaches to understanding how perfumes are manufactured and where a perfume derives its values from at this point.

Discussions have only traditionally centered on the exchange value to conceive perfumes as examples of conspicuous consumption and co-constitutive elements of the fantasy of the rich (Baudrillard, 1998).[42] The aspects of class, smell, and a determination of good and evil were intertwined and the good smell of the rich was connoted with positive characteristics (Synnott, 1991; Classen et al., 1994; Classen, 1998). In general, commodities from cultural industries are produced with multiple symbols and signs that enable personal appropriation, identification, and comprehension (Baudrillard, 1996, 1998; Power and Scott, 2004). Cultural products are situated in a system of symbolic commodities that all signify different things. In addition, they experience a different individual and collective recognition. Perfumes are situated in a system of objects. Baudrillard (1996: 92) argues that "every object thus has two functions – to be put to use and to be possessed." However, multi-sensorial products

[42] Cultural products tend to have a low degree of functionality and high degree of subjective utility, as Baudrillard (1996) explains in the context of collecting. The term 'utility' tends to be connected with a functional logic but perfumes belong to the subjective discourse of the non-functional system. A perfume is only marginally limited to a simple functional determination and is not restricted to utilitarian values such as (de-)odorizing the body – in contrast to other fragrance industry-products (Ashenburg, 2008).

such as perfumes are, in addition, subjective entities that involve the human body as a site of encounter, evaluation, and consumption (see also Rodaway, 1994; Strati, 1999; Lorenzen and Frederiksen, 2008). This description makes sensible knowledge both of the producer and the consumer necessary (Rodaway, 1994; Strati, 1999, 2007). Cultural products stand for personal, intimate, and immediate experiences. This characterization is related to the question where value of a perfume actually comes from. Since most cultural products like perfumes are not based on needs but on wants (Baudrillard, 1998; Bolz, 2002), industries that produce such cultural products are based on a recurring 're-enchantment of a disenchanted world'[43] (Bolz, 2002: 98). Manufacturers of perfumes are interested in creating and satisfying 'wants' and 'must haves' on a regular basis.[44]

Two contrasting approaches to conceive the becoming of a perfume should be presented and distinguished based on the theoretical and empirical literature: the focus on the process of branding versus the focus on what develops out of the processes of crafting. In contrast to the other materials and immaterials that are involved in branding a perfume, a fragrance is a component that is difficult to make use of because of its sensual and communicative logic. Perfumes develop meaning out of the brand and scent values. Cultural products such as perfume depend on symbolic and sign values, which are mixed and mingled with sensorial stimulations. Symbolic values become manifest through the representation of an object, for instance, by a specific connection or

[43] Translated from the German original "Wiederverzauberung der entzauberten Welt" by the author (original in Bolz, 2002: 98).

[44] "To excite today's consumer, we have to make her feel that fragrance is too exciting to not use" (Michael Edwards in Jeffries, 2007). Thus, it is about the creation of needs and of 'cool' for the consumer (see also Lury, 2004). 'Cool' is created through the openness to personal interpretation where luxury goods in general are expressed and celebrated through individuality, creativity, expressiveness, intelligence, and personalized meaning (Dumoulin, 2007). The making of meaning moves from manufacturers to consumers.

convention. A reared up horse, for example, might symbolize Ferrari. Thus, a symbol is a representative device. Baudrillard (1996: 77/78) exemplifies the term “sign value” when he speaks about antique objects: “The antique object no longer has any practical application, its role being merely to *signify*. It is astructural, it refuses structure, it is the extreme case of disavowal of the primary functions. Yet it is not afunctional, nor purely ‘decorative’, for it has a very specific function within the system, namely the signifying of time.” Perfumes, in this context, might be signifiers as well – they stand for a brand, for instance. However, the aspect of the representation of a fragrance as the most important characteristic of a perfume is more complicated since fragrances communicate through a different sense; the complexity of understanding sign and signifier is heightened and the communal aspects of presentation and recognition are implied. Therefore, fragrances are a good example of a simulacrum.

Perfumes are relational: they are based on the relations of and between the various components that characterize them (Sorhaug, 2007).[45] Thus, the value of a perfume is created also by characteristics of the object that, strictly, do not belong to the cultural product itself. This characterization implies challenges for the creative personnel to produce a perfume. It is, actually, about the coordination of different mediums and materials – e.g. the fragrance, brand, bottle, and package – and about the amalgamation of these materials and immaterials into a product to let the consumer successfully relate to the product (Allen, 2002).

[45] A bottle of perfume, for instance, does not only exist as a thing in itself for sensorial recognition, it is manufactured as a networked relation of the bottle with a brand name that is printed on it, a package that is wrapped around it, with perfume bottles that you already know and held in your hand, with the fragrance it contains, with your artistic experience of looking at, with the use and handling of the bottle, with a store where you bought the perfume, to name a few examples (cf. the discussion in Callon and Munieza, 2005).

How do perfumes as epistemic products develop value? First, the perfume itself with its different components is characterized by different attributes that signify. Second, the sign value transcends the commodity since it involves characteristics of the brand such as the brand name, brand logo, and brand color. The literature on the creation of economic markets in economic sociology provides insights at this point. A perfume is produced so that it 'holds together' on 'the market' (Callon and Munieza, 2005). This is possible through singularization and objectification. Singularization is the process by which individual consumers become attached to a product. Objectification is the process where goods and services become stabilized, delimited, and definable. Marketers work on both tasks. Brand and scent values enable a singularization so that cultural products can be brought into an individual relationship (Callon et al., 2002; Callon and Munieza, 2005).[46] Thus, 'a brand' and 'a scent' represent two ways how producers singularize and objectify an item, thus make it accessible for individual consumers and target groups. This will be discussed in the following paragraphs.

First, the discussion of where a perfume receives value from relates to the set of activities that focuses on branding such as creating, sustaining, promoting, and selling a brand and branded products (Pavitt, 2000; Pike, 2009a, 2009b). The aspect of value creation through branding is discussed as significant (Pavitt, 2000; Lury, 2004; Lash, 2008; Power and Hauge, 2008; Pike, 2009a, 2009b). Therewith, work processes like marketing, advertising, and communicating have become central for the production of perfumes (Turin, 2006; Burr, 2008). Baudrillard (1996: 209) sees the primary goal of

[46] Different levels of singularization can be differentiated according to a weak and strong substitutability between products (Callon and Munieza, 2005). During the development, the perfume experiences "processes of qualification, processes through which qualities are attributed, stabilized, objectified and arranged" (Callon et al., 2002: 199).

branding in designating a product with emotional connotations. Branding plays a role on two levels. First, it is about the products themselves. For instance, fragrances are attributed with fantasies, illusions, and dreams and are constructed as mediums of memories and mirages (Le Norcy, 1988; Lash and Urry, 1994; Partington, 1996; Newman, 1998). It is about associations and imagery, texts, shapes, and scents. Second, it is about the mindset of the brand and its position on the market (Bolz, 2005). A perfume is recognized through its (relation to the) brand. Brand positioning and re-positioning is a recurring task for marketers. The sign values of a brand are important in the communication with and documentation for consumers (Baudrillard, 1998).[47]

Related to the second argument about the mindset of a brand and its position are current discussions in studies of marketing processes and the reconstruction of cultural products as expressive and experiential goods (Pine and Gilmore, 1999; Gobe, 2007; Kerner and Pressman, 2007). Thus, it is about the individual identification with and attachment to a perfume, the experience of it in a specific atmosphere (such as a store or a particular city, see the brief discussion of retail), the contextualization of a perfume in a broader set of practices (for instance, emphasizing the ritual of ‘bathing’), and the

[47] For instance, perfumes are often the first experiences with a designer brand – you recognize a new brand by smelling a perfume that runs under the brand name – and this stresses the relevance of first impressions (Byron, 2007; Burr, 2008). In fact, this has to do with the easy accessibility of perfumes because “it’s easy to sell, and it crosses borders, cultures, and target audiences with ease” (Thomas, 2007: 139). The connection of perfumes with celebrities is an example for this (see the discussion in Kerner and Pressman, 2007; Burr, 2008). The characteristics of a perfume are connected with the understanding of a celebrity and vice versa. This characterization changes over time – celebrities might lose popularity or perform badly in TV shows, flop with new songs, or are criticized for their recent collection. Brand values change over time, brands vanish from the market. Kerner and Pressman (2007: 157/158) mention that celebrity has always sold; however, what is different now is that celebrities changed “from icons to guys like you and me that don’t last.” Perfumes are put onto and off the market at a quick pace. This is contrasted by the lasting success of some brands and perfumes that still dominate the sales’ lists (cf. Burr, 2008). Thus, the challenge is to make a perfume an eligible advocate and representative of a brand.

utilization in terms of an individual expression and co-constitution of self by a scent.[48] Brand recognition stretches all kinds of spaces from a store to TV, newspaper, and online ads. The store, usually paraphrased as a point of sale, point of contact, or a 'door' in marketers' terms, is a place of brand representation and a point of contact with consumers. Therewith, the spatial extension of cultural products that reach out to inform and attribute consumer environments make the practice of brandscaping crucial (Kerner and Pressman, 2007; Pine and Gilmore, 1999). The practice and task of brandscaping has enabled new trends like the emotional design of objects (Bolz, 2002; Gobe, 2007) and the focus on experiences and rituals[49] (Pine and Gilmore, 1999; WWD, 2008). It is not about the cultural good itself but its accommodation and the way it informs a biography of a product (Thrift, 2004). The multiplicity of communication channels lets a perfume be related to other commodities within the universe of the brand (a perfume relates to a watch or clothes, for instance). Thus, increasingly specific objects are not marketed by themselves but widened through the experience of related processes (e.g. in Gobe, 2007: 34). Individual value emerges out of the intensity of the experience (see also Gobe, 2007). The intensity of experiences is visceral, gritty, and full of emotional elements (in contrast to products that are based on a rational paradigm with an objective-trust orientation; Burnett and Hutton, 2007). Sign values emerge not only out of what a brand stands for (thus, representation) but out of the general experience (thus, 'theatrical staging;' Bolz, 2005; Kerner and Pressman, 2007; Lash and Lury, 2007).

[48] This remark hints to the significance of the co-creation of values by the consumer: within the post-modernized consumer environment of brands, the interpretation of the semiotic world of cultural products highlights the relevance of consumer perception, reception, and interaction with the manufacturers.

[49] The example of rituals and a ritualization intends to change everyday routines (such as taking a shower) into 'little rituals.' The brand 'Rituals' is about the rediscovery of the magic of every day (WWD, 2008). This rediscovery is personalized and intertwined in products with "a story at their heart" (e.g. Fuiyama shower gel is inspired by a bathing ceremony undertaken by pilgrims about to climb Mount Fiji).

Perfumes are increasingly organized in a “set of relations between products [and] services” (Lury, 2004: 26) or, as Baudrillard points out (1996), in a system of objects (see also Callon et al., 2002; Callon and Munieza, 2005). I mentioned that perfumes are relational goods since relations between all product components exist. However, relations with different other products and services are also present. A quickly changing landscape of brands exists where every brand intends to locate and position itself in distinction to other brands in order to develop originality and specificity on the market. However, this questions the organization, communication, and mediatization of the qualities and characteristics of a brand in the case of perfumery (Callon et al., 2002). “The brand is no longer a monolith. It is many different things to many different people” (perfume expert Michael Edwards in Jeffries, 2007; Edwards, 2009).[50] Two aspects are related. First, branding faces the challenge to coordinate the configuration of the different material and immaterial components of a perfume in a system of objects (Baudrillard, 1998). The diction is that during the branding process multi-sensorial coherence is created (cf. Burr, 2008). In order to communicate holistically, the intention of brand managers is to use the underutilized brand equity of scent (see also Lindstrom, 2005, in general). Brands are summarized by the characteristics of what they stand for and a scent is brought into this context. Only particular compositions are seen as legitimate ‘attachments.’ It is a challenge to relate a fragrance to a brand because scents are characterized as non-representational (Blackson, 2008). Baudrillard (1996: 210) explains that

[50] However, branding integrates the significance of the brand under investigation in its account. Thus, there are different goals that are approached during the manufacturing process. For example, for some perfume brands it is about clarity – about the clear communication of what the brand and the scent represent (= homogeneity). For other brands it is about mechanics – about the most effective use of ideal communication channels and the ways to reach of targeted consumer groups (= reach).

> "there can be no more impoverished language than this one,[51] laden with referents yet empty of meaning as it is [where] a language of mere signals, and 'brand loyalty' can never, therefore, be more than a conditioned reflex of manipulated emotions."

Thus, in question is not if brands match fragrances, but how they are related to each other. Second, this challenge increases on a market that is characterized by numerous new launches, product overflow, globalizing brands, and marginal difference between branded cultural goods both in an artistic as well as financial context.

Perfume manufacturers and fragrance suppliers increasingly objectify fragrances (Callon and Munieza, 2005; Gobe, 2007). The involved techniques of the perfume manufacturers are statistically sophisticated. New market research techniques focus on the idealized and targeted consumer, how she understands, contextualizes, and conceptualizes olfactory notes and scents, and how this can be related to brands (Gobe, 2007). An understanding of the consumer's emotions and feelings towards a scent is seen as giving the producers a better opportunity to create coherence within a branded cultural product. Thus, producers of perfume increasingly invest in emotional design in order to sell coherent products (Gobe, 2007). This trend shows the development towards arts and design as the 'post-modern R&D department of the economy' (Bolz, 2005). "Aesthetics become the new forefront science" (Bolz, 2005: 30). The fragrance industry is an example of how aesthetics is being performed in a multi-sensorial setting where professionals with different backgrounds are collaborating.

[51] Baudrillard (1996: 210) speaks about language that is "strictly asyntactic: different brands succeed one another, are juxtaposed, or replace one another, without articulation or transition' this is an erratic lexical system in which bands devour one another and the lifeblood of each brand is interminable repetition."

Second, however, the presented view of the importance of brands and brand environments is put into perspective by the artistic and sensorial values of the fragrance.[52] The monetary value of a mass market perfume at a counter is, in large parts, defined by the marketing and communication budget. However, the financial value of the different components in a perfume and, in particular, of the fragrance develops out of the involved ingredients and their histories. The product ingredients contribute to the monetary value of a perfume at a counter especially in the context of niche perfumes. The product development time is, in contrast to other cultural industries, of a less significant matter for the value of a product. In his study of chefs in French contemporary haute cuisine, Hetzel (2003: 244) explains that "the value of the object

[52] Berthoud et al. (2007: 6) present a quote from 1972 when Suzanne Grayson, marketing director at Revlon, stood in front of the American Society of Perfumers: "'At the risk of oversimplifying', she said, 'there is nothing to a 'fine' fragrance other than mystique – and that mystique is primarily among the perfumers, not among the consumers. The search for vérité, beauté and amour is clearly wasted on the consumer. She [sic!] stops at a counter, gets treated to a squirt, and says, 'Yeah.' At the next counter, 'It's divine' and so a sale is made. As you search for vérité, she searches for a 'nice smell', - and that's all she wants from you. The rest she wants from the marketer.' This quote describes a specific picture of a consumer at the time. However, I emphasize two points here. First, this quote highlights a certain role of the marketing profession. Second, perfumes are seemingly more than just cognitive products that are evaluated by their brand name; in contrast, they can be considered as instinctual. Scents evoke emotional reactions that are only co-constructed by marketers' brands and salespersons in a shop. A scent is the most complex register of a perfume and it develops out of 'crafting'. The sense of smell, as the literature on the psychology of odors describes, is a sense that is memorized in a specific situation (van Toller and Dodd, 1988; see also Rodaway, 1994). Furthermore, it is memorized by the specific emotion that it evokes (Laudamiel et al., 2008). A scent connects places across time and resembles or re-substantiates and mimics memorized situations (Newman, 1998). However, the memorizations of a scent work like a palimpsest. The specifics of the sense of smell enable echoing memories and situations of time-spaces (a meeting, a particular place, a person, a situation, a state of mind). They are not cognitive *or* emotional, they are both – they are associational. A perfume is a multi-sensorial goods and its smell creates associative emotional geographies. While many cultural products (such as visual arts, for instance) work according to the understanding of property (the intention is to own the specific entity), the logic behind perfumes is that of appropriation (the intention is to create effects through the consumption of a perfume). Only the consumption of a perfume creates an intended effect (cf. Simmel, 2004). Consumers attribute themselves, for instance. This is what Hetzel (2003: 239) in a different métier means when he characterizes haute cuisine as an intellectual experience: "Eating becomes a pretext for experiencing something unique: destroying a piece of art through incorporation. The phenomenon of incorporation of the creation means that the customer, through a magical process, gains some power." These characterizations hint to the complexity of manufacturing. The upper characterizations are implied in the strategies and intentions of perfumers to create or recreate scents that evoke specific emotions (Laudamiel et al., 2008).

lies not in the scarcity of the product but in the scarcity of the person producing it" (see also Amin and Roberts, 2008a).[53] This is true for some perfumes as well. Finally, however, it is the connection of the brand with the scent that make a perfume valuable.

Thus, a perfume has various focus points for professional work. Involved actors are contributing through their specific competencies to the manufacturing of a perfume. Rather than a "discrete physical good" (Lury, 2004: 26), a perfume benefits from being an epistemic object that materializes in different environments (Baudrillard, 1996; Knorr Cetina, 2001; Callon and Munieza, 2005). Therefore, different values and valuations of a perfume have to be taken into account. I argue below that the industry is characterized by a complex organizational architecture where creativity is approached collectively and where connectivity contributes to product innovation.

3.4 The historical development of perfumery

In this section of the chapter I present a brief introduction to the historical development of perfumery. It is far from comprehensive but focuses on those historical developments that led to specific characteristics and practices in the industry that are most significant today. The term 'perfumery' implies the creation of fragrance formulas and the production of olfactory materials for the use in different cultural products (see below). A number of sources describe the history of perfumery and the fragrance industry (Morris, 1984; Roudnitska, 1991; Barille and Laroze, 1995; Barille and Tahara,

[53] Thus, the creator of a perfume makes it valuable. However, this value is only hypothetical because the perfumer is often strategically decentralized and branded figures stand in the focus of consumers' attention. Only within the small but growing niche houses, the perfumer is celebrated as a star for the consumer (Perfumer and Flavorist, 2008a).

1996; Newman, 1998; Manniche, 1999; Aftel, 2004; Fortineau, 2004; de Feydeau, 2006; Sell, 2006; Turin, 2006; Thomas, 2007; Dove, 2008, for instance).

The roots of perfumery lie in ancient Egypt. There, the craft-aspect of perfumery was central, namely the craftwork-aspects of extraction. Methods included the identification, perception, and matching of fragrant materials as well as processes such as pressing, boiling, drying, powdering, macenerating, and burning in order to extract essences from animal and floral materials, e.g. flowers, leaves, wood, resin, and seeds (Manniche, 1999; Aftel, 2004; Fortineau, 2004; Dove, 2008).[54] In contrast to the current usage, perfumery served to connect with the gods. Burning incense, for instance, was seen as a form of communication between humans and the gods (Manniche, 1999). The historical development of perfumery during the centuries until the end of the Middle Ages is described in Morris (1984) and Dove (2008), for example.

In the 16th century, Italy gained significance in regard to the creation of perfumes and cosmetics (Morris, 1984). During the early Renaissance, advances were made as far as distillation, botany, chemistry, and glassmaking were concerned; in addition, trade increased through the development of new transportation routes (Morris, 1984). The emerging new Humanism and adornment of the body led to the use of perfume for masking unpleasant odors that were related to a different understanding of

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[54] The word ‘perfume’ stems from the Latin *per fumum* (by means of smoke) and refers to the practice of burning woods and scented material in religious ceremonies to deepen the connection between the Gods and human beings (Morris, 1984). A detailed presentation of what kind of extraction methods were and are involved and how these methods changed over time is in Aftel (2004) and Morris (1984). In ancient Egypt, various materials traveled distances depending on their perishability. “Roots, barks and resins traveled easily and had a long lasting fragrance. (…) In contrast, the delicate scent of leaves and petals presented a problem” (Manniche, 1999: 12) because it first had to be captured in oil or fat. A detailed list of significant fragrant materials in Egypt can be found in Manniche (1999).For that reason, scents from perishable materials mainly came from Egypt. The Crusades made Europeans more aware of different scents and spices. During the Middle Ages, an international trade in spices, which were used in fragrances, medicine, and food flourished. This trade reflected the early internationalization of the scent and spice industry.

hygiene (Corbin, 1986; Le Norcy, 1988; Ashenburg, 2008). The early perfumes were made from natural materials only.[55] Production processes were based on small craft-based production. Human labor made perfumes expensive. Therewith, perfume was a characteristic of elites and wearing a perfume described class and style.

In the 17th century, France slowly developed as the center of perfumery and traditional homeland of fragrances in Europe. Morris (1984) characterizes, for instance, that workers in the area of soap making were encouraged to come to France because it offered higher payments than Italy. French perfumery started to develop in Montpellier (de Feydeau, 2006), but Grasse is commonly seen as the historical capital of the fragrance industry (Perfumer and Flavorist, 2004). Its importance was due to the favorable climate and fine soil, which proved perfect for flower growing, and thus ideal for perfume production (Newman, 1998; Perfumer and Flavorist, 2004). Thomas (2007; also Newman, 1998; Dove, 2008) traces the development of perfumery as a family business back to production of leather gloves. “Leather back then had a vile smell, so tanneries treated it with animal fat infused with flowers” (Thomas, 2007: 136). Grasse became an important center for production and trade in the industry when the glove industry in France gained significance in the 16th century and when perfumeries were officially registered in the 17th and 18th century (Aftel, 2004; Underhill, 2005). Gloves became popular among rich people because they kept the skin soft (Aftel, 2004: 27). After the French Revolution in 1789, perfumers were given the right to set up their own businesses. Many perfumers made use of this right so that the number of independent

[55] They were mainly based on three forms of ingredients: first, essential oils, which were found in flowers, roots, fruits, rinds, or barks, depending on the type of plant; second, resinoids, which were gums or resins that were purified with a solvent; third, absolutes, which were aromas extracted with solvents existing in viscous liquid form (Encyclopedia of American Industries, 2008).

perfumers creating scents for their customers was highest in the 19th century (Barille and Laroze, 1995).[56] The opening of a shop in Paris by Guerlain in 1828 is an example for the registration of perfumeries and the family-ownership (see also the discussion of the Guerlain dynasty in Barille and Laroze, 1995: 72-80). Another key development was the separation of perfumery and pharmacy under Louis Napoleon. Over time, partnerships with firms in other locations developed and expanded worldwide (see also the annual reports by IFF, 2008; Givaudan, 2008). The demand increased and families that traditionally grew crops switched their focus and grew flowers or those crops where essences could be extracted from.

At the end of the 19th and beginning of the 20th century, perfumery democratized and industrialized to become a big business. This industrialization and democratization was characterized by a shift in the relevant practices and the geographical locations of corporate functions. Besides the integration of natural materials, synthetic materials started to be used. The orientation in the creation of fragrances shifted from the use of natural essential oils only to the integration of synthetics in formulations. With the institutionalization of chemistry in the middle of the 19th century, the laboratory emerged as a key institution where professionals described, analyzed, reconstituted, created, and composed scent components (Morris, 1984; Newman, 1998). Modern chemistry allowed the industry to reorganize independently of natural resources and it allowed for quality standardization. Natural materials were synthetically reproduced; they replaced expensive natural ingredients. In addition, new synthetic materials were

[56] Le Norcy (1991) exemplifies that in Paris at the time of the author's great-grandparents (thus, at the end of the 19th century), perfumers were consulted to exclusively produce one perfume for one person. Personality and smell were intertwined. This development in currently revisited: independent perfumers offer olfactory consultations and personalized creations. However, the motivation differs in that these consultations nowadays take place because of the cluttered marketplace and the homogeneity of smells.

created. This led to a wider availability of perfumes (Encyclopedia of American Industries, 2008). The development of Coumarin[57] as the first synthetic molecule in 1868 by Perkin and the use of it in the perfume 'Fougere Royale' (by Paul Parquet for Houbigant, 1882) were significant moments of a breakthrough innovation in three ways (Turin, 2006; Turin and Sanchez, 2008). First, from an economic viewpoint, producers grew to become independent from the uncertainty of supply that was connected to materials from nature.[58] Second, the creation of synthetic materials meant a "rupture in the practice of perfumery as mimesis and representation [that] can be traced back to the introduction of what are called 'aromatic synthetics'" which smelled, for the first time, "otherwordly" – thus, non-representational (Blackson, 2008: 3). Third, the invention of the lab included the workplace where the perfumer, as the creator of fragrance compositions, worked. The creativity of the perfumer was organized in an organ, i.e. a casket with the most significant materials.[59] Synthetic materials enriched the palette of natural ingredients. Morris (1984: 191) lists different other industrial and societal changes that developed at the end of the 19th century namely: new fragrance crops emerged, new means of extracting essences from old fragrances developed, easier access to suppliers and new markets was possible because of better transportation, a more sophisticated production of alcohol and glassware took place, and the middle-class

[57] Turin and Sanchez (2008: 32/33) explain that "Coumarin was a big deal. It was the main component of a popular, very expensive natural material: dried, fermented tonka beans, which have a wonderful sweet-nutty herbaceous, tobacco-like smell.

[58] Ellena (1991) mentions that 80% of all synthesized products that are used today (= late 1980s) were discovered between 1880 and 1930. The perception of consumers is that materials in perfume should ideally be natural; in contrast, however, most perfumes work as a mix of both (Burr, 2008).

[59] Newman (1998: 153) characterizes the organ when she explains that it is "a unit once basic to the perfumer, consisting of a series of semicircular stepped shelves lined with hundreds of bottles or raw perfume materials arranged by scent category. Sitting at the organ, the perfumer could construct fragrance creations in much the same way as a musician chooses musical notes and chords."

grew. The previously described changes all focus on the technical and technological side of the business.

However, other changes that occurred in France during the early 1900s until the 1920s focused on the metaphysical alteration of fragrances. Fragrances were increasingly linked with fashion, design, art, and style (Morris, 1984). Coco Chanel and François Coty, in particular, represented this new approach in perfumery (Barille and Laroze, 1995; Barille and Tahara, 1996; Burr, 2002; Newman, 1998). Paul Poiret was one of the major initiators of the linkage between fragrance and fashion (Morris, 1984). Morris (1984) and Thomas (2007) trace the 'wedding of fragrance and fashion' to the invention of fashion-branded perfumes in the early decades of the 20th century:

> "With No. 5, Coco Chanel had turned the idea of a fashion-branded perfume into a viable and quite remunerative business. Louis Amic, a respected French nose who ran the major perfume laboratory of Roure Bertrand Dupont, decided to make it a business unto itself. In the 1930s and 40s, he went to couture houses such as Elsa Schiaparelli, Piguet, and Balenciaga and told them, "You have good taste and you should have a perfume. Let me do it for you" (Thomas, 2007: 149/150).[60]

Fragrances of this time differed according to the unusual and innovative bottles and packages from previous periods (see Morris, 1984; Aftel, 2004). As "*the* perfumer of Paris" (Morris, 1984: 198), Coty introduced elegance through the introduction of the Art Nouveau style to perfumes.[61] With Chanel No. 5, a new turn in making perfumes

[60] The quote documents not only the connection of fashion and fragrance but also the development of buyer-supplier-relationships with specific firms producing fragrances for others (a development of the 19th century; Morris, 1984). The increase in the variety of fragrance formulations is another significant characteristic. Morris (1984: 205) characterizes the picture of the 1920s and 1930s when the "houses of perfume [e.g. Guerlain] produced more perfumes than the couturiers" – for the couturiers, "had to job out the creation of a new perfume."

[61] This is represented in his collaboration with René Lalique, who was an up and coming glass designer in Paris at the time (Dawes, 1986). "Success rapidly came to Francois Coty (…) and he soon established retail premises on the fashionable Place Vendome adjacent to Rene Lalique's newly opened showroom. This proximity gave Coty the opportunity to admire Lalique's design, mostly limited at that time to

was described both in the sense that packaging but also the olfactory characteristic of the 'new blockbuster' differed from previous fragrances (Morris, 1984). The long-lasting success of some scents (Chanel No. 5 is still in the Top 10 sales charts, for example; Burr, 2008) reminds of this epoch. Before the start of the successes of François Coty and Coco Chanel, perfumes were without the "variety and prestige associated with name brands and manufacturers" (Dawes, 1986: 13).[62]

Barille and Tahara (1996) describe and depict the increasing industrialization of the manufacturing processes during this time: perfume was manufactured according to the logics of Fordist mass-production.[63] Chanel and Coty started with the marketing of perfume as an affordable luxury and recognized the developing relevance of the US market (Morris, 1984). Therewith, traditional understandings of luxury were altered (Peiss, 2000; Thomas, 2007). Branding as a significant economic activity and form of marketing became prominent and the development of marketing as a performative science took place (Cochoy, 1998; Lury, 2004). The activities of marketing and advertising became prominent and, over time, more and more capital-intensive through

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jewelry and *objects vertu*, and, in 1907, he commissioned Lalique to design labels, and subsequently bottles and flasks, for his expanding range of fragrances" (Dawes, 1986: 13/14).

[62] Dawes (1986: 13) mentions: "it was common for individual druggists to concoct their own scents and eau de colognes, offering them for sale in plain glass pharmaceutical bottles wrapped in waxed paper."

[63] Another sign for this was product innovation, which is a significant component in the historical development of the industry. While the history of the Eau de Cologne (originally relating to the production of scents by Farina in Cologne, Germany; Morris, 1984) started in the early 18th century, the manufacture of the Eau de Toilette did not start until the 1930s (Barille and Laroze, 1995). Further differentiations developed (Dove, 2008: 80-81). "In the 1930s, luxury perfume brands introduced eau de toilette, which is 6 to 12 percent extract diluted with solvents such as ethanol and water, and it became commonplace in the 1950s. Unlike eau de cologne, it smelled like a weaker version of the extract and sold for a fraction of the extract prices. "Eau de toilette was created to take perfume to the street," meaning to the middle market, Polge explained [Jacques Polge in the house-perfumer of Chanel]. "It was the beginning of the democratization of perfume"" (Thomas, 2007: 142). Thus, different concentrations of fragrance formulations entered the market. Important contributions that helped to fuel this trend are the general development of different consumer environments and consumer spending of the developing middle class (Zukin, 2004). With the emergence of modern perfumery, the consumption of fragrances switched form a narrow elite market to a broader market.

which "making branded goods [became] far more desirable than home-made or bulk products" (Puig, 2003: 94). Since World War II, perfumes have been mass-marketed along with other personal care products. This coincided with the emergence of Revlon and Estee Lauder as significant corporations briefly before and after World War II. With the emergence of the 'ready-to-wear' industry in the 1950s that was based on the idea to produce nice clothes for decent prices came the first ready-to-wear perfume in 1973 (Barille and Laroze, 1995); the idea was transferred to the perfume business in order to enable looking-choosing-smelling-buying as crucial processes to increase the likelihood of consumer purchases.

Furthermore, a spatial differentiation of perfumery within France and from France to the US set in post-World War II (Morris, 1984). First, the industry grew to maintain significant economic and cultural value in the Southern part of France until the 1950s. Grasse is today understood as the "traditional home of perfumery" (Newman, 1998: 59; Perfumer and Flavorist, 2004), although there are still as many as 30 international companies located in this region (Underhill, 2005). Labor costs have risen in the last few decades and these higher costs have pushed the production or 'farming' of natural ingredients to other, lower-cost sites. In the 1950s, the labor-intensive growing of flowers moved to countries such as Morocco and Italy. The importance of locating in Grasse appears to have decreased over time with many firms moving to Paris through the course of the 20th century. Although the big producers of fragrances mostly left, the significance of Grasse as a center in the industry is still relevant. "Grasse has become like the haute couture ateliers in Paris: a boutique business kept alive by the generosity of those who understand, appreciate, and can afford the best that money can buy" (Thomas, 2007: 136/137). Puig (2003: 93) argues that Grasse has been known "for the cultivation and distillation of natural essences, and Paris, for the preparation and commercialisation [sic!] of perfumes." Thus, Paris stands for perfumes that receive value through the mix of scents and brands, while the focus in Grasse was on scents. Second, Puig (2003: 94) sees a difference between the new, American way of perfumery versus a traditional European approach: "the rise of American industry meant the emergence of a mass production and consumption model that differed from the European, or rather French, model, based primarily on craftsmanship, high quality and luxury." The locational shift of perfumery to Paris and New York documents the important and changing interactive relationships with other industries over time. Before the World War II, Paris had been the center of the fashion and the fragrance industry. The city regained some of its importance in the post-war years, but it could not fully re-establish its pre-war relevance and increasingly gained symbolic rather than material significance (Rantisi, 2004). New York emerged as a center after World War II.[64] Both cities are not only localities of production, cooperation, and (re-)presentation of firms in the fragrance business, they are also symbols of different approaches to perfumery. This characterization can be connected with Scott's description that the cachet of products gains something from the imagined places where they are coming from: he mentions "Paris fashions, London theater, Nashville music, or the pottery of Caltagirone in Italy" (Scott, 2006b: 10). Thus, Paris stands for perfumery that is, overall, still art-

[64] An interesting sideline is that perfumers now also build scents around the city of New York (La Ferla, 2006). A collection of Manhattan-centric fragrances – consisting of different scents with names of some neighborhoods in Manhattan – has been developed with the tactic to create and enhance an identity around New York, rather than a celebrity, for example. The development of New York occurred in response to the occupation of France during World War II. However, besides this fact, New York evolved as a center of the industry by its own means (Rantisi, 2004).

and craft-driven while New York stands for perfumery that is marketing-driven. However, even with this attribution and imprint of geographical qualities to a product (Callon and Munieza, 2005; Scott, 2006b), questions develop around the collective understanding of a place (e.g. what do the brand 'Paris' or 'Made in France' mean and represent?) and the reality regarding the "points of origin" (Scott, 2006b: 10).

Beyond the early democratization of perfumes, over the last two decades or so the perfume market has been altered in the direction of an accelerated consumer market. Perfumes have, even more, been mass-produced and mass-marketed; a related trivialization of marketing concepts through a mass-symbolization but also a degradation of the complexity of fragrance formulas is described (Turin and Sanchez, 2008).[65] The mass production and marketization has led to the trend that manufacturers pre-evaluate and consciously create perfumes according to different concentrations and different fragrance families (Turin and Sanchez, 2008). The organization according to fragrance families and sub-families reflects a visual representation and organization of a heterogeneous perfume market. Furthermore, a genealogical approach to perfumes is a representation of the major directions in which masculine and feminine perfumes were and are moving (Symrise, 2008a, 2008b).

The reconfiguration of perfume from a luxury good that was considered more valuable than gold or any kind of money (Le Norcy, 1988: 218; also in Dove, 2008) to an everyday consumer good is important as production processes and how these processes are organized changed. Thomas (2007) describes how processes changed

[65] Turin and Sanchez (2008: 17) name three reasons for the trivialization and inferiorization of fragrance formulas: the high launch activity, the profitability of aroma-chemicals and the cheapening of formulas, and the "necessity for a fragrance to shout even louder to make itself heard."

according to corporate ownership. Bernard Arnault, currently CEO of Louis Vuitton Moet Hennessey (LVMH), purchased Dior in 1985; subsequently, an acceleration in the creation, production, marketing, and consumption of perfumes set in. Thus, corporate restructuring and mergers and acquisitions changed not only the face of the industry but brought interest holders and agents to the table that introduced practices from other sectors. Amongst those practices are the acceleration of the product development process according to a quick-to-market logic (in other words, a shortening of development time) and the reduction of uncertainty through consumer and market testing solutions (see discussion further below). This is done against the background of a highly-segmented market with a few major producers of fragranced goods and numerous suppliers. Puig (2003: 95) characterizes that the reputation of the major players has historically been based on the specialization and development of excellence in terms of particular products; this historicized reputation is still relevant today. However, the foci of the manufacturers have diversified. Facilitators of this acceleration are mergers and acquisitions, corporate internationalization, and the globalization of beauty (Peiss, 2000).

3.5 Industry characteristics

Hereafter, I introduce to the organizational configuration of the fragrance industry. The term ‘fragrance industry’ remains complex for reasons that are explained below. The ‘fragrance industry’ is an idealization because the boundaries of the industry are permeable.[66] This has to do with the involvement of many actors for the creation of economic values in the production of fragranced products. The market is hard to grasp organizationally and statistically because the industry's boundaries remain sketchy (Manowitz and Naipawer, 1991). "The precise size of the global market for flavors and fragrances is difficult to determine because the industry is highly fragmented, both geographically and along product lines" (IFF, 2005: 25).

The fragrance industry is part of the broader personal care market. In 2008, the personal care market produced annual revenues of $40bn worldwide and perfumes take a share of 10% of these revenues (Hoover's Industry Profiles, 2008).[67] Within the personal care market, the cosmetics and hair care segment play a crucial role for revenue. Davies (2007) points out that the fragrance industry was the third fastest-growing sector within the broader cosmetics and toiletries sector; in 2006, it increased by 7% in a year to reach $30.5bn. The market for fragrances is dynamic and growing.

The fragrance market is segmented. Functional fragrances are separated from fine fragrances. Functional fragrances (= they fulfill a certain function) are in various household goods such as detergent, fabric softener, and dish washing-soap; fine

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[66] According to the SIC classification of The U.S. Department of Labor, the fragrance industry belongs to the Major Group 28 and therein the Industry Group 284 ("Soap, Detergents, And Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations"). According to the NAICS classification which officially replaced the SIC in 1997, the fragrance industry belongs to the Group 325620 Toilet Preparation Manufacturing which "comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations." Numbers of employees are listed online through the mentioned departments. Key actors operate in other industry segments within and beyond the personal care industry (Hoover's Industry Overview, 2006). The fragrance industry is one of the components of the larger personal care market.

[67] However, this percentage does not include the components that go into other products that are scented (such as cosmetics and hair care). In general, the numbers that document the size of the industry differ per source. For instance, Wolfson (2005) estimates the size of the global fragrance and flavor market at between $12 and $15bn with perfumes accounting for about $3bn. Boorstin (2005), in contrast, claims that the global fragrance industry is some $25bn in size although estimates vary depending on which firms are considered part of the industry and which are not. Burr (2008: xvi) characterizes a $31bn international perfume market.

fragrances are in products ranging from toiletries (soaps, hair colorant, body lotion, for example) as well as perfume. The latter one can be differentiated into a so-called masstige[68] or mass-market, premium- or prestige-market (including fashion, designer, celebrity, and lifestyle brands) and a niche market.[69] The intention to differentiate a total perfume market into segments is to make it statistically-observable in order to create generalizations and produce forecasts how segmented markets develop. Furthermore, the aspect how product characteristics determine the work of creative personnel according to their demands are often eschewed. This will be discussed below.

Three broader trends on the mass- and prestige-market characterize the dynamics in the perfume industry. First, the overall market is cluttered with perfumes. “Original perfume brands such as Coty have become corporate behemoths that churn out perfume products like Kraft makes cheese" (Thomas, 2007: 143/144). In 2008, 950 new perfumes were launched (Edwards, 2009). However, only most recently the number of perfume launches is dropping (Hume, 2009; Trucco, 2009); this might be an index for the worldwide economic crisis but also for the detrimental increase of perfume launches over the last few years. Second, this is contrasted by the trend that the survival rate of many perfumes becomes shorter just like in other cosmetic and toiletries product groups (Euromonitor, 2001). On the German fragrance market, for example, only 3% of new perfumes remain on the market for more than three years (Fragrance Foundation Germany, 2006; see also Euromonitor, 2001). Kaiser (2008) mentions that

[68] The term ‘masstige’ is a neologism developed out of the conceptual understanding of products that provide *prestige for the masses*.

[69] It is not precisely clear how and where to exactly draw boundaries between those idealized segments. Segmentation is possible according to market prices, brand ownership, geographical markets, retail environments, and consumer target groups, for example. Furthermore, the significant international manufacturers are characterized by differing internal management philosophies of their perfume brands.

in Germany only 10% of the total 250-300 new perfumes that are launched per year stay on the market for a longer time; most of the new launches disappear silently. Thus, shortened shelf-lifes are characteristic.[70] Frequently purchased consumer goods such as shampoo, soap, cosmetics, and shaving products are sold quickly at a relatively low consumer price; this low price as well as their continuous change over short periods of time make those products a part of the so-called fast-moving consumer goods (FMCG). The perfume sector is moving in this direction and the manufacturers increasingly create 'fast perfumes' (see Tungate's notion of 'fast-fashion;' 2005: 24). Third, perfumes are recreated as quick-to-market products. This comes along with two developments: on the one hand, development cycles are shorter (Hoover's Industry Overview, 2006, 2008; Trucco, 2009).[71] On the other hand, the expenses for research and development (R&D) of new molecules (= captives, see discussion below) that enable the continuing pace of innovative production are increasing (cf. the current Annual Reports of the key fragrance suppliers). Thus, innovativeness of molecules that can successfully be appropriated for new 'big hits' is key for the major suppliers of fragrances in order to out-compete their siblings and to enable a litany of successful scents as long as the property rights guarantee the firm-specific use of these molecules.

The mass-market and prestige-market trends are contrasted by developments of niche or boutique perfume houses, which produce artisanal fragrances; some small

[70] On the contrary, however, some brands and perfumes persist for generations: middle- and upper-class Europeans and North Americans have experienced the longitude of Chanel No. 5 for a while.

[71] However, this development of economies of scale must go hand-in-hand with competence and expertise: "If you're not fast, you're dead. But if you're not also good, you're still dead" (Hamm and Rowley, 2006). This relates to the fact that maintaining recognition and loyalty over time is an additional challenge (Hoover's Industry Overview, 2006).

houses even create signature scents for individual customers.[72] The development is connected with the use of rare and expensive ingredients, the un-orthodox organization of ingredients in compositions, and the growing number of consumers that are attracted by these perfumes (Prior, 2007). While the niche market contributed with only 9% to the total market in 2007, the sales have risen 60% since 2005 and show steady growth rates (Lee-St. John, 2008; Trucco, 2009). In contrast to the ready-to-wear and fashion-based prestige perfume market, the niche market focuses on the art of perfume (Davies, 2007). This conceptual understanding also travels to the larger producers, which intend to make fragrances more aspirational but, simultaneously, commercial (Weisman, 2007).

Overall sales' of fragrances values are stagnant or declining in Western Europe and the US (Briney, 2006); however, these two regions still account for almost 60% of global fragrance sales in value terms (Davies, 2007). The perfume manufacturers as well as the fragrance suppliers increase their involvement in emerging markets. Brazil, Russia, India, and China showed the highest growth rates in the global cosmetics and toiletries market in 2007 (Kirilov, 2008). Thus, trends differ across countries and segments and industry segments are characterized by different market developments (Jeffries, 2004; Briney, 2006). This corporate globalization goes along with a globalization of brands and olfaction (Peiss, 2000). Actors in the fragrance industry are globalized for quite some time. Somogyi (1996: 170) indicates that "major participants

[72] However, the clear lines of a mass- and a niche-market are blurring (GCI Online, 2007). This has, for instance, to do with the definition of niche manufacturers. Even within the olfactively rather un-orthodox niche sector, a 'new niche' can be set into contrast to an 'old niche.' Traditionally, niche houses have existed on the market for a long time. Those niche brands were symptomatic signifiers for prestige and exclusive consumers. However, numerous new niche houses and brands emerged on the national and global markets over the last ten years. This significant trend might actually be related to or even the result of the development of a cluttered mass market (Anderson, 2006). Increasingly, the quality and validity of the universal term 'niche' is criticized and opened up for discussion (Anderson, 2006; Trucco, 2009).

in this industry operate in virtually all markets around the globe." This is clear from a historical point of view and through the various networks that span the production, distribution, and consumption of both raw materials and the finished branded products (Morris, 1984; Newman, 1998; Aftel, 2004). This characterization is also important for the participating companies and professionals. It is argued that markets differ significantly and that perfumes have to address the specificities in order to be successful on a market. Western multinationals formulate, communicate, and introduce new concepts of beauty through media and materials to developing countries. This positions the creation and coordination of a material and metaphysical cultural good between the cornerstones of a homogenized global branded product and a localized idiosyncratic product. Furthermore, it questions where manufacturing is actually taking place and how the involved personnel is enabled to address the markets under consideration.

Markets and market action is co-created by companies that visualize the market (Callon et al., 2002; Callon, 2005). Euromonitor and NPD are private corporations that provide consumer and retail sales data of perfumes. The statistical data pervades the industry in the sense that "every player buys NPD's products, and the bigger they are, the more data they buy" (Burr, 2008: 142).[73] This constant monitoring and data provision helps to create perfume charts and visualize markets by sales numbers. The providers of data are significant co-creators of the market and indirect organizer of competition because based on the charts manufacturers enter a specific market terrain.

[73] Burr (2008: 142) adds that the bestseller list "is made up of sales data from various sources, the sources change and are never complete, and the full picture is never entirely clear. This means that neither the Big Boys, who make the perfumes, nor the brands, such as Hermès, ever get total information. Still, the list is, generally, an accurate picture of the field." It is, for instance, lacking information from retailers that do not contribute information regarding their sales to the list.

The characterization of mass and niche markets relates to patterns of consumption. Traditionally, female consumers dominated the fine fragrance and, in general, personal care market. This picture is still largely adequate, particularly in cosmetics. However, over the last couple of years, men have become targets of manufacturers (Kaiser, 2008). The development of a cluttered market with numerous perfume brands and branded products goes along with a tendency of increasing confusion on the consumer market; this was diagnosed already in the late-80s (Green, 1988; Hankinson and Cowking, 1997). Le Norcy (1988: 218) describes at the example of perfumes that "we can easily imagine that the noise and confusion of the stores and the assertiveness of the sellers would be enough to make a virgin consumer turn tail and flee." Vice versa, in contrast to the cluttered mass-market, the niche market sees an increasing development and constitution of fragrance aficionados. They are organized in niche brand communities such as *Sniffapalooza*, they subscribe to, read, and post to blogs (*Now Smell This* or *basenotes*, for example), and they trade fragrance samples online (through *MakeupAlley*, for example). The existence of niche consumers also highlights the relevance of the Internet for organizing a brand community (McAlexander and Schouten, 2002; McAlexander et al., 2002). The niche market is even larger since numerous niche brands exist and compete. In general, consumer markets diversify and this challenges the approaches of the large manufacturers and their intention to satisfy particular target groups.

Overall, the market is characterized by product differentiation that results from variety and novelty; product differentiation from radical product innovation is hardly recognizable (Lorenzen and Fredriksen, 2008: 163).[74] Not only are products that differ through variety more likely to develop, they are in fact developed more frequently. It takes much longer time periods to produce novelty or radical innovation. Two major domains of performing product innovativeness can ideally be separated: while the major manufacturers of perfumes centralize their work on marketing, advertising, and branding in terms of a variety and novelty of brands and product brands, the fragrance suppliers depend on innovativeness through fragrant molecules as well as the use of these and other materials in novel fragrance formulations, i.e. a variety and novelty of fragrances (Puig, 2003: 111). However, as I demonstrate below, the innovativeness is cautiously orchestrated and 'being innovative' through products is a relative task, especially of mass brands. Most mass-market perfumes are not innovative from an olfactory standpoint. This has to do with decision-making processes within the branded perfume manufacturers and fragrance suppliers in terms of the positionality of a product.

3.6 Key actors and processes

3.6.1 Introduction

In the next paragraphs I characterize the major actors and processes for manufacturing a perfume. I focus on the manufacturers of fragranced goods and the fragrance suppliers as, arguably, the most significant collaborative partners (Curtis and

[74] The two authors list the following examples for cultural products that differ through variety (i.e. differentiated products in given design space and existing markets with examples such as "*Britney Spears in the mix (2005), Spiderman 2 (2004), and Harry Potter and the half-blood prince (2006)*") and novelty (i.e. differentiated products in new design space and existing markets such as "*Grunge (1990s), Film Noir (1940s), and Cyberpunk Literature (1980s)*").

Williams, 2001; Sell, 2006). The manufacturers are, like many brand-centered corporations, complex, amorphous, flexible, and essentially vertically disintegrated organizations (Scott, 2000a; Olins, 2003).[75] They exist and perform through networked collaboration with numerous suppliers (Scott, 1996, 2000a, 2006). Vertical disintegration allows for a high degree of flexibility in terms of the increased production tact and in terms of creativity that is enabled on a project-by-project basis. Collaborators are those creative suppliers that shape a fragrance, package, bottle, name, advertisements, and promotion activities. Thus, the areas of key interest are how the processes to invent, characterize, and communicate meaning of tangible and intangible product characteristics work across sensory and corporate boundaries (Sennett, 2006). I put my view on typical companies, corporate structures, and specific professions.[76] This discussion helps to strengthen the point of view that creativity is created out of a

[75] Olins (2003: 113) explains that "Companies like this [i.e. "companies (…) formed from a complex web of alliances and joint ventures with research, design, manufacturing and marketing activities all over the world" which "employ or work with highly educated people from a mix of different countries", Olins, ibid.] are often so complex, so amorphous, so flexible or all of these that they aren't easy for an outsider or even an insider to understand."

[76] Intertwined in this discussion is a focus on typical training facilities where individuals become knowledgeable in their specific occupational area and where they start to become community members through performance and practice (Wenger, 1998; Knorr Cetina, 1999; Amin and Roberts, 2008; Gertler, 2008). In regard to the last point I present the brand manager and the perfumer as two significant roles in the industry. The focus on these two professionals is far from coincidental but stresses the understanding of what makes a perfume valuable: a scent and a brand. The perfume business is based on the marketing of images – this is the métier of the brand manager. Burr (2008: 157) mentions that most perfume manufacturers are "empires resting on nothing but image." In contrast, the perfumer as an illusionist and professional ghost works on the craft-based task of creating fragrance formulations (Burr, 2007, 2008a). The strategies and goals of these two professionals differ but they are connected through the materiality of a scent and the immateriality of a brand. Furthermore, the focus on training sites is a significant enabler of communities and a learning place in a professional career (Ibert, 2007; Gertler, 2008; Faulconbridge and Hall, 2009). "At the most basic level, sharing the same spoken and/or written language is an obvious precondition for effective social learning based on mutual comprehension. This trait may also be a proxy for other more basic commonalities such as similarity in national, ethnic, or cultural origin" (Gertler, 2008: 209). Thus, I briefly characterize the specificities of professionalization and differences of the professional milieus that are characteristic for both functions in order to delineate professional milieus with particular ways to practice knowledge (Amin and Roberts, 2008a, 2008b). Thus, I briefly characterize the specificities of professionalization and differences of the professional milieus that are characteristic for both functions in order to delineate professional milieus with particular ways to practice knowledge (Amin and Roberts, 2008a, 2008b).

collective approach, but is also depending on significant investments in training and enculturation (the perfumer as a craftsman and the brand manager as a symbol analyst; Reich, 1991; Sennett, 2008).

3.6.2 Manufacturers of fragranced goods

Two idealized types of business organization for the manufacturing of perfumes exist: large, multinational manufacturers and niche manufacturers. The major focus will be on the large companies that manufacture perfumes. Manufacturing in this case encompasses the central functions of marketing and branding (Lash and Urry, 1994; du Gay and Pryke, 2002b; Kubartz, 2009). Over the last decades, marketing, branding, and image creation have become central within the manufacturing process of a perfume. Thus, in contrast to traditional understandings of manufacturing, the major focus of the large international companies is on marketing and branding.

I briefly discuss major characteristics of the niche or boutique manufacturers. Niche perfume manufacturers have always existed in the fragrance industry (cf. Berthoud et al., 2007). Puig (2003) exemplifies the importance of families (sometimes also surrogate families; Sennett, 2008) for the manufacturing of perfumes in Spain. In addition, the author describes the development of a larger perfume market that emerged after mergers and acquisition took place. Two remarks in this context are made. First, the difference between the small and large producers on current international markets is not only induced by restrictions in terms of the firm and market size, brand and product reach, consumer market sizes, and product prices but also by the intention to manufacture perfumes differently than the big companies. Second, the internal setup of niche houses is very heterogeneous. In general, the diversity of the business organization is high: some companies are run by perfumers-as-owners without marketing personnel in-house, others have one house perfumer and a small staff that covers the most important functions, yet other niche houses do not have perfumers in-house and work with smaller or bigger fragrance suppliers. Overall, decision-making processes take place much faster than in the large companies. Niche houses have experienced new successes with the industrialization of perfumery, the democratization of perfumes, and the segmentation of major markets (Anderson, 2006; Trucco, 2009).[77]

On the other hand, a small number of multinational producers of fragranced products is most active in geographical and economic terms. The producers are also called finished goods producers (Curtis and Williams, 2001), consumer goods producers, or cosmetics and toiletries manufacturers (Kirilov, 2008). These categorizations highlight the major focus of the companies. The historical trajectories show specializations and reputations through specific products;[78] in addition, Puig (2003: 94/95) characterizes that the social targets and marketing and advertising innovations also differed per house so that, for example, “Guerlain focused on the aristocracy; Chanel aimed at the trend-conscious upper classes; the ‘new woman’ found her place at Rubinstein, Arden, Revlon, and Lauder, while Avon and Henkel targeted housewives.” Nowadays, the major players are still characterized by their historical trajectories and foci but active in the mass fragrance market as well as the personal care market more

[77] Over the last 10 years, numerous new niche houses entered regional and global markets. A discussion takes place within the industry how to discriminate a niche brand from a large manufacturer.
[78] Puig (2003: 94) characterizes that the reputation of different manufacturers were (and still are) based on products such as facial cream, hair care products, soap and detergent, nail polish, and razor blades.

generally. Thus, major producers are also involved in the manufacturing of lotions, air care products, home fragrances, hair/body care, bath and shampoo products etc. The top five producers in 2004 accounted for 37% of total sales by value (Briney, 2006). These five firms are *L'Oreal, Estee Lauder, LVMH Moet Hennessey Louis Vuitton, Proctor & Gamble,* and *Avon*. Most of them are international conglomerates hold a multitude of brands; they are "international perfume licensing corporations" (Burr, 2008: xii). The conglomerates mention portfolios of brands such as a "lifestyle brand portfolio" as well as the "prestige and designer brand portfolio" (GCI Online, 2008). Portfolios are assembled, organized, and managed according to particular positions of brands on the market. A brand from one company often competes against one in a comparable position of another firm; sometimes, brands are newly licensed in order to enable competition with one of the already existing ones (Encyclopedia of Global Industries, 2008). *L'Oreal* serves as an example to explain the setup. The corporation has a license from Ralph Lauren, for example, to produce fragrances for a specific period. Licenses typically run for ten to fifteen years. The corporate brand often stands behind the product brand within the segment of designer and lifestyle fragrances.[79] Branded perfumes contribute and are fed by the public understanding of a fashion label, a fashion designer, or celebrity, for instance. It is a common belief amongst marketers of both the license giving and holding company that the launch of a perfume strengthens the brand's cachet. Therewith, it is a conscious and intended political decision to promote not the manufacturing company but the products of the licensed brand (Burr,

[79] For instance, most consumers are not aware that *L'Oreal* is involved in the production of perfumes for the brands *'Giorgio Armani'* and *'Ralph Lauren.'*

2008; Puig, 2003).[80] The decision-making processes within the big manufacturers take, in comparison to the niche houses, longer since more hierarchies are involved. Furthermore, every manufacturer has a different setup beyond the above depiction.

3.6.3 Fragrance suppliers

Producers of perfumes are supplied with all kinds of product and service components; the suppliers of fragrances are key. Flavor and fragrance suppliers develop, manufacture, and deliver flavorings, scents, and aroma chemicals for diverse products (Blackson, 2008; Firmenich, 2008; Givaudan, 2008; IFF, 2008; Symrise, 2008a).[81] They are also called essential oil-suppliers because a major function is to deliver natural or synthetic raw materials to their clients. Tastes and smells in numerous products come from the fragrance suppliers and the small and large manufacturers of fragranced goods are only one example of those clients (also Turin, 2006; Burr, 2008). The supplier market resembles that of the manufacturers. Five large companies, the so-called "big boys" (Burr, 2002; 2008; 'the boys' are: *Givaudan, Firmenich, IFF, Symrise,* and *Takasago*; order according to their market size in 2008; Leffingwell & Associates, 2008) made up more than 55% of the overall sales of fragrances in 2007 (Leffingwell &

[80] Burr (in Perfumer and Flavorist, 2008b; also in 2008a) adds that "'these guys (the brand managers) would not let people know who the perfumers were. They are actually putting out misinformation out who created the perfumes." Burr blamed the problem on "years of suppression by the brands: 'Don't come out of the shadows, don't show your self, don't talk about yourself.' It's a terrible culture.'"

[81] The Annual Report of IFF (2005: 3), for example, describes that "the company's principal fragrance and flavor products consist of compounds of large numbers or ingredients blended under proprietary formulas created by its perfumers and flavorists. Most of these compounds contribute the total fragrance or flavor to the consumer products in which they are used."

Associates, 2008).[82] "The firms accounting for the largest share of worldwide sales of flavours and fragrances are [still] based in the US, Western Europe or Japan" (Somogyi, 1996: 171).

The flavor and fragrance companies are internally organized according to a flavor and fragrance segment. This shows the sensual connection between the senses of smell and taste (see also Blackson, 2008; Gilbert, 2008; Gleason-Allured, 2009).[83] Interaction and mutual inspiration between the two segments increasingly takes place (Gleason-Allured, 2009a). The fragrance segment develops scent molecules and scent compositions for products such as cosmetics, toiletries, hair care products, deodorants, soaps, detergents, softeners, and fine fragrances (Newman, 1998; Givaudan, 2005).[84] Curtis and Williams (2001: 347-386) describe the structure of a fragrance supplier in

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[82] Besides those companies, the fragmentation in the sector is high and in 1996 as many as 800 companies participated in this business worldwide (Somogyi, 1996). However, in the last two decades processes of market consolidation have become prominent (e.g. Perfumer and Flavorist, 2008c). Mergers and acquisitions are initiated by the acquisition efforts of larger companies acquiring smaller firms. Consolidation occurred because of growth in specific geographical and product markets, synergies that developed out of a combination of two companies where those are secured or enabled to produce for specific clients, and cost savings. The corporations intend to "expand their competence in specialised product and process technologies, and their geographic presence in selected industry sectors" (Somogyi, 1996: 173). Thus, some companies are characterized by particular strengths in sub-sectors of the fragrance industry. A recent example is the acquisition of *Manheimer Fragrances* and *Intercontinental Fragrances* by *Symrise*. This makes *Symrise* "one of the leading fragrance suppliers for air fresheners in North America" (Perfumer and Flavorist, 2008c).

[83] IFF, for example, produced more than 35,000 compounds in 2004 of which 60% were flavors and 40% fragrances (IFF, 2005). As a curator o contemporary art, Blackson (2008: 2) describes the work of chemists in the flavor industry: "These are individuals, chemists really, entirely invested in the production of representations. Only their still life of apples isn't rendered in paint or plaster, but in seven or eight syllabled chemicals. (…) This is how the chemists represent apples. From there begin the chemical substitutions for burnt apple, dried apple, sour apple, and on and on, and on. (…) A vanilla flavour, for example, may be described as tasting like heaven but it's really just ethylvanillin. Whether the flavour is labeled 'natural' or 'artificial', the difference is almost purely semantic and the results, although impressive in their ability to mimic Mother Nature's own palate, are essentially skilled imitations."

[84] IFF (2008b: 3) mentions that "fragrance products are sold principally to manufacturers of perfumes, cosmetics, personal care products, hair care products, deodorants, soaps, detergents, fabric care and air care products." The creators/manufacturers of these compounds are themselves dependent on the supply of essential oils and natural extracts. These firms usually obtain their raw materials from suppliers because they are "only selectively involved in producing and marketing them" (Somogyi, 1996: 171). As Somogyi (ibid.) explains, the raw material source is covered by specialist producers with knowledge in the processing or agribusiness operation of natural materials

detail. The authors stress that both the input (raw materials) as well as the output are very diverse and complex. From the viewpoint of creativity, the most significant operations lie in the composition of fragrances. “The formulations represent the most valuable asset of the firm, its intellectual property” (Curtis and Williams, 2001: 360; Perfumer and Flavorist, 2007c). Creative perfumery is complemented by downstream functions such as formulation control[85], production and compounding,[86] and “computer support systems” (Curtis and Willams, 2001: 357) and functions that cover the purchase, sales, and distribution of fragrant molecules, compounds, and fragrance formulations.

In the paragraphs below I characterize, first, the main objectives of a fragrance supplier. Second, I describe the typical developmental processes of a mass-market project. Third, I focus on three major sets of processes that highlight the creativity and competitive success of fragrance suppliers.

First, I mentioned above that the industry is characterized by incremental rather than radical product innovation that is based on variety and novelty (Lorenzen and Frederiksen, 2008). This is also the case for fragrance suppliers and guides their activities. Two quotes from recent corporate publications stress the importance of innovation.

> “We deliver innovation in flavors and fragrances through our combination of science, consumer insights and creativity. Our goal is to help our customers deliver consumer-preferred products to the marketplace. Our global presence, combined with our extensive local market expertise, makes us ideally suited to

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[85] The formulation control is connected to the purchasing department, which secures the supply with materials, and technical perfumery. The technical perfumer might need to change the formulation of a fragrance if supplied materials differ slightly from previous submissions. Curtis and Williams (2001: 352/353) mention the significance of security that demands the setup of a formulation control section.

[86] “The compounding of a fragrance is deceptively simple. At first sight, all that is required is to mix the required materials in the quantities indicated by the formulation, accurately and with no possibility of cross-contamination, in the most cost-effective and efficient way. Production and the technical perfumer need to work in close collaboration to achieve this” (Curtis and Williams, 2001: 353).

> work with our customers to develop successful products… Understanding the connections between the consumer, the product and the brand enables us to create flavors and fragrances that resonate with consumers and drive brand loyalty. With innovative materials, technology and consumer understanding, our perfumers and flavorists create the scents and tastes people love" (IFF, 2008: 5).

This description from the most recent Annual Report of *International Flavors and Fragrances* (IFF, 2008) describes in essence what the business of the fragrance suppliers is about. *Firmenich* (2008: 4) states that

> "the success of fragrance and flavor creation depends on an intimate knowledge of nature, and the creative talent to recreate its components. It also calls for a scientific understanding of smell and taste preferences to adapt products to global and local markets around the world."

Both quotes from corporate reports stress the central role of experience and the importance of understanding how to supply markets adequately. Inscribed in the corporate lingo is the geographical specificity and sensitivity of creative operations. Actually, the operations are multiplied in their complexity by the geographical and product markets where the fragrance suppliers are active. Thus, fragrance suppliers create, manufacture, and sell new fragrance compounds on all major markets. Olfactory preferences differ regionally and the fragrance suppliers address these differences in their fragrant creations because of expertise in terms of consumer research (Mullock, 1999; Rouhi, 2003).[87]

Second, a typical project to create a new fragrance is discussed below. Fragrance suppliers are competing with each other to develop a fragrance for a manufacturer.

[87] At the same time, the fragrance suppliers are dependent on supplies as well. IFF's Annual Report (2005: 4), for instance, characterizes that "The Company manufactures a substantial portion of the synthetic ingredients. While the major part of the Company's production of synthetic ingredients is used in its compounds, a substantial portion is also sold to others. The natural ingredients are derived from flowers, fruits and other botanical products as well as from animal products. (…) The natural products are purchased for the larger part in processed or semi-processed form."

Competition occurs in two major steps. First, fragrance suppliers compete with each other where the supplier is bidding against other suppliers for a project. Second, perfumers compete with other perfumers within a supplier. Different perfumers become active at the beginning of a project. The initial coordination takes place through the vehicle of a brief.[88] Perfume manufacturers brief multiple fragrance suppliers. The fragrance suppliers translate the 'descriptions' of their clients into compositions with the best 'translation' securing the contract. Newman (1998) points out that suppliers strongly correspond to their clients. The market environment moves in a direction where fewer suppliers are active for big brands. This is even more so the case in recent years that saw the development of 'core lists.'[89] Thus, competition is re-located from the market into the suppliers. The decision which samples are chosen for the competition is made in blind tests internally. After this decision, the manufacturers decide with which samples they continue to work.[90] In addition, 'winning a brief' is shared between the supplier and the creative perfumer in monetary terms and in terms of reputation.

Third, what are the ways and means for fragrance suppliers to be successful and win a briefing process? I summarize molecular research and development (R&D), the formulation of fragrances, and the performances of the perfumer as three significant aspects that describe how and where fragrance suppliers articulate their creativity. Thus,

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[88] These briefs describe an intended scent in a verbalized, typically written, form. A brief includes various aspects such as the price (production and retail), consumer target group, geographical market, and the intended points of sale (another term for the retail environment). This information guides the formulation of a fragrance from the beginning on. Briefing processes are typical for diverse cultural industries (such as architecture, and advertising).

[89] Core lists are formal agreements that imply that only listed suppliers of fragrances have the legitimacy to supply a brand with a fragrance (see also Chapter 5; Burr, 2008). The international producers of fragranced goods usually make decisions to put companies on a core list based upon the amount of material, the flexibility of supply, the price, and the quality of the fragrance compositions.

[90] Burr (2008: 32) calls the first round of submissions to the manufacturer "initial cluster fuck" in order to show the degree of complexity (going through and sniffing all submitted samples) and the likelihood to get into the second round of competition.

I discuss, first, the aspect of investing in the strategic research and development of new scent molecules (= the development of new tools for perfumers; Ellena, 1991; also Burr, 2008); second, the formulation techniques and the creation of a formula (= methods of the perfumer; Ellena, 1991); and third, the creativity of the perfumer (cf. the characterization in Calkin and Jellinek, 1994: 102). The third part is connected with Chapter 5 where I introduce to how perfumers do their art- and craftwork.

First, the creation of new fragrances is based on the development and the constant discovery of new molecules. These new molecules highlight the physical manifestation and materiality of components for creativity (Santagata, 2004; Anderson and Wylie, 2009). In contrast to the mentioned artistic R&D (Bolz, 2005) and innovation in branding, marketing, and advertising (Puig, 2003), molecular discoveries stress the sustained significance of 'traditional R&D.' Two processes ought to be separated: synthesis and new development (cf. the discussion in Turin, 2006). Synthesis usually reconstitutes materials from nature (see examples of exceptions in Ellena, 1991). *Firmenich's* synthesis of amber, for instance, meant a breakthrough for the company: in introducing a synthetic molecule that has the identical smell characteristics of natural amber, the company was able to substitute the natural ingredient and/or broaden its palette of effective scents (Jeffries, 2005). Synthetic materials are trademarked and become firm-specific intellectual property (Curtis and Williams, 2001; Perfumer and Flavorist, 2007c). They are manufactured at larger volume, lower price, and independent from their geographic origins.[91] However, synthetic materials differ from natural resources as far as biochemical characteristics are concerned. For example, the

[91] Artificially synthesized or created molecules can also have advantages in relation to the interaction with the human body (e.g. bioaccumulation of molecules, allergies; Wolfson, 2005).

scent of an essential oil may be affected by variations of the local weather and soil; therefore, scent compounds are geographically-sensitive (see also Ellena, 1991; Newman, 1998).[92] In addition to the synthetic reproduction, completely new molecules are developed and produced. There are smells that we do not know yet[93] and the number of fragrance molecules that are left to be discovered is "astounding" (Burr, 2002: 289; Burr, 2008; Gilbert, 2008). The new scent molecules that result from investments in the research and development-facilities of the fragrance houses are called captives (cf. the recent Annual Report by *Givaudan*, 2008, and the description of the new molecules).[94] Molecular innovation is key. However, this type of innovation is only possible for the largest fragrance suppliers, essentially the big boys, because it is extremely capital-intensive (Turin, 2006; Burr, 2008; Firmenich, 2008; IFF, 2008). Significant financial resources are invested into R&D and related tasks such as toxicology tests, exploration of economical synthesis etc. (Burr, 2002: 69; see also Burr, 2008). At the same time, the development of a new compound gives a company a competitive edge.[95] Burr (2002:

[92] At the same time, natural and synthetic materials as well as formulations are under quality control. Essential oils, for instance, have to be within the margins of precise olfactive standards (Ellena, 1991; Curtis and Williams, 2001). These standards differ sometimes according to the company but they are usually kept similar over time (cf. Burr, 2002, 2008).

[93] "There are, like undiscovered continents filled with unimaginable animals, millions of hypothetical molecules yet to be created, millions of atomic structures that exist, thus far, only as mathematical possibilities, which we will create" (Burr, 2002: 288).

[94] *Givaudan's* recent Annual Report (Givaudan, 2008) presents the outcomes of the previous year: "In 2007, three exciting patented molecules were added to the captive ingredients on the perfumers' palette: Zinarine™: a molecule with natural green and tomato-leaf notes with aspects of mint, fig, hyacinth, petitgrain and metallic notes; especially desirable because of its very natural character, most reminiscent of walking into a greenhouse on a warm summer's day; a high-impact ingredient also acting as an excellent "naturaliser" in fragrance accords. Paradisamide™: a long-lasting, fresh tropical fruit note with nuances of grapefruit, rhubarb and cassis; high-throughput techniques helped in the identification of this stable in-use molecule with, unexpectedly, a tropical fruit odour and other functional benefits. Florymoss™: a multi-faceted molecule of floral, green, mossy, natural notes with a touch of fruitiness; blends well with floral fruits and spicy accords, and enhances fruity notes as well as oriental compositions" (Givaudan, 2008: 25).

[95] Burr (2002: 11): describes that "the creation of a commercially successful fragrance molecule represents tens of millions of dollars, and the Big Boys employ an army of chemists ["molecular

57) mentions that new molecules generate a value of roughly $20 billion per year. Captives are, like new molecules in the pharmaceutical industry, cash cows (Burr, 2008); however, the approaches to search and successfully find useable captives are related to stochastic techniques instead of a clear search (the “shotgun-blast approach”; Burr, 2002: 66-67). Being able to use and work with captives does not only give the fragrance supplier an advantage against competitors, it also highlights the attractiveness of a supplier for a perfumer. Three major advantages of captives are mentioned by Burr (2008): they save costs in the long run because of the easy reproduction; access is not restricted and captives can be used in unlimited amounts, and they enable the perfumer to add new smells to the olfactory palette. Although the competition with other perfumers increases with the size of the company, it is much more likely to work on bigger projects and with other materials than in small houses. Furthermore, captives often drive the consumer markets and have led to top sellers on the market. Specific captives like CIS-3-Hexenol (1947), Hedione (1966), Rosenoxid (1969), Methyloctincarbonat (1988), and Iso E. Super (1988) have led to big hits. Captives determine particular biographies of a perfume and a perfumer. Moreover, captives such as Calone (1990/92; cf. Burr, 2002) have determined a whole ‘school of thought’ and a specific period that made related perfumes successful.

However, “nature continues to be a great resource [for creativity]” because “nature provides new combinations of individual ingredients” (Rouhi, 2003: 55).

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jockeys”; Burr, 2002: 57] tasked with creating them. The *way* to create them is the magic formula.” He adds later on (p. 57): “The Big Boys’ molecules generate roughly $20 billion a year in economic activity. They employ hundreds of chemists, molecular jockeys who spend their days welding atoms together to create new molecules with new smells. And, upstairs, they employ an army of perfumers, who spend *their* day mixing these molecules into new scented elixirs.” However, in the context of the mentioned ways to create fragrance molecules are criticized by Turin (2006) and the characterization of Burr (2002: 67) of a “shotgun-blast approach” with “random recombination chemistry.”

Givaudan's search for molecules in nature has focused on the biodiverse rain forests – i.e. the "storehouses of plant life" – in French Guiana, Indonesia, Gabon, and Madagascar, for instance (S&C, 2002). The search was achieved through the firm's ScentTrek technology. This technology focuses on capturing scents from all parts of a plant such as fruits, leaves, stems, and roots through mobile machines (Gaug, 2005; Jeffries, 2005).[96] The method of extraction is non-destructive and a subsequent analysis is based on gas chromatography (GC) and mass spectrometry (MS; Rouhi, 2003). Through these techniques, scent molecules become available for the synthesis of essential oils that are based on the product from nature. This makes the creation of new fragrances possible. In Madagascar, for instance, a total of 50 scents from flowers, fruits, woods, leaves, and resins were investigated, analyzed, categorized, and – where possible – synthetically reconstituted (S&C, 2002). The two examples of molecular innovation in the laboratory and synthetic reconstruction based on the extraction of scents out of nature document who is enabled to perform innovation in terms of raw materials: only the large suppliers are active in this capital-intensive business.

Second, creativity lies in the innovation of new fragrance formulations. When we think about novelty in the industry, the most basic example is the composition of a new fragrance: the composition of a fragrance according to different notes (see below) gives almost infinite choices of how to construct a new ensemble. "Everything in perfumery depends on mixtures" (Wolfson, 2005: 858) so that "in all perfume houses

[96] The so-called "headspace technology" allows capture of an entire sensory experience: by 'vacuuming' molecules of the scent and running them through an instrument known as a gas chromatograph and mass spectrometer, a chemical blueprint can be made. This blueprint allows the chemist to reassemble the scent in a laboratory (Newman, 1998: 90). Other companies apply comparable portable, non-destructive technologies/extraction processes such as *Mane's* Jungle Essence Technology (Jeffries, 2005) or *Quest's* Acquaspace technique which is 'extracting' scents from marine nature (SP&C, 2001; *Quest* belongs to *Givaudan* since 2007).

the perfume oil formulas are among the best kept secrets and represent the know-how" (Boeck and Fergen, 1991: 422). The composition of fragrances is based on the creative mix of natural and synthetic ingredients (Boeck and Fergen, 1991; Burr, 2008). As Newman (1998: 82) explains, natural ingredients give richness and roundness, while synthetics bring strength, reliability/uniformity, backbone, and longevity to the perfume (see also Aftel, 2004: 8; Burr, 2008). The geographical heritage and how a natural material is harvested thus matter significantly for a smell.[97] The major constituents and notes in perfumes indirectly relate to an important quality determinant in the industry:

> "the territory, the cut, the harvest, all have different olfactive effects on lavenders: lavender from Sault, Ferrassieres, Montbrun or Diois in France vary from a very delicate floral fragrance to fruity, grassy, earthy and even cut-hay or animal notes" (Ellena 1991: 338).

The development of fragrance formulations relates to the uniqueness of perfumery in contrast to other artistic-artisan industries. This uniqueness is defined by the material idiosynracies and restrictions of fragrant molecules. Laudamiel (in Berthoud et al., 2007: 102) stresses that "in contrast to visual or audible works – fragrant creations are unpredictable until that moment of truth when the perfumer has put the components together and smelled them, i.e., until he or she has actually deployed his or her olfactory sense." The formula might not turn out as it was imagined or intended to be. Complexity is significantly higher than in other cultural industries such as the making

[97] Scents resemble wines: the characteristics of natural essences fluctuate over time and across space. A trend towards perfumes that use only natural materials has been observed. This development is backed by the focus of some suppliers on organic and fair-trade ingredients (cf. the example of Symrise in Perfumer and Flavorist, 2008a). However, the focus on perfumes that use natural and/or organic ingredients only has led to some controversies. On the one hand, a major argument against it is the risk of allergy development by consumers. On the other hand, critics of the 'all-natural eco-trend' argue that "we're marketing a philosophical and intellectual point of view that is anti-scientific and incoherent. Perfume is not meant to be all-natural. (That's) not perfume" (Chandler Burr in Perfumer and Flavorist, 2008a: 29).

of clothing.[98] Uncertainty governs the industry during the part of the creation of a fragrance. This uncertainty dwells in the materials at hand. The experience of the perfumer contributes to lower this uncertainty. However, uncertainty remains a major constituent and potential driver of innovation in the fragrance industry.

This uncertainty is added by the financial risks that fragrance suppliers face during the interaction with a client. The suppliers invest time, money, and resources into projects but are remunerated only when they win a competition (Burr, 2008). Thus, only the winners of the briefing process are paid. The financial efforts to bid on and win competitions are co-aligned with shortened periods of economic advantage from a scent. Technology invaded the fragrance business since the 1950s (and even before; Gilbert, 2008). The process of 'reverse engineering' (also in Burr, 2008) is connected with two technologies that play a crucial role: the gas chromatograph (GC) and the mass spectrometer (MS). The GC allows to visualize the composition: "take a smelly substance – an apple or an oyster, it doesn't matter – put it in a blender, then run it through a GC, and you will get a visual record of its volatile components" (Gilbert, 2008: 26). Thus, smell is visualized according to its molecular components; the fingerprint of substances are released. The MS "provides a definitive identification of the molecule" (Gilbert, 2008: 27). These two machines and the practice of de-coding smells are done on a regular basis: once a perfume becomes successful on the market, competing fragrance suppliers copy it, and put a reconfigured one on the market (Siegel,

[98] Burr (2008: 117) describes that "perfume, by contrast, is fundamentally, mastering organic chemistry, and it involves cutting and sewing together pieces of the periodic table of the elements, trying to choreograph electrons that often react to each other in surprising ways, and cajoling molecules into a single mesh that has structure, durability, and stability – not to mention beauty, originality, and commercial appeal. It takes all of this to create a formula."

2007).[99] This leads to olfactive similarity and a "me too"-market (Manowitz and Naipawer, 1991; Siegel, 2007). Calkin and Jellinek (1994: 101) explain that "few perfumes that come on the market today are entirely original, and if they were, it is unlikely that they would be accepted by the consumer." Burr (2008: 57) sees the tendency to "focus-group a juice to death" as a result of consumer testing that challenges to come up with novel fragrances. This speaks for olfactory trajectories.[100]

Third, the creation of a fragrance is dependent upon the perfumer. Historically, manufacturers employed perfumers; the institutionalization of 'a nose' ('le nez' in French) within a company is still en vogue in the case of traditional perfume houses.

> "Back in the early twentieth century, "every luxury brand hired a nose like a restaurant hired a chef," Jacques Polge said. "Poiret had a nose who later worked for Patou. Coty had a nose. Lanvin had one, who created Arpege."… "Today, only a handful of perfume companies have a nose on staff. Chanel has Jacques Polge. Hermes hired Jean-Claude Ellena in 2004. Patou, which is owned by Proctor & Gamble, had Jean-Michel Duriez, who took over when Kerleo retired in 1999" (Thomas, 2007: 152).[101]

The trend of recreating perfumers as stars – like in other cultural industries such as haute cuisine and architecture (Hetzel, 2003; Sklair, 2006; Perfumer and Flavorist, 2008a) – is mainly recognizable in the small but growing market of niche houses

[99] The intention of the GC/MS-technologies in the fragrance research lab is, as an interviewee pointed out, to "understand how competitive perfumes are constructed" (Senior Perfumer, September 2007). Burr (2008: 129) presents the case that a few talented perfumers are enabled to load "red herrings in their formulae, secret codes to screw up the analytical machines." Thus, this quote speaks against the easy decryption of a perfume. However, the mentioned GC/MS-technologies work ex-post: answers to the question why some scents become successful and others fail are not given. Furthermore, technological sophistication is a reason why many similar products are on the market, but the answer is open when perfumers actually implement the molecular insights into their formulation practices.

[100] In addition, individual fragrance formulas only sometimes change; however, it is more likely that manufacturers alter product aspects such as the package and the bottle over time (= the process of "anniversary-ing"; Burr, 2008: 57/58). "When the marketing people say "anniversary" as a verb, they mean a tweak in presentation, revamping the box, tweaking the image, hiring a starlet, doing a miniature relaunch without doing an actual relaunch. An so boosting sales" (Burr, 2008: 57/58).

[101] One of the most recent decisions, for instance, was to hire Thierry Wasser as the house perfumer of Guerlain in 2008. Guerlain was founded in 1828 and its history is described as a "dynasty" (Barille and Laroze, 1995: 72-80); LVMH acquired Guerlain in 1994.

(Trucco, 2009).[102] Furthermore, a few luxury goods-houses such as Hermes and Cartier re-established the function and role of a house perfumer. Niche manufacturers often employ a house perfumer, work with a selected set of perfumers, or are perfumer-owners. The contrasting trend that “most luxury brands today do not own, create, manufacture, or distribute their perfumes” (Thomas, 2007: 152) anymore lets the interaction between the fragrance suppliers and the mass brand companies become even more central and crucial for investigation. I will elaborate on the perfumer in Chapter 5.

3.5.4 Other suppliers and industry stakeholders

Advertising, marketing, branding, and promotion agencies help to communicate perfumes to targeted consumers and the general audience. The intentions of the mentioned activities and actors differ significantly; however, they are listed here together because they contribute to the metaphysical aspects and symbolisms of a perfume and the ways and means to communicate branded cultural products. To advertise, market, brand, and promote a fragrance means to position a product within a brand and in relation to different other brands (Olins, 2003; Lury, 2004; Lash and Lury, 2007). Currently, advertising, marketing, branding, and promoting a perfume predates or goes along with the composition of the actual scent. Thus, these activities are procedural in that they are connected with other supply activities. In most cases of the mass market, the conceptualization of a new fragrance is initiated in the offices of the

[102] The perfumers are celebrated for their individual work and their palette of creations. A documentation of what perfumers created is found and regularly updated in the magazine Perfumer and Flavorist and, for the broader audiences, in the blogosphere on nowsmellthis.com, for example. While these sources help to monitor the creative successes of perfumers for consumers, they are not telling much about the decision-making processes during the development.

manufacturers of perfumes. However, they also outsource parts of those activities to specialized suppliers. I stressed that branding and marketing, are often intertwined with each other and are key for the mass brand-manufacturers of perfumes. Actually, the manufacturers of perfumes conduct, to different degrees, the four activities. However, these companies often request services from external suppliers.[103]

Design firms play a significant role in the fragrance business (Dawes, 1986; Falk, 2007b). Those companies are involved in the design of the bottle and the package, for instance. The traditional importance of bottles and packages is represented in the collaboration between Coty and Lalique (Dawes, 1986). The recent focus on fragrance quality is backed by premium packaging techniques. Furthermore, the different packaging parts of a perfume are ideally coordinated so that they create a coherent message.[104] However, bottle designers are often not directly involved in the

[103] Reasons for the externalization are that specialized service suppliers know a market better than the perfume manufacturers. Two examples should be presented here that show the significance of external collaborators during the manufacturing of a perfume. First, one component is naming. Choosing a name for any product is an important decision because names are permanent and they are the verbal representation of a perfume. A name is intended to correspond with the perfume, its presentation, and the targeted potential customer (Villeneuve and de Grandi, 1996). Key considerations and trends in brand naming in general are authenticity and simplicity. However, the task to find a name can be very complex depending on the manufacturer and the brand (see also Burr, 2008). Specific companies that design, search for, and check the legality of names exist. Second, just before the distribution process starts, fragrances are often launched with advertising campaigns featuring celebrities and stars, just as in other creative industries such as movie- or art exhibition-openings. These launch events are not only very expensive (Burr, 2008), they also create a certain media buzz that can be beneficial for perfume manufacturers, distributors, and retailers.

[104] The particularities of packaging are most apparent in the case of limited editions of fragrances. SP&C (2005: 35), for example, points out that the 100ml bottle of a limited-edition fragrance was "engraved with orange blossoms, numbered and signed, topped with a copper cap and wrapped in specially printed silk paper. It is presented in a wooden box, closed by a thick ribbon and engraved on each side." Through these techniques different goals are met: a higher degree of personalization, uniqueness, and exclusivity is documented for specific consumer groups (SP&C, ibid.). Those undoubtedly more expensive fragrances reflect the preferences of niche consumers, but they point to the importance of packaging, visual representation and recognition/attraction of the packaged material.

manufacturing of the fragrance even if it would be beneficial[105]; this is a strategy to streamline information about a forthcoming product.

Distributors and retailers are important elements in the industry. First, distributors contribute to the diffusion of perfumes on national and international markets; they are essentially business-to-business components. The diversity of the distributors is high.[106] An interesting facet is that the contracts that distributors make with perfume manufacturers are very sensitive according to which brands are distributed. One perfume brand might actually stop working with a distributor if this firms starts to distribute products that are targeted to a completely different market segment. Second, retailers are important as well. Traditionally, perfumes were sold in perfumeries or, within the last few decades, stores of perfumery chains (especially on the European market in France, the United Kingdom, and Germany, but also in the United States). Over the last few decades, the channels have diversified though. Sometimes, decisions are made to sell premium fragrances only in selected places. Aspects of image control in specific department stores in prime locations are contributors of the aspect of exclusivity. Friedman (2006) and Passariello and Dodes (2007) contribute that the 'second stage of globalization' is one of local authenticity: while during the first stage, the focus was on homogeneity of brands in their retail environments across space, the current understanding of the second stage is that uniqueness needs to be highlighted because products are not enough. It is about a unique experience. Top retail locations are re-named 'maison' (Vuitton) or 'epicenter'

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[105] A bottle designer argues that "if I had the opportunity to discover the juice prior to designing, of course the scent would influence the designing (…) it truly does improve the design process and allow the designer to create a very brand- and fragrance-appropriate bottle" (Denis Boudard in Falk, 2007b: 12).

[106] Distributors might be nationally-focused and coordinate a small range of niche perfumes; they might have an international focus and coordinate a large range of perfumes from perfume manufacturers.

(Prada), for example. The idea is that “luxury executives say that linking their products to art enhances their brands, even if shoppers don’t immediately respond by spending more money” (Passariello and Dodes, 2007). This is contrasted by the increasing significance of retail channels such as airport perfumeries, department stores, and mass retailers like Wal-Mart and Target, or even supermarkets (Briney, 2006) for both masstige and premium fragrances (Villeneuve and de Grandi, 1996). Direct selling methods – e.g. at home parties (Avon Products, Mary Kay, Amway) and through consultants (The Body Shop) – are also used as retail environments (Encyclopedia of American Industries, 2008; Hoover’s Industry Overview, 2006). Although some sources discuss the Internet as a vehicle for ordering and buying fragrances, Frost (2006) describes the customer relationship to a fragrance as tactile: most consumers purchase perfume at a store because of the touch of the package and the direct experience of the smell. This describes the practice of selling a perfume as a “subtle interaction between the consumer and the representative of the producer company” (Le Norcy, 1988: 217). The retail spaces are the places of interaction between manufacturer and retailer. Similarly, retailers symbolize the business-to-consumer environment.

The manufacturers of perfumes devote significant amounts of money and time to better understand consumer behavior. Consumer and market research is another key component (see also Chapter 5). Consumer research is bought in but also conducted by the major members of the fragrance industry. Research of the probable behavior of consumers becomes an important part for the creation of fragrances by mass-market brands (Partington, 1996). Consumer groups are defined according to all kinds of characteristics such as age, gender, ethnicity, income, race etc. They are also defined in geographical terms, which relates to the question if a fragrance is created to address a global audience or a local one (for a description of fragrances that are ‘connected’ to a specific place see La Ferla, 2006). Manufacturers and suppliers in the fragrance industry have firm-specific methods and techniques to grasp the attitude of the consumer. The production-distribution-consumption chain is scientifically-engineered by consumer and market tests. However, even with the advances in consumer and market research, the flop rate of perfumes is high and contrasts the scientific approach to fragrances.

Finally, other agents are relevant for the creation of perfumes and fragranced products in the fragrance industry. First, since the boundaries of the fragrance industry are permeable, some companies congregated to form the Cosmetic, Toiletry, and Fragrance Association (CTFA). “Many participants in the cosmetics, fragrances, and personal care products industry were members of the Cosmetic, Toiletry and Fragrance Association (CTFA). The CTFA, which was founded in 1894, represented manufacturers, distributors, and industry suppliers. It provided scientific, legal, regulatory, and legislative services” (Encyclopedia of American Industries, 2008). The CFTA currently lists more than 600 member companies (2008). Second, the firms in the fragrance industry are institutionally embedded in a regulatory environment that focuses on keeping and improving quality and security standards. The aspect of ‘safety for the consumer’ plays an increasing role and fragrances are increasingly created to comply with the safety standards (see also Gherardi, 2006: 205). For instance, the U.S. Food and Drug Administration (FDA) is a key authority in the US in this context; the

REACH regulation[107] of the European Union regulates the production and use of chemical substances and discriminates between the safety and toxicology of materials and substances.[108] In addition, the industry is characterized by a high degree of self-regulation: institutions such as IFRA (International Fragrance Association) and the EFFA (European Flavour and Fragrance Association), for instance, "seek to preserve the self-regulatory practices of the industry. It aims to protect the consumer and the environment through the development and implementation of a Code of Practice and Safety Standards worldwide" (Osbiston, 2003: 38).[109] Self-regulation applies, for example, to allergic testing before a fragrance is launched. Third, legal firms are relevant to the industry. Legal aspects in the industry include restrictions on the naming of new molecules and proprietary rights to new compounds. Fourth, foundations represent firms in the fragrance industry. The aim of the Fragrance Foundation, for example, is "to develop educational programs about the importance and pleasures of fragrance for the American public" (see www.fragrance.org). Thus, the intentions of the

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[107] The regulation regarding the "Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)" from December 2006 included also the establishment of a European Chemicals Agency (in Helsinki); its impact is, however, not restricted to the European Union but governs also the import from other countries above a specific imported amount of materials.

[108] Ingredients of a product must be listed on the label (by predominance); however, fragrance formulas are considered trade secrets and so, only the word "fragrance" must be put on a product that has odor-adding ingredients in it. The FDA obtains its regulatory authority once a product is on the market.

[109] On IFRA's webpage, the following description is presented: "Together with the industry's scientific arm RIFM (the Research Institute for Fragrance Materials), the IFRA team makes sure that the establishment of usage standards for fragrance materials is put into practice according to the available scientific recommendation, and that member companies comply with those standards. Self-regulation enables the IFRA standards to be adopted very rapidly by fragrance houses worldwide and by the industry as a whole" and "The Code of Practice applies to the manufacture and handling of all fragrance materials, for all types of applications and contains the full set of IFRA Standards. Abiding by the IFRA Code of Practice is a prerequisite for all fragrance supplier companies that are members of IFRA (through their national or regional associations). Client companies (including producers of toiletries and household products) expect their fragrances to comply with IFRA Standards as set out in the Code" (accessed through www.ifraorg.org on September 30, 2008). "The fragrance segment of the industry organized the Research Institute for Fragrance Materials (RIFM) in the mid-1960s to independently test and certify the safety of natural and chemical aromatics" (Encyclopedia of American Industries, 2008).

foundation clearly focus on the relationship of producers and consumers and the olfactory education of consumers. Lastly, the fragrance market is also increasingly delineated and constructed by particular industry experts and specialists like fragrance critics such as Chandler Burr, fragrance critic for the New York Times and book author of two relevant books that unravel the characteristics of the industry (Burr, 2002, 2008), Luca Turin, a biophysicist with a long interest in perfumery and the fragrance industry (Burr, 2002; Turin, 2006) who has put together fragrance reviews (the most recent one with Tanja Sanchez; Turin and Sanchez, 2008), and Michael Edwards, who regularly publishes his perfume guide (the most recent is Edwards, 2009) and organizes through his genealogy of fragrances and fragrance families the growing market olfactively.

3.6 Summary

Chapter 3 introduced to the international fragrance industry. First, I situated the fragrance industry in the broader group of cultural industries. Then, a perfume was characterized in its becoming and being both a branded cultural product and a materialized olfactive formulation. Third, the history of perfumery was discussed and significant points in time were emphasized in order to stress the most significant changes over time. Thereupon, I characterized the general market and recent market developments. The major actors on the market were characterized as well as the most significant processes that take place.

CHAPTER 4

METHODOLOGY

4.1 Introduction

This chapter focuses on the methodology to study the international fragrance industry in order to investigate practices of knowing and spatialities of knowledge. I connect the literature on methodology, methods, and the conduct of research in economic geography with the specific empirical case (Baxter and Eyles, 1997; Clark, 1998; Schoenberger, 1998; Cormode and Hughes, 1999; Yeung, 2003; Clark, 2007). I start the discussion with some general methodological claims and Yeung's (2003) article is key in this context. A dialogue regarding the research objectives and questions follows. At the end of the chapter, the particularities of this study (interview recruitment, participation, and timetable) are in focus.

4.2 Methodology and research objectives

4.2.1 Methodology

In a seminal article on research methodology, Yeung (2003: 442) suggests a process-based methodological framework to discuss what it takes to 'do' economic geography.[110] By 'methodology,' the author paraphrases "the entire process of practicing research (according to a positivistic or interpretive setup, for instance) and methods as specific technique and/or instruments for research (e.g., sample surveys and in-depth interviews; Yeung, 2003: 443)." Thereupon, he argues that economic geographers ask different questions and think differently than traditional economic geographers; this orientation challenges subject/object relations and the ways the so-called new economic geographers collect, analyze, and present data. Yeung's article relates to a differing understanding of two methodological components in economic geography: 'fieldwork' and 'the field'.

In general, fieldwork has become creative, deep, and broad in diversity in geography overall (DeLyser and Starrs, 2001). Increasing numbers of geographers discuss two important elements in their recent re-approaches: the body (= the fieldworker) and its positionality (= its involvement and his/her performance in the field). A transition has been made from a dominant masculinist view that sees the ability to do fieldwork as innate (DeLyser and Starrs, 2001; Powell, 2002) to one of the

[110] He differentiates this approach from previous methodologies in three major aspects. First, economic activities are currently understood as socially embedded and not, as in orthodox economic theories and neoclassical economic geography, based upon under-socialized rational actors who are not socially-connected. Second, identities of economic actors shift and change over time. A pluralization of what is considered as "economic" has become significant. This aspect is related to a much broader and wider debate in economic geography that can be linked to the "cultural turn" in the sub-discipline of economic geography and the study of the cultural economy by economic geographers (cf. Thrift and Olds, 1996; Amin and Thrift, 2004, 2007, for instance). Profit maximization was traditionally characterized as the major goal of corporations and managers but this understanding is now considered as partial. The focus on "reflexive business knowledge" (in general, see Nigel Thrift's work on non-representational theory; Thrift, 2004, 2005) and the significance of ongoing practices and creative performances put this view into perspective. This characteristic has to do with another discussion in the sub-discipline namely the recent opening of the 'black box of the firm' in economic geography more generally (Taylor and Asheim, 2001; Yeung, 2005; see also Yeung's description of the "disruptive representation of the firm", Yeung, 2003: 445). Third, context matters in order to help explaining economic action: this is a route in between "logical determinism in positivism and structural determinism in Marxism" (Yeung, 2003: 445). Context is internalized into the investigation and this internalization means that economic action is only conceivable in a contingent socio-spatial world. These shifts in the orientation of economic geography necessitate alterations of the research methodologies in the sub-discipline.

open encounter where the fieldworker learns to work in the field from personal interaction with others (DeLyser and Starrs, 2001; Gibson-Graham, 2004). In addition, the understanding of the field is shifting: a change from cultural geographers' landscape (Mathewson, 2001), from a predefined 'real geography' and a 'being there/given' (= an existent location or place; Driver, 2000; Powell, 2002; Corbridge and Mawdsley, 2003) to a construction and a "shifting location" (Powell, 2002: 265; Driver, 2000) is notable. Related to the re-conceptualizations of fieldwork and the fieldworker is the emergence of a complex integration of both. This affects modern methodology: Dewsbury and Naylor (2002: 256) speak about taskscapes as imperatives of the in-between of field and body which are characterized by "a set of related activities that are as much a part of the world as they are about our capacity to carry them out;" their conviction is that "the space of fieldwork is inseparable from those doing it".[111] The "commitment to place" (Corbridge and Mawdsley, 2003) and its related practices with the primacy of the visual (Powell, 2002) changed considerably with the understanding of the field. Traditionally, regional foci and place-based studies of practices and policies stood in the center of attention. Institutions such as formal and informal rules, laws, and conventions between different kinds of actors helped to constitute and characterize 'the field' in terms of scalar entities and bounded regions such as the already mentioned spatial innovation systems (Amin and Cohendet, 2004; Mouleart and Sekia, 2003; Thrift and Olds, 1996).

[111] This trend towards a complex field-body-interrelation is weakly mirrored in economic geography. In Yeung's (2003: 451) description of practices in economic geography that are taking place in situ, he does not refer to the Euclidean space/places of other and older paradigms anymore, but to the direct and intimate economic landscapes that the researcher through the selection of firms, industries, and markets defines. He admits, that *in situ*-research "seems to have more significantly influenced the methodology of physical and environmental geography" (Yeung, 2003: 451) – a view that is apparently changing (cf. Powell's, 2002, discussion of physical geography as an interpretative field science). However, since fieldwork has not been historically inquired in all sub-disciplines (Driver, 2000), I state that a critical review of the fieldworker in economic geography is missing.

The understanding of a field-as-place is manifested in a one-sited methodology (Powell, 2002).

In contrast, economic geography after the relational turn (Bathelt and Glückler, 2003; Boggs and Rantisi, 2003) and within the context of practice-based studies (Gherardi, 2009) and the practice turn in the sub-discipline (see AAG sessions in 2008) emancipated itself from this methodologically-informed "scalar nesting" (Amin and Cohendet, 2004: 93; Grabher, 2004: 306) towards topological spatial metaphors (Amin, 2002, 2003; Amin and Cohendet, 2004). It understands "fieldwork as *shifting* locations" (Powell, 2002: 265, italicized in original). This view counters the heavy emphasis of place and investigates how networks connect places through practices, for instance (Amin and Roberts, 2008a, 2008b; Gertler, 2008). The spatialities of actor networks are not observable with the eye (Amin, 2002); empirical work emphasizes research through close dialogue and discourse with ethnographical methods such as participant observation and action research (Schoenberger, 1991, 1998; Clark, 1998; Yeung, 2003; Clark, 2007). Researchers choose firms, projects, and individuals (and different kinds of other research entities) to enter and trace specific fields and places and how they are constructed in a general networked setting. At the same time, the fieldworker neglects the uniformity of places and characterizes practices within multiple locales. For that reason, the term 'spatialities' implies the multiplicity of places where practices are performed (cf. Amin, 2002).[112] To summarize, first, the fieldworker is an agent who practices 'field-making.' Her role is to initiate 'the field' but, at the same time, she is

[112] In this context, two arguments are striking that could be fruitful for thinking about fieldwork in human geography, in general: first, Lyman and Wakeford (1999: 361), referring to Marcus, understand field and method as the same: "Method is the activity of the researcher, and field is the mental model constructed by method". Related to this is, second, that research, which tries to define boundaries of the field at the beginning, is fateful. Against this background, the evolution of a field seems to be process-based.

also a relational part of it during its construction. A clear distinction between the two entities is problematic and vanishing. Second, the field in economic geography is increasingly non-scalar and non-territorial. The field is created *ex-ante* in order to legitimate the performance of specific methods; however, it does not exist in a scalar sense of a specific city or country that the fieldworker is intending to examine but as a topology.

The study of practices of knowing and the conceptualization of spatialities of knowledge that correspond with these practices benefit from the discussion above. I address the issue of conceptualizing the fieldworker and the field by relating the discussion to Yeung's (2003) claim to establish a process-based methodological framework that is based on a tripartite litmus test (with the components of reflexivity, validity, and reliability; see also Baxter and Eyles, 1997). This litmus test helps to provide a legitimation and justification through robustness in empirical research. Reflexivity refers to the "capacity of the research practice to allow the researcher to reflect upon his/her own situatedness in the research process,"[113] validity to "whether the research process and instruments used are approximating the correct phenomenon and whether they explain what they set out to explain," and reliability means the "replicability of findings" (Yeung, 2003: 446).

[113] Beyond the major purpose of conducting an interview in order to get insights from an industry under investigation, other effects of doing fieldwork are mentioned. The change of being an outsider and becoming an insider is seen as a positive value that develops through empirical fieldwork, for instance. This is often understood as a way to better understand how a firm or industry functions. Herod (1999) is critical about becoming an insider and sees the positive aspects of remaining an outsider that lie in the crucial and critical distance. The related challenge is when somebody is considered a member in a community and what this means for the new member and the community.

The issues of reflexivity, validity, and reliability/rigor as well as plausibility resurface in qualitative research on a regular basis (Baxter and Eyles, 1997; Crang, 2002; Yeung, 2003). First, the aspect of reflexivity (i.e. the critical understanding of me as a fieldworker within the field) is discussed in different parts of the following paragraphs of this chapter. Reflexivity was enhanced through the discussions with industry experts in the field, which helped to critically engage with my role during the interview period and afterwards in order to write this report. Industry characteristics such as the neglect of a social science-focus on the industry as well as the size of the industry and its idiosyncracies in terms of central figures and names were discussed multiple times. Second, the aspect of plausibility is approached in three ways: first, the recent literature in economic geography shows a deep interest to better understand knowing practices and the related spatialities of knowledge; second, cultural industries where sensible knowledge is key describe a research objective which deserves coverage especially within the context of a practice-based understanding of knowledge; third, an investigation of the international fragrance industry serves particularly well to study practices of sensible knowing. In addition, it is plausible to choose New York and Paris as locales and entry points to study the fragrance industry as I described in the previous chapter. Third, the aspect of validity is approached in three ways: first, "in situ"-research helped to get a circumstantial understanding of the industry that implies not only aspects of performing research interviews but also visualizing, hearing, smelling, and touching the visited environments. Thus, interviewing experts in their occupational settings contributed to get an overall understanding of where sensible knowledge is practiced in the specific learning places; this was necessary because, for instance, the architectural setup of fine fragrance studios actually contribute to the practice of how and where knowing takes place (cf. the discussion of ‘open bars’ in Chapter 5).

I have experienced the places that I emphasize as significant learning places in the next chapter not only through the discussion in an interview but as a ‘real setting’ where the professionals work. Second, the interviews with a multiplicity of different identities and professional roles within the interviewed firms helped to enhance a valid, triangulated account. Third, the major conduct of the interviews in two different geographical contexts (in the US and France) and in different time-periods helped me to understand, contextualize, and explain but also challenge and re-think what I experienced. The experiences in the field and through the fieldwork are actively intertwined with the existing theoretical literature so that “correct phenomena” (Yeung, 2003: 446) can be explained. Fourth, the aspect of reliability through replicability is approached through the interrelation of the empirical material with existing research from other individuals with a background in the industry (for instance Müller and Lamparsky, 1991; Calkin and Jellinek, 1994; Curtis and Willams, 2001) or with an exploratory and documentary interest (for instance Turin, 2006; Burr, 2008; Gilbert, 2008).

4.2.2 Research objectives

Research on practices is found in literatures from a variety of different disciplines (cf. the discussion in Chapter 2). The dissertation draws from literatures outside of economic geography proper and uses insights from organizational studies, cultural and economic anthropology, situated/social learning, as well as economic sociology (Brown and Duguid, 1991; Lave and Wenger, 1991; Cook and Yanow, 1993; Wenger, 1998; Strati, 1999; Gherardi, 2000; Brown and Duguid, 2001; Nicolini et al., 2003; Strati, 2003, 2005; Gherardi, 2006; Ewenstein and Whyte, 2007; Strati, 2007; Gherardi, 2008; Ewenstein and Whyte, 2008; Gherardi, 2009). The interest that connects these different disciplines and approaches is to better understand organizational knowing and learning for the purpose of investigating innovation (Grabher and Ibert, 2006; Ibert, 2007a). While the social sciences-literature stresses the contextual nature of sensible knowledge, geographers spatialize practices of knowing in order to characterize the spatial necessities in terms of mobility and situatedness of epistemic objects for their becoming. However, empirical insights to feed the spatial theory of knowledge formation, which centralizes the view on practices, are lacking (exceptions are Mattson, 2006; Ibert, 2007a, 2007b, 2009). Economic geography can contribute to the above discussions by stressing the role of learning places and networked practices that matter (Ibert, 2007a, 2007b).

Paris is the center of the industry in France and Europe, while New York is the center in the US. However, beyond this simple logic of two cores and peripheral regions, I explore networks that encompass multiple relations. I discuss examples of sites where knowing and learning takes place on different geographical scales from the meso- to the micro-level. The fragrance industry is a hybrid industry at the intersection of a number of different practitioners and their skills and competencies (perfumers and brand managers, for instance). These agents contribute to give meaning to an emerging cultural product though their unique competencies at different points during the formulation and manufacturing of a perfume. In general, fragrances as epistemic objects demand that different actors collaborate. This implies the potential to learn in different places (Ibert, 2007a, 2007b). Since the multiple actors approach an emerging perfume with different individual and corporate histories, trajectories, and purposes, the practices that they apply are likely to mingle and change through collaborative work. Practices of knowing are based on the performativity of the different actors in creating the fragrance; they are diverse across organizational boundaries and differ according to corporate cultures. However, I will be able to synthesize generalizable forms of practices of the industry (Nicolini et al., 2003; Strati, 2003; Gherardi, 2006, 2009).

4.3 Research design and research questions

4.3.1 Research design

I examine practices of knowing and spatialities of knowledge in the fragrance industry in two ways. First, I investigate the industry press and the corporate literature. The industry press is quite diverse. Some journals target the cosmetics industry in general and also include the coverage of the fragrance industry (in alphabetical order: *Beauty Fashion; Cosmetic World; Global Cosmetic Industry [GCI]; Perfumer and Flavorist; Soaps & Cosmetics; Soaps, Cosmetics & Perfumery; Womans Wear Daily [WWD]).* Other journals are rather tangential since they focus on advertising/marketing, packaging, or retailing and are not restricted to the fragrance industry *(Advertising Age; Journal of Advertising Research; Journal of Product & Brand Management;*

Packaging; Packaging Digest etc.). Corporate annual reports provide information about specific approaches that individual companies in the industry take and the overall challenges that are characteristic for the business (Firmenich, 2008; Givaudan, 2008; IFF, 2008). These reports are checked against general descriptions and publications that characterize the setup of the fragrance industry (Müller and Lamparsky, 1991; Calkin and Jellinek, 1994; Curtis and Williams, 2001; Burr, 2002; Sell, 2006; Turin, 2006; Berthoud et al., 2007; Thomas, 2007; Burr, 2008). Furthermore, the general literature on perfumery helps to understand the fragrance business as a commercialized though craft- and design-intensive sector (Morris, 1984; Dawes, 1986; Newman, 1998; Dove, 2008).

Second, the main component of the empirical research consists of in-depth, semi-structured interviews – also characterized as close dialogue – with personnel of key industry participants (Clark, 1998, 2007; also in Schoenberger, 1991; Kvale, 1996; Baxter and Eyles, 1997; Schoenberger, 1998; Yeung, 2003). Data from interviews, which represent an intensive research method, have been conducted in situ, thus at a specific socio-economic location (for instance, corporate offices and laboratories). These two major forms and strategies of investigation are triangulated, thus brought in fruitful discourse with each other in order to enhance robustness and to critically reflect upon developments in the industry that one source mentions while the other does not.

What are the advantages and problems of qualitative methods such as semi-structured interviews in comparison to other methods? I outline potential other research methods below that could have been applied (also in line with recent and future disciplinary developments) in order to emphasize the significance of semi-structured interviews in the next paragraph. First, I use the research methods of participant observation and questionnaires as examples to show their problems and dis-advantages. Ethnographic methods such as participant observation are still relatively novel to economic geographers (as an exception, see Ibert, 2007a, 2007b, 2009, and the overall literature on practices, e.g. Lave and Wenger, 1991; Strati, 2007). As a researcher who is an observant participant and participating observant I could have participated in the business development of a new product.[114] The approach centralizes the becoming of a community member in order to understand the occurring processes. This research method would have been beneficial for the study of practices since I would have ideally been involved in these practices on a regular basis. However, I describe three major challenges of this method. First, organizational challenges exist. Manufacturers and numerous suppliers create a perfume. Thus, the challenge of manageability and authorization to observe ethnographically would have quickly crossed corporate boundaries; this is added by significant organizational challenges. Second, a challenge lies in the restriction of the research outcomes. An ethnographic method would have put more emphasis on one or a few specific cases under investigation instead of interpreting the industry as a whole. Future research in this guise might be feasible though. Third, pragmatic reasons of financial and temporal matter spoke against ethnographic methods. The temporal and financial investments would have been significant considering the location in New York or Paris and the necessary travel within and between cities and countries. In contrast, quantitative data that I could have gained through questionnaires would not have been beneficial in order to make claims in regard to the questions that I

[114] While the phrase of an observant participant stresses the participation is particular tasks, the second one emphasizes the aspect of observation; however, researchers are both so that these terms are listed together.

ask and intend to answer. Answers that relate to questions that deal with fuzzy concepts such as knowledge and innovation come out of explorative methods (Markusen, 2003).

What are the benefits from doing research with the technique of semi-structured interviews? First, the method of researching the industry literature and the corporate press was used to get a better understanding of the drivers in this industry and the general economic processes that characterize it. I subscribed to newsletters and RSS feeds of some of the above journals and examined literatures outside of geography and the social sciences on the particular topic of the fragrance industry and perfume.[115] Second, the method of a semi-structured interview has enabled me to access first-hand information and in-depth knowledge from interviewees. The creation of in-depth knowledge is due to the fact that interviews prioritize depth and quality of information. However, interviews are not intended merely to deliver pre-existing knowledge or 'data.' The knowledge from an interview is based on what the interviewee says and how s/he reacts in the interactive conversation (Kvale, 1996; Clark, 1998; Herod, 1999). The interviewee produces a story based on the questions that are asked (Crang, 2002). The interview is a social process that enables the researcher to gain information in real time. This aspect of spatial and chronological proximity is helpful regarding direct responses to spoken words, the clarification of issues, but also – and specific to my research on the fragrance industry – responses that can be understood as summaries of what usually takes place over a longer term (Clark, 1998). Interviewing industry participants helps to save money and time but abstracts information from one specific case. The situated

[115] By saving relevant article information in an EndNote-file and extracting the most important insights into a Word-file I have been able to understand the general market dynamics as well as the developments within the most significant companies in the industry.

creation of outcomes in an interview is – in different ways – shaped by both parties. As Herod (1999: 314) pointed out, “it makes no sense to assume that one version of this knowledge [i.e. knowledge that emerges out of participation of the interviewer and interviewee] is necessarily “truer” in some absolute and “objective” sense.” This situated knowledge during the interview process was condensed and triangulated later on during the analysis of the interviews. In the next section I will discuss the general setup and conduct of the interviews in greater detail.

Hereafter, I list the challenges that I faced. Organizational and executive challenges were likely to occur. Organizational challenges include accessing relevant subjects and the temporal organization of the research. The discussion of interviews with the influential in economic geography (Cormode and Hughes, 1999) presents the challenges that are connected to access managerial elites in the current example. Executive challenges are enshrined in the conversation and are difficult to forecast. Since the researcher is said to define and control the situation (Kvale, 1996: 6), the emphasis is laid on interpersonal and listening skills in order to act and react directly to the spoken words of the interviewee (Valentine, 2001). Against this more traditional view, the experience in the field has been that the interviewee and me as the researcher became combatants on the same field: I started and guided the conversation, but it often went off into other, unforeseen, and unplanned directions. This is not a weakness but characterized as typical for semi-structured interviews where the interviewee is an active agent (Watson, 2006). From a practical point of view, it was a challenging and demanding task to coordinate listening, reacting, and keeping the rough schedule in mind, especially for a junior researcher and a non-native English speaker. The majority of the research interviews in New York and Paris were conducted in English. However, the capacity of expression and translation into a foreign language were not only an issue for me but also for some of the non-native English speakers. In addition, numerous interviewees indirectly talked about the complexities of verbalizing sensible knowledge – they often spoke about aspects that are difficult to describe in words because they are based on feelings and sensual experience. This aspect is possibly limiting the outcomes from the research interviews but similarly highlighting the relevance of individual understandings of what and why something is done. Thus, interviewing is not about asking questions and receiving on-the-spot answers but about contextualizing.[116]

4.3.2 Research questions

The focus of this section is in the first part on the research questions and in the second part on the way I operationalized and synthesized the responses in order to make

[116] Two aspects characterize this statement. First, the aspects of interpersonal and listening skills as well as language skills are related to the broader issue of cross-cultural comprehension and expectation (Herod, 1999); the specific technical and commercial language that some interviewees (the perfumer and the brand manager, for example) used and took for granted made an understanding challenging. Furthermore, the inherently political aspects of translation lead to the creation of new and unique situations instead of a simple representation or reproduction of a standpoint that an interviewee holds (cf. the discussion in Müller, 2007; cf. also Hassink's, 2007, discussion of English as characteristic for the Anglo-American hegemony in Human Geography, i.e. a linguistic hegemony). Watson (2004) summarizes that the effort of translation can distort conceptual insights, especially when the insights do not resonate with the experience of the interviewer. Watson (2004: 61) argues that "learning a language can be seen as having the potential to benefit or confront at least three other overlapping areas of research practice and theory: the nature of understanding [i.e. "meanings and values are attached to words"; ibid.], the relationships between researcher and the researched, and the political implications of language." The interviews that were conducted in German were an interesting experience since the interview generated, according to my perception, a deeper understanding of the processes that – in this case – a perfumer has been involved in. However, implicit in this advantage on the spot is the ex-post translation. The analogy of translation with moving from one house into another and, thereby, potentially losing some of the "experiences and ideas" from the previous house serves as an adequate analogy (Martin Heidegger in Watson, 2004: 61). Second, and more generally, following the discussion in Gubrium and Holstein (2003) and Watson (2006), the intention of interviewing is not to discover meaning but to locate it – interviewing is about readings and not observations, interpretations, and not findings. This postmodern view clearly breaks with modernist traditions like a (post-)positivist epistemology.

use of the collected data. What are the major research questions for the investigation of practices of knowing and spatialities of knowledge in the international fragrance industry? Most questions in the interviews that I conducted dealt with "what" and "how" the processes of interest – described in the research questions above – take place (Gubrium and Holstein, 2003). The question how practices of knowing shape the spatialities of knowledge in the fragrance industry should be asked by looking at the following three major research questions:

a) What are practices of knowing that characterize the industry participants as innovative and creative?

b) What are the organizational repositories involved in harnessing these practices?

c) What kind of knowledge spatialities characterize the industry and how do these spatialities, in turn, affect the practices of knowing?

In order to answer these questions, I developed a semi-structured interview schedule. Questions that were addressed to firm representatives targeted aspects of doing and in what kind of organizations 'doing' typically takes place.[117] Hereafter, I describe the process of conducting the interviews.

At the beginning of the empirical research I raised questions that I intended to ask when I set up the study. The initial interviews in Germany gave me the chance to test some questions. In addition, I learned from the first interviews in Paris and New

[117] A few examples of these questions are: What do you do? How and when does your work change? Are you collaborating with clients more than once or on a recurring basis? What does this collaboration look like? Do you usually work on a project-to-project basis? If so, how can you make sure you satisfy the client's wishes and preferences? How do such interactions differ from those with 'new clients'?

York in January 2007 if questions worked or not. At the beginning of a conversation it was challenging to describe the goals and intentions of my research.[118] Most of the time, interviews took place in corporate offices. Quickly developing new situations and the exposure to new corporate contexts and interviewees in these environments were related to procedural and organizational challenges (depending on the situation and the situatedness; using the voice recorder, for example). Over the course of the interviews, it became clear that some questions had to be changed or adjusted. Some questions changed during the course of the research. They turned out to be too general or did not really fit for the specific interviewee that I talked to. This is a usual outcome once the researcher enters the field (Crang, 2002, 2003). Depending on the specificity of the corporation and the corporate function of the interviewee I altered the initial questions in order to create particular sets of questions for groups of employees (e.g. between the members of the creative team in the fragrance suppliers). A perfumer within a fragrance supplier responded differently than a marketer or salesperson in the same firm, for example. Therefore, I had to roughly categorize the semi-structured layout of the questionnaires according to the different professional functions of the interviewees.[119] The majority of the interviews were taped on a digital recorder (except those where the individuals did not give me the allowance to do so). The data from the transcribed and coded interviews is used to trace the geographies of knowledge in order to examine and explain the nature, extent, and spatial configuration of knowledge and processes of knowing.

[118] The challenge lay in the simplification of the language of “academic-ese” (Herod, 1999: 317), the reduction of the inherent complexity, and translation into a less theoretically-informed language. This was, at times, more complex and difficult than imagined.
[119] In addition, questions were added depending on an interview-by-interview basis accustomed to the individual interviewee. This meant that the overall breadth and depth of the responses increased.

I operationalized the interview data in order to make practices of knowing visible so that I am able to name, describe, and analyze them. Furthermore, I grasped the related organizational solutions and knowledge spatialities. I describe this below.

First, how can we 'know a practice,' i.e. name and highlight a particular practice as a significant practice that is worth mentioning and separable from an 'unworthy practice' (Gherardi, 2008; Bjørkeng et al., 2009; Gherardi, 2009)? In general, research on practices is characterized as problematic since "practices are difficult to access, observe, measure or represent because they are hidden, tacit, and often linguistically inexpressible in propositional terms" (Gherardi, 2009: 116). A way to study practices from the outside (i.e. by both researchers and practitioners looking at the inside of a practice) is when "the inquiry concentrates on their regularity, on the pattern which organizes activities, and on the more or less shared understanding that allows their repetition" (Gherardi, 2009: 117). Social accountability, recognition, and an institutionalization of the doings are stressed as making a practice as a practice visible. In contrast to the rather rational and cognitive accounts and assumptions of routines, a practice is recognized and aggregated as one that takes the materiality of involved agents into account (Strati, 2003; Gherardi et al., 2007; Strati, 2007; Gherardi, 2009).[120] Thus, practices are formed through aggregate results of "individual behavior, the collective practices of various occupational groups, [and] organizational practices" so that the "courses of action interweave in various ways" (Gherardi, 2006: 55). Actually, practices are related to each other based on the individual and collective action of

[120] In addition, Gherardi (2009: 123) characterizes a practice as a discursive construct "that has intersubjectively created a feeling and a doing around a socially recognized and recognizable modality of collective doing." Again, this addresses the social and collective nature of practices.

different communities so that “fields of practices” (Gherardi, 2006: 46) develop.

The goal of interviewing industry experts was to discuss and examine the daily and routine work processes of the participants on an individual, collective, and industry level (Gherardi, 2006). Qualitatively rich data was collected through the interviews.[121] Bundles of activities – “socially recognized as an institutionalized doing” (Gherardi, 2009: 117) – were created in order to name and describe a practice. Thus, I summarized those tasks that were characterized by similar motivations. This was done by comparing interview transcripts with each other, synthesizing the data from the different interviews, and interpreting the material relating to the development of a fragrance. Only those practices that are crucial for the constitution of a professional in a particular field and the construction of a perfume are named and discriminated against the richness of potential emphasis. The synthesis is necessarily an abstraction and aggregation where certain aspects remain under-represented (Gherardi, 2009). This is not unproblematic but is characterized as a required abstraction from the richness of data (Gherardi, 2009).

Second, the organizational repositories to harness a knowledge practice are understood as loci of knowledge. These repositories exist as individual and collective entities where knowledge is done in social relations. They range from the individual knowledgeable practitioner (e.g. a perfumer) to groups of individuals such as the ‘creative team;’ however, at this point it is significant again to not eclipse materials, materialities, and materializations for the significance of repositories of knowledge.

[121] The focus on different corporate functions and individuals that are involved in the manufacturing of a perfume is understood as a strength in order to describe the different points of engagement of where industry professionals become active players. While the diversity of interviewee roles’ brings richness to the table, the interviewing of the same functions beyond corporate boundaries enabled to understand practices that are particular for a profession as a whole. “Common skills and tasks” (Amin and Roberts, 2008a: 354) unites not only specific professions in the industry but characterizes what individuals and professional collectives do.

These actants inform both the practices of knowing but also the organizational solutions of where it is done (Nicolini et al., 2003b).

Third, during the interviews, the research objects described practiced knowledge that was connected to specific locales and learning places (Knorr Cetina, 1999; Ibert, 2007a, 2007b). These learning places co-develop with the practices of knowing and are dependent on the mobility and temporal situatedness of the epistemic object: they are actually constituted by the involved actors that contribute to create a perfume and they provide the specific material and materializing infrastructure (Knorr Cetina, 2001; Ibert, 2007a, 2007b). There, fragrances perform as actors and they are maintained in their being through the discursive communication with involved agents. Accordingly, a perfume is an epistemic object that meanders between learning places in order to gain shaped (Ewenstein and Whyte, 2009; Ibert, 2009). The dissertation looks only at the manufacturers of perfumes and the fragrance suppliers; other necessary contributors to the perfume development and their geographies are not in focus.

The study follows an inductive research methodology and elaborates on specific cases in order to generalize and theorize based on them. While the study conceives of practices of knowing, *per se,* as existing as in a deductive approach, the value and merit of the study is to examine, elaborate, and theorize practices in this particular industry, thus inductively extrapolate those practices worth mentioning. As it has been mentioned above, the naming and characterizing of these practices is based on the in-depth interpretation of the interview material.

The study is intellectually close and sympathetic to ethnomethodological approaches in their consideration of social reality (Garfinkel, 1967; Bergmann, 2000).

Furthermore, it follows the understanding that reality cannot be characterized, generalized, and abstracted through a mirroring of the social world. It is conceptually proximate to the line of thought that intends to grasp the major determinants in the construction of social realities. For instance, there is no 'set of practices of knowing' that exists in the singular and by itself which 'waits' to be researched and recognized as in positivistic social sciences. Here, a necessarily only partial, though significant, construction of knowing practices is envisioned (Gherardi, 2009). I approach the challenge of declaring and describing certain spatialities of knowledge according to the cross-functional description of work and work environments based on the richness and diversity of the empirical data.

4.4 Interview recruitment, participation, and timetable

Three pilot interviews were conducted in Germany in June and July 2006 (see Tables 4.1 and 4.2). The rationale behind conducting these interviews was to get a better understanding of the general characteristics of the industry, test some interview questions, and generate possible contact names and addresses for the main interviews. Furthermore, the conduct of these interviews in Germany was connected to cost and time efficiencies that became possible through my stay during that period.

However, I mainly conducted the fieldwork in New York and Paris; two interviews have been conducted in San Francisco. 'Being there' to interview mattered because face-to-face interviews enable a broader understanding beyond the vocal; it integrated learning in the field in visual, haptic, and olfactive terms (cf. Dewsbury and

Naylor, 2002; Gertler, 2003). The headquarters and subsidiaries of the major international constituents of the fragrance industry are located in Western Europe and the US. New York and Paris stand out as significant centers.[122] Whereas, for instance, the fragrant materials are sourced from all across the globe, the industry itself is clustered in a few major locations.[123] Dewsbury and Naylor (2002: 255) mention that the "finitude of time and resources" can often be considered a pragmatic reason for specific approaches.[124] However, the decision to conduct the fieldwork in Paris and New York was not only of pragmatic nature: the study sees the two sites as anchor points from where I could approach the industry in a better way because of the multitude and number of firms that are located there[125]; thus, the labor market is denser and the likelihood of access to other potential research subjects higher than elsewhere.

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[122] The research did not intend to examine the status and the roles of these two cities in a globalizing economy. In addition, the dissertation is not a comparative study. First, according to the understanding that firms are organized as networks around the world, the two cities are not enclosed systems. It became clear that significant flows of capital, materials, and individuals between these two and many other cities around the world exist. Second, the cities are characterized by the location of production facilities in the closer hinterland of New York and Paris. For the case of New York City, New Jersey serves as a location where the fragrances – formulated in the fine fragrance studios in Midtown or Downtown New York City – are mass-produced. In addition, other perfumers work on functional fragrances such as soaps or perfumed products with lower profit margins. This is true for Paris as well.

[123] In contrast to a focus on a clustered industry, however, "materialities come into play in the field that proffer their own delimiting agency upon us" and "space writes back" (Dewsbury and Naylor, 2002: 256); the knowledge geography of the fragrance industry resembles its organizational structure and is, accordingly, diverse. At the same time, this over-dichotomized picture of a clustered versus a spatially-fractured industry does not help to describe or explain questions about the geographies of knowledge that mediate between 'being there' or being apart – it is about the important why's and when's someone is close or far that matter (Gertler, 2003; Amin and Roberts, 2009b; Grabher and Stark, 2009; Ibert, 2009).

[124] The conduct of interviews in New York and Paris has been connected with financial and organizational challenges. I organized as many interviews as possible during the time that I spent there (usually between one and two weeks). With a prolonged stay the financial efforts increased. This argumentation suggested a short stay. However, this reasoning conflicted with the temporal restrictions of organizing many interviews. On a day in Paris, I conducted five interviews. This was an organizational and individual challenge that might have affected the performance of the interview conduct.

[125] While various other industries are more visible and economically significant to New York and Paris than the fragrance business, the industry leaves its footprint on the urban economy through its interdependence with related industrial sectors. Industries such as advertising, fashion, and art (Grabher, 2001; Rantisi, 2004) are clustered in these cities enabling proximate, long-term, and networked relationships with the firms. On the other hand, the rich diversity of the city makes project-based work with alternate partners possible.

The conversations involved in-depth, semi-structured interviews with mid-management personnel of key corporate actors in the international fragrance industry. The access of potential interviewees has been anticipated as a challenge. Indeed, I experienced some of those anticipated difficulties during the recruitment period. The recruitment period is the phase of contacting, coordinating, and scheduling interviews before I entered the field; however, the recruitment periods was extended into the field as I arranged last minute-interviews while I was in New York and Paris. Herod (1999: 315) observes that "in practice simply arranging an interview can itself be an extremely challenging ordeal, even when one is armed with such basic knowledge as contact addresses." The following challenges were significant during the recruitment phase.

First, it was initially quite difficult to recruit interview participants. Before the first round of interviews in New York and Paris in January 2007, I started to contact individuals that I became aware of through the industry press and through internet research. Blogs, webpages, and industry journals have been particularly helpful to explore names and functions of individuals. This was even more the case after I entered the field since I talked to individuals from the trade press during the first phase of interviews. I started to send out 'cold emails' and, to a minor extent, 'cold faxes.'[126] This strategy turned out to be suboptimal considering the time and effort and its related success rate of recruitment. While a number of individuals agreed to participate in the study through this approach, the amount of positive feedback did not justify the invested time. In fact, this challenge was a first eye-opener: the industry is still a fairly secretive

[126] The word 'cold' incorporates that I did not approach or talk to the contacted individuals via telephone; neither was I introduced to them beforehand by others. Thus, these approaches contrast snowball techniques (Mattsson, 2006).

business and it is rather difficult to approach and engage industry participants in an interview. 'Getting into' the industry was difficult for three major reasons that have to do with my as well as the interviewees' position (Herod, 1999; Yeung, 2003). First, I am entering the field from the outside (i.e. I am not related to a company in the industry). Second, I am a PhD researcher from a geography department at a university. The three parts of this characterization are significant: I was probably considered less prestigious than a professor plus I was not 'visible' on a national or international level in the field; industry members could hardly anticipate why a geographer would be interested in anything that has to do with perfumery or the fragrance industry[127] and, besides these efforts to understand geography from a common-sense point of view, they would classify and rank (economic) geography differently than business or management studies (where potential benefits from participation might have been easier to be anticipated); I came from a university – the ivory tower that some respondents knew mainly through their college experiences. Third, I am a researcher who is interested in questions concerning innovation and knowledge. This potentially rang alarm bells and led to caution but also discreet interest (cf. Cormode and Hughes, 1999). Therefore, I adjusted my approach and asked interviewees for recommendations as far as potential individuals are concerned. This snowballing-technique turned out to be an effective strategy (cf. Mattsson, 2006). The reference to a person that the interviewees knew

[127] In the introductory messages I documented my interests and intentions. However, in a number of interviews the question came up that Herod (1999: 321) in his documentation of the experiences from the work in the field describes: "well, how is that geography?" or "why would a geographer be interested in that, don't you do things with maps?" One of the recurring anticipations of interviewees was that, as a geographer, I would have to be interested in the very upstream part of the industry, namely where raw materials from nature are coming from. As it should be clear by now, this is not a focus of this study.

helped to extend my identity and suggested to the targeted individual that I was respecting, respectable, and it would be ‘safe’ and useful to talk to me (Watson, 2004).

Second, I recognized that differences in the accessibility between different groups of interviewees exist. The recruitment period made clear that there is a gap between the manufacturers of perfume and their suppliers as far as their willingness to be interviewed is concerned. First, the large manufacturers represent internationally well-known brands. The employees are cautious to become engaged in interviews because of several issues. They do not only represent and embody their companies (e.g. *L’Oreal*, *Coty,* or *Estee Lauder*), they are also significant linkages towards the brand. This loyalty makes potential interviewee candidates rather cautious; the caution seems to be increasing with the ranking of a specific brand and the position of the employee (where the ranking is a function of the sales numbers in a specific business segment). In addition, a specific work culture and ethos is nurtured within this environment including long hours, recurrent team and client meetings, sudden telephone calls, and frequent local, national and international travel (cf. Cormode and Hughes, 1999). These characteristics imply that many individuals in the industry are only available on an ad-hoc basis: often they simply do not know if (and sometimes where) they are traveling the following week. Finally, the above description contributes to the general characterization of the industry as secretive. I ascertained in my initial recruitment emails that all information is kept confidential in the sense that an identification of interviewees would not be possible without the permission of the participant. I mentioned that all research records are stored securely and would only be accessible by approved individuals.[128] Nevertheless, a large number of initially contacted individuals did not reply to my emails or faxes.[129] Therefore, the account for the brand managers is rather limited in terms of the large manufacturers; the amount of interviews is, by comparison, larger when it comes to the niche brand managers/owners.

The larger amount of interviews has been with representatives from fragrance suppliers. I list three reasoning's for that. First, even though the suppliers are in close interaction with their clients, they are not directly linked to and representing brands. Second, I might have not been considered as a potential thread because the knowledge that is practiced within the fragrance suppliers is very context-dependent and demands a long enculturation with particular skills so that my participation was not considered as harmful. Third, the higher response rate probably had to do with the quality of the gatekeepers and snowball-initiators that I contacted at the beginning. The above arguments made the significance of certain gatekeepers (that recommended to approach a particular person) and the snowballing technique even more relevant (Herod, 1999).

On the one hand, this kind of recruitment is problematic since the access to the industry is restricted because already existing networks of individuals guide who is approached. On the other hand, since the industry has been described as rather small where "everybody knows everybody else," the recommendations quickly spread. The likelihood of receiving recommendations beyond corporate boundaries and, in particular, with competitors or clients was low. Thus, recommendations came from community

[128] After recruiting individuals and during or after the interview I handed out an informed consent that I compiled under the supervision of the Institutional Review Board (IRB) at the University of Oklahoma.
[129] This has potentially to do with the characterization of brands as aspirational (see the discussion about who is put into the focus for the production of a perfume; Burr, 2008). Beyond the potential concerns listed above, the contacted interviewees maintained their inaccessibility and distance through their non-response.

members that are affiliated with each other by previous links (e.g. working for the same company) or by collaboration from time to time. The snowballing technique turned out to be successful but I was careful in deciding whom to ask regarding interviewees.

Third, the interviews took place in several locales: cafes, laboratories, but mostly offices and conference rooms were the major spaces where I conducted the interviews. Why does this situatedness matter? Dewsbury and Naylor (2002: 255) characterize that knowledge production takes place "in particular spaces through the labours of myriad human and non-human entities" (see also Strati, 2007; Gherardi, 2009). Dewsbury and Naylor (2002) add that this situation and situativeness should not be generalized and monopolized although, as the authors claim, this has often been the case: divergent truths exist. Turner (1988: 109) mentions that in addition to the tape recorder the interviewer should ideally take notes about the "physical layout of the organization, the style of décor, the type of people involved, the style of normal interchanges in the canteen, or in the cloakroom, as well as in the office and on the shop floor." Turner argues that the personal notes about these observations, personal feelings and reactions, and speculations give a more coherent and fuller picture of the interviewee in a particular setting. Similar instances are discussed below as significant to study the international fragrance industry.

The face-to-face interviews were mainly conducted in three time periods: January and February 2007; June 2007; and August and September 2007; 6 telephone interviews were conducted (see Fig. 4.1). Initially, I planned to interview 2-4 representatives of the major fragrance producers, advertising agencies, and packagers; I also intended to speak to representatives of key foundations such as the Fragrance

Foundation. I anticipated to complete 30-35 interviews. However, the final amount is 68 interviews with a participation of 69 individuals.[130] The interviewees agreed to save time for feedback questions. Since some questions were more extensive, I scheduled additional meetings or telephone calls and talked to two individuals twice and one individual three times.

Time period	**Paris**	**New York**	**San Francisco**	**Germany (Recklinghausen and Cologne)**	**SUM**
July 2006				3	**3**
Jan./Feb. 2007	7	7			**14**
April 2007			2		**2**
June 2007	18	15			**33**
Aug./Sept. 2007	6	9			**14**
Other time		1			**1**
SUM	**31**	**32**	**2**	**3**	**68**

Table 4.1 Research interviews with experts of the fragrance industry per city and time period[131]

Form	**Paris**	**New York**	**San Francisco**	**Germany (Recklinghausen and Cologne)**	**SUM**
Face-to-face	31	26	2	3	**62**
Telephone	0	6	0	0	**6**
SUM	**31**	**32**	**2**	**3**	**68**

Table 4.2 Research interviews with experts of the fragrance industry per form of conduct

[130] There are several reasons why the number of interviews and interviewees is higher than expected. First, the initial interviews documented that the diversity of actors and processes in the industry is quite high. This aspect entails that a higher number of interviewees would give a better understanding and more coherent picture of the industry. Second, through the pilot interviews in Germany and the initial round of interviews in Paris and New York, it became clear that there is a significant division of labor. The 'creative team' that I will focus on below consists of four functions. Because of the variety of tasks and functions, I interviewed multiple individuals from each function. Third, I used the opportunity to speak to trend, design, and branding agencies. These additional interviews provided general information.

[131] Three interviewees did not give me permission to record the interview; however, notes were taken. One individual provided information via email (not included in count). The first interview was conducted on July 18, 2006 the final one on April 24, 2008. In total, 69 individuals participated.

4.5 Summary

Chapter 4 introduced to the methodology of the study. It started with a brief discussion of how to conceptualize 'the field' and 'the fieldworker' in order to characterize the specific methods that were applied. I discussed the benefits of conducting in-depth research interviews with industry experts and the triangulation with material from the industry and corporate press in order to enhance the validity of the conclusions. I discussed the general research design, the major research questions, and how I operationalized the acquired data. Finally, the organization of the interviews in terms of a timetable and interviewee recruitment has been presented.

CHAPTER 5

GEOGRAPHIES OF KNOWLEDGE IN THE INTERNATIONAL FRAGRANCE INDUSTRY: EMPIRICAL FINDINGS

5.1 Introduction

The practice approach to knowledge and the concept of sensible knowledge are based on the understanding that 'to know' is deeply connected with the characteristics of doing and, therefore, only partially cognitive but based on sensual perception and action (Schatzki, 2001; Gherardi, 2003, Nicolini et al., 2003a, 2003b; Strati, 2003; Gherardi, 2006, Ewenstein and Whyte, 2007; Ibert, 2007a; Gertler, 2008; Gherardi, 2009; Ewenstein and Whyte, 2009). In the fragrance industry, to know means to be engaged in sensible work processes that are crucial for the manufacturing of products through specific materials (see also Ewenstein and Whyte, 2007, 2009). In contrast to other cultural industries, experts in the fragrance industry depend on the use and connection of multiple human senses and faculties and in particular the sense of smell in order to create new products. The fragrance industry works on the basis of sensible knowledge that is practiced at the crossroads of craft-/task-based and creative knowing, for instance (cf. Chapter 2 and Strati's work; also Lave and Wenger, 1991; Amin and Roberts, 2006; 2008a, 2008b). However, both the practices of knowing as well as the repositories and spatialities of knowledge are far from clear. We will see that fragrances as sensual materials connect different practices of knowing. The creative process is distributed and performed beyond individual abilities.

At the beginning, I focus on the brand manager as an expert of branding with certain competencies and on the perfumer as the crafting expert who composes a fragrance for the cultural product. I zoom in on the particular role of brand management, which is a crucial activity for symbol analysis, symbol creation, and gatekeeping within the manufacturing company (Reich, 1991). Brand managers play focal roles within the production process and act at the crossroads of supplier, brand owner, retailer, and consumer. The supposedly non-sensual task of brand management stabilizes and orchestrates the creation of a perfume through decision-making and branding-as-marketing techniques where creative and expert knowing is key (Knorr Cetina, 1999; Amin and Roberts, 2008a). At the same time, this task is connected to the physicality and materiality of scent. Thus, the understanding of how sensible knowledge is practiced is relevant in this métier as well (Strati, 2007). I will elaborate on crucial practices during the product development and branding process.

In terms of the fragrance supplier, I look at olfactive creation of the creative team: creation is recognizable as a distributed and dynamic process. I stress that, as an outcome of the historical division of labor, the ‘creative team’ puts the traditionally centralized work and effort of the perfumer in perspective. The crucial functions of the creative team are sales, marketing, evaluation, and perfumery. These functions contribute to construct and shape the material and symbolic content of a fragrance (Boden, 1994; Bilton, 2007). I look at the objectives of the team members and list capabilities and practices of each practitioner. The functions have not been examined in terms of the practices of knowing; furthermore, the interrelationships in communities of practitioners and individual projects are not clear (Knorr Cetina, 1999; Gherardi, 2006).

The chapter starts with a brief synthesis of the existing literature examined through the practice view on knowledge; thus, the presented material draws from existing sources but adds also new values by the interaction of existing material with the literature on practices (e.g. Figure 5.1). Part 5.3 mainly draws from my empirical research and intertwines the findings with the existing literature in order to make a valid contribution. I follow a fragrance that is produced for the mass market on the journey during its typical development in order to examine practices of knowing and spatialities of knowledge. The focus is on where fragrances materialize and where they are a significant mediator of social relations (Knorr-Cetina, 1999, 2001; Ewenstein and Whyte, 2009). I synthesize knowing practices of the brand manager and the creative team, discuss the interactions as organizational repositories where the practices of knowing are done, and intertwine them with the developing spatialities. Finally, I introduce the 'brand ecology of knowledge.'

5.2 Experts and creative activities in perfume manufacturers and fragrance suppliers

5.2.1 The brand manager

The role

"Brands are generally described as creating a world of signs, identities and meanings in which 'marketers and advertisers attach images to goods'" (Lash and Urry

1994: 15).[132] In the fragrance business, cultural products are essentially constructed out of the connection between the registers of brand, targeted consumer, and materials (where scents belong to the latter register). The meticulous invention, engineering, and maintenance of meaning are challenges [133] because of the description and characterization of the registers by themselves and the relations between them.[134] Thus,

[132] The American Marketing Association (AMA) characterizes a brand as "a name, term, design, symbol, or any other feature that *identifies* one seller's good or service as *distinct* from those of other sellers. The legal term for brand is trademark. A brand may identify one item, a family of items, or all items of that seller. If used for the firm as a whole, the preferred term is trade name" (AMA, 2008; emphasis added). AMA also defines branding: "A brand often includes an explicit logo, fonts, color schemes, symbols, sound which may be *developed to represent* implicit values, ideas, and even personality" (AMA, 2008; emphasis added). Thus, branding is described as the process to shape a brand. Brands are relevant in numerous industries. In manufactured goods, for instance, brands add context and additional value to items. The semiotic content of a brand implies images and information – a brand is a representation and a number of goods can actually 'proof' the contextualized information in a brand. In contrast to cultural products, goods from manufacturing have often been discriminated against their technological and 'hard facts.' This is hardly the case for multi-sensorial cultural products. The perfume industry is a brand-driven market in terms of the performance on international markets and the attractiveness for consumers.

[133] The idea that brands are filled with meaning and meaning drives the 'economy of wants' (Bolz, 2005) is scrutinized in a market that is characterized by an overflow of products and an inherent over-symbolization. In contrast to the functional economy of needs, the economy of wants is driven by the desire 'to buy' and not simply 'to have' (Bolz, 2005). Thus, the focus shifts from having to buying and this re-calibrates and challenges the creative activities of the brand manager.

[134] Three major challenges during the process of the creation of meaning through branding are crucial. First, the diction is to create results that can be measured in quantifiable terms. Wood (2000) mentions the quantifiable concepts of brand value and brand loyalty. Brand value is "the total value of a brand as a separable asset – when it is sold, or included on a balance sheet;" brand loyalty is "a measure of the strength of consumers' attachment to a brand" (Wood, 2000). In order to develop brand value for the consumer, branding is about developing and maintaining a particular position so that a brand stays different from another. The intention is to create bonds between the consumer and the brand in order to transcend single purchases: the brand-loyal consumer builds long-term connections. It is about the constant description and representation of the qualities of a brand in products so that a particular brand image resurfaces. Brand value and loyalty are to be quantitatively abstracted so that the work of the brand manager is monitored and separated from other work. Second, brand development is situated between historical continuity and continuous change. Change hints towards the implementation of processes of qualification and re-qualification, which belong to the general process of calculation; consumers are enabled to constantly update their relationship with an interest in a brand and new consumers get interested (Lury, 2004; Callon and Muniesa, 2005). "Calculation starts by establishing distinctions between things or states of the world, and by imagining and estimating courses of action associated with those things or with those states as well as their consequences" (Callon and Munieza, 2005: 1231). Calculation is done in a three-step process based on detachment, association (based on manipulation and transformation), and result extraction. The intention to give the consumer a reason to consume is imprinted in a cultural product through slight alteration of existing products and the constant delivery with new products (see Hume, 2009). The ways and means of representing a brand are changing from time to time (if only slightly). In addition, the creation of wants is only successful through the process of remix (Bolz, 2002; Currah, 2006). The brand narrative changes according to one of the crucial contributors that are the sensual aesthetics, plot, character, and theme of a perfume (Vincent, 2002).

in the case of a perfume the question is how “the distinctive combination of various kinds of symbolic dexterities and knowledges” (Allen, 2002: 47) is invented, fabricated, and communicated for the potential consumer. Since the fragrance industry is an “economic sector that produce[s] information and images” (Mansfield, 2003: 179; also Burr, 2008), the question is not only what kind of attributes and codes are ciphered by specific materials. The focus is shifting from objects to practices (i.e. general understandings of production or consumption) in order to understand the industry (Ibert, 2007a; Partington, 1996). Here, the study of practices during the manufacturing of a perfume is significant; manufacturing implies, in particular, the two sets of activities of branding and crafting.

The brand manager is key to the creation and continuation of a brand story. Beyond the rather philosophical question who actually brands[135], branding is essentially a corporate activity done by marketing professionals. The term ‘brand manager’ is rather an informal description than based on the functional organization in a company.

Third, the aspect of remix is connected to the process of singularization (Callon et al., 2002; Callon and Munieza, 2005). Branding strategizes to let an often mass-produced good be perceived as distinctive and ready for personal attachment, attribution, and identification at the same time (Holt, 2004). A product “seeks to obscure homogeneity” (Sennett, 2006: 143). In order to develop its value for the consumer, the implied function of a brand as a symbol for particular characteristics needs to be effectively communicated and should imply the capability for individualization (Lury, 2004; Bengtsson and Ostberg, 2006). The creation of meaning is an institutional struggle between the manufacturer and the retailer (Lasn, 2006). The components of a perfume are characterized by different attributes and codes so that they can be bundled together (cf. Allen, 2002).

[135] This traces back to the question how brand managers are organized, trained, and motivated (Hankinson and Cowking, 1997). The understanding in the orthodox marketing and business literature is that a manager is as a ‘high priest’ organizing all branding. A more critical understanding conceives the brand manager as an ambiguity-coping co-author (Kärreman and Rylander, 2008). Bengtsson and Ostberg (2006) discuss that a number of brand authors exist such as popular culture (TV programs, magazines, movies, books etc.), stakeholders (competitors, labor unions, and retailers), and consumers (Bengtsson and Ostberg, 2006). Some of these co-creators as well as the productive/disruptive link between manufacturing and retail have been investigated in cultural studies and consumer research. Since a brand is negotiated and relational, the orthodox delineation of ‘producers’ and ‘consumers’ diminishes particularly in the case of cultural-product industries (Allen, 2002; Pratt, 2004; Scott and Power, 2004; Power and Hauge, 2008). Therewith, the productivist logic in economic geography is challenged (Pratt, 2004; Grabher et al., 2008).

Brand managers are usually marketers (see their characterization in Cochoy, 1998; Lury, 2004). They are typically exposed to college educations in business and management studies; in general, the brand manager is heterogeneously trained. While most managers have backgrounds in business or management education, their backgrounds are far from uniform (see also Lury, 2004). The initiation and enculturation of individuals into the segments of consumer goods and luxury goods production – depending on the brand – is seen as an entry point how and where individuals are professionalized on the job. Professionalization depends, to a large extent, on learning on the job. Brand managers accelerate their careers at different stages when they run through several different but related functions both at manufacturers as well as supplying companies. Some brand managers spent significant amounts of time in areas other than fine fragrance-perfumery but within the wider area of personal care or other fast-moving consumer goods (FMCG). Perfumers often develop social ties with their colleagues. However, such ties hardly exist in the case of the brand manager. Ties are more significant with other personnel that work for the brand. For the brand manager, brands are not only a spiritual and cultural glue during the manufacturing process, they also form an environment to shape and arrange the societal and communal bonds (Olins, 2003; Grabher, 2004a). The ultimate outcome and goal is to communicate within the brand ecology of knowledge (see below) that is coordinated around the fluid organizational boundaries of the brand.[136]

[136] A narrative that guides the actions of brand managers is connected with the discussion of marketers as symbol creators and symbol analysts (Reich, 1991; Cochoy, 1998; Lury, 2004; Bolz, 2005). Brand management is about the emphasis of certain aspects of a brand and communication of them in front of the consumer. From a temporal standpoint, de Chernatony (2009) presents a spectrum as one avenue to describe the process of branding. The spectrum consists of five stages: differentiation, positioning, personality, vision, and added value. In relation to the stages of differentiation, positioning, and

Burr (2008: 41) characterizes the professionals that brand and that are in contact with the different suppliers as “marketing people” including marketers and/or artistic directors (also in Lash and Urry, 1994; Lury, 2004). In some cases, ‘product managers’ are responsible for the creation of new items – however, this organization is rather product-specific. Within the major manufacturers, brands are organized in a similar fashion: the function of global marketing – i.e. the organization of the brand on a world-wide basis – is coordinated by brand management that oversees the global operations. The overall independence from the individual corporation is comparatively high and only certain functions exist on a corporate level for all brands. Most often brand managers or product managers are in charge of the creative development of the overall perfume brand and individual products that are added to the stock of existing products of the brand. The brand manager oversees as a coordinator the creative development of

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personality, the brand manager is far from being free to invent the creative direction of a brand. The marketing literature gives two reasons for that. First, the diction of branding is to allow creative continuation along specific longitudinal trajectories and, second, a brand needs to be open for individual attachment. The understanding is that brands need to be carefully maneuvered in order to sustain potential economic havoc from mis-communication and in-coherence in the marketplace. This ‘care’ is increased in the coordination processes with the legal brand owner and suppliers. Brand managers qualify products through the management of relations between attributes such as place, packaging, promotion, and product qualities (the orthodox marketing mix; Lury, 2004; Callon and Munieza, 2005). The example of *Grey Goose Vodka* in Kerner and Pressman (2007) helps to grasp the idea (see also the comparison in Gobe, 2007: 103-107). The building of cachet and differentiation in comparison to other Vodka brands is engineered: *Grey Goose* comes in a frosted bottle and is shipped in wooden crates just like wine which relates to the value appearance, it is produced in “the great Vodka region of France” which signifies prestige, it has a high price, and it received attention through the “World’s Best Tasting Vodka”-award of the Beverage Tasting Institute (all in Kerner and Pressman, 2007: 10). Furthermore, the Vodka was a give-away at a charity event and, therewith, reached the target audience. All this helped to let the consumer understand the brand in the marketplace is a particular way. The economic success is a blueprint of that. However, a branded product talks about itself in a brand narrative that is determined by sensual aesthetics, plot, character, and theme (Vincent, 2002). The narrative is constructed in ways that enable general recognition and individual attachment. For instance, perfumes that are launched by mass brands are often easy to approach since the plot is understandable and, in an aesthetic and olfactive sense, typically a re-interpretation of earlier successes (Ellena, 1991; Burr, 2008). A brand maneuvers between an internal historical and traditional set of values, ideas, and representations and an external abstracted reality that is affected by trends. Depending on the history and future intention, brand management finds its orientation along the internal or external realities in the branding strategy and follows current lifestyle or insists on its own determination of lifestyle.

a brand between the upstream and downstream environments of manufacturing, distribution, and retail. However, brand managers interact with two important sets of company-based colleagues. First, brand managers are in close interaction with the legal brand owners (e.g. Ralph Lauren or Giorgio Armani himself, for instance) and brand associates that represent, oversee, investigate, and report back from individual markets.[137] Second, brand management collaborates with the fragrance development department. This department in a manufacturer typically works for all brands. Olfactively-trained personnel in this department initiates the interactive process with suppliers by writing perfume briefs; fragrance submissions from fragrance suppliers are tested according to stability and objective characteristics of the submitted fragrances. These experts oversee the creative work of the briefed suppliers and advise the brand manager in terms of technical research and olfactory decision-making (see also Berthoud et al., 2007). Thus, the artistic coordination per brand and per product development is with the respective brand manager.

The activity: branding

The recent interest in how and where individuals are trained in order to become legitimate professionals in a community of practitioners (Gherardi, 2006; Gertler, 2008; Faulconbridge and Hall, 2009) has received more attention than a focus on what brand marketers or managers actually do during the activity of branding. Rather than a term of a professionalized function, brand managers are characterized by what they do.

[137] Thus, during the production of a perfume the brand manager has to mediate between the goals of the legal brand owner and the brand licensee. The different brands and their business plans are coordinated on a corporate, inter-brand level as well as per brand. The definition of market is fluid here: while 'a market' can be one country, in other cases 'a market' is summarizing multiple countries such as 'Eastern Europe.'

I intend not to come up with 'best practices' of organizing brands and branding in order to make products successful.[138] Instead, I characterize branding as a social accomplishment. Branding means social (inter-)action and characterizes social ties in their spatialities. It belongs to the wider field of marketing and is crucial for the manufacturing of cultural products. The purpose of branding is to charge a product with ethereal qualities and build a link between the 'brand-less character' of an object with specific images so that a particular brand image develops that is communicated through a product (Pavitt, 2000; Lury, 2004; Power and Hauge, 2008). In the short run, the goal is to maximize sales per brand and to guarantee a high and quick return of investments. The ultimate goal in the long run is to increase the credibility and authenticity of a brand in comparison to other brands (= brand positioning) in order to build long-term linkages with the final consumer. Branding characterizes a postmodern economy with cultural products where the trade with symbols and experiences is key; this holds particularly true for the manufacturing of perfumes (Holt, 2006; Blackson, 2008).[139] The symbolic association instead of the pragmatic description of an object is "at the heart (…) for many of the goods we [i.e., consumers] buy and sell" (Pavitt, 2000: 16; Lury, 2004). Branding includes the development and alteration of signs and symbols.

Usually, branding has been understood as the 'making of meaning' (Jackson, 1999; Allen, 2002; Pike, 2009a, 2009b). In the fragrance industry, it is argued to be crucial

[138] Branding does not exist as a normative fashion, a managerial tool, or as in a cook-book. Furthermore, it is not constructive to condemn brands and branding as characteristics of a knowledge-intensive capitalism (Amin and Cohendet, 2004; Sennett, 2006; Kärreman and Rylander, 2008; Power and Hauge, 2008).

[139] Classen et al. (1994: 203-205; also Rodaway, 1994) describe smell as 'the sense of the post-modern' since it is "difficult to localize, hard to contain [and with a] character of flux and transitories." Post-modern design targets "emotional experiences, decorative opportunities, and the technology that make up our lives. It is about the evolution of society and about people and their senses" (Gobe, 2007: 9-16).

that communication is enabled through the demonstration of meaning in a visual and verbal economy: brand, consumer, and scent are idealized and abstracted from their fluidity (Lash, 2008).[140] Thus, involved professionals align multiple materials and materializations in order to brand.[141] The lower and higher human senses are interacted by the brand manager. Fragrances are put to work as branding devices: consumers recognize and develop emotional bonds on the basis of the olfactive characteristics (Falk, 2007a; Lindstrom, 2005). The solution of the challenge how to operationalize, generalize, and standardize scents so that they can be used accordingly has been the inventorization of scents: brands that plan to launch a product according to a specific concept integrate materials in order to represent a concept olfactively (Rodaway, 1994; Gobe, 2007). Branding implies the uniform communication of material and metaphysical components in a perfume in order to raise credibility and authenticity.

However, branding takes place within a context of financial pressures and uncertainty. First, the launches of perfumes are connected with significant ex-ante expenses of the manufacturer and the goal is to maximize the return of investment over a short period of time. Second, the aspect of uncertainty has three connotations: communicability, materiality, and organizational challenges. First, the ability to communicate about scents is limited (Rodaway, 1994; Burr, 2008; Gilbert, 2008). A scent is not a word and communication about olfactory impressions remains always a verbal and therefore partial reduction. The restrictiveness is typically high for corporate

[140] The fragrance industry works on the basis of abstractions. The brand, the consumer, and materials are essentially abstractions. Brand, consumer, and scent do not exist by themselves, they are abstracted from reality and generalized; this is done with the help of various "measuring devices" (Lury, 2004: 23).

[141] Branding of perfume is characterized by additional challenges, since this cultural product is deeply intertwined with and dependent upon sensible knowledge. In order to develop its individual value, the implied function of a brand as a symbol for particular characteristics needs to be communicated, recognized, and individualized effectively (Lury, 2004; Bengtsson and Ostberg, 2006).

functions that have limited olfactive training. Second, the materiality contributes to this problem. A fragrance is understood by the sense of smell and the approaches to talk about experiences from fragrances ambiguous. The materiality of a fragrance demands numerous rounds of interactive communication with external suppliers and olfactive advisors in-house in order to create a mutual understanding of a composition. However, third, the communication about scents is performed across corporate boundaries. Different parties have different objectives, intentions, and languages. They are characterized by their individual corporate cultures and their geographic heritage.

To summarize, a brand is a dynamic and changing construct at the crossroads of producers and consumers. The brand manager performs branding in order to increase the authenticity and credibility of a brand. However, branding is complicated in this setting because of the multi-sensorial nature of the emerging cultural object. Beyond the descriptions above, it is not clear how to envision and understand branding in the fragrance industry based on the practice view on knowledge in economic geography.

5.2.2 The 'creative team' in a fragrance supplier

5.2.2.1 Introduction

Within the fragrance supplier, four experts approach and shape a fragrance through their unique skills, competencies, and intentions: the perfumer, the evaluator, the salesperson, and the marketer.[142] I call this organizational repository the 'creative

[142] Pybus (2006a: 134) mentions in his discussion of the business-getting chain that "deciphering the need and creating and presenting the fragrant offering" is key; however, "how it is presented will vary tremendously depending on the client." In contrast to the supply chain, which is based on the purchase of raw materials, "competitively costed formulae, total quality production techniques and a customer

team.' For instance, the perfumer has univocally been characterized as 'the artist' that has to be nurtured in order to enhance creative productivity.[143] However, the work of perfumers is orchestrated by the work of the other members of the creative team who practice their knowledge with different competencies (Curtis and Williams, 2001; Nicolini et al., 2003).[144] The functions of evaluation and perfumery are defined through their expertise in olfaction; they characterize, discuss, and create scents according to their specific technical and olfactive structures (including notes, accords, and chemical formula). Marketing and sales are experts on the overall business of trade and market research in the industry; they develop competencies to characterize, document, and represent fragrances visually and verbally without the ability to make informed comments how to change an olfactive structure.[145] Curtis and Williams (2001: 288) locate diverging intentions in the goals of the perfumer and the non-olfactive functions: perfumers approach fragrances artistically and through their passionate motivation to compose while the functions that focus on accounts are mainly production- and sales-driven.[146] In essence, perfumery and evaluation focus on the "sensory body (…) as the

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delivery and service department," the focus in the business-getting chain is to "work on a client's brief with creative teams developed to deliver winning products" (Pybus, 2006a: 134). The author (2006a: 134) recognizes the core team that responds to a brief as marketing, perfumery (creative and technical), and evaluation; he stresses that account managers "relate[s] with the client work to interpret the brief."

[143] However, no status hierarchy of the practiced knowledge can be implemented: sales does not out-compete perfumery because of its focus on financial performance. The importance and significance of certain functions varies between fragrance suppliers and geographical markets so that a company has a very strong marketing department versus another one with a strong sales component, for example.

[144] The professionalization is significantly different from each other. Gertler (2008: 210) adds: "A large part of the educational process is the imparting of a vocabulary of terms and concepts, a portfolio of analytical frameworks and models, and a dominant mindset or worldview that shapes the interpretive outlook of all those who graduate with a particular kind of degree."

[145] It is one of the defining characteristics that a role switch of professionals between the personnel with and without olfactive training is not possible. This is the case because the particular training in olfaction takes a significant amount of time and effort (Calkin and Jellinek, 1994; Curtis and Williams, 2001).

[146] Thus, the mentioned service logic (Grabher, 2004a, 2004b) of a fragrance supplier is added by an artistic logic that the perfumer develops in contrast to the other two team members.

primary research tool" (Knorr Cetina, 1999: 95).[147] The functions of marketing and sales are examples of the "acting body [that is] an information-processing machinery" (Knorr Cetina, 1999: 97). Thus, the creative team is an example of a sensory division of labor into sensory and acting bodies. Curtis and Williams (2001) propose that the intentions and logics of artistry and sales necessarily have to be aligned. In contrast to the increased out-differentiation of tasks and functions, the professionals interact through common knowledgeabilities (see also Pybus, 2006a); ideally, they exemplify "experienced bodies [that] calls attention to the temporal and biographical dimension of embodied work" (Knorr Cetina, 1999: 99).[148] Interactions between members of the departments recur in project work, particularly between the functions that are organized around accounts. Basic mutual understanding is necessary. Grabher (2004a) mentions the necessity to have sense-making capabilities of each other's perspective and approach in order to assure meaningful interaction and fruitful collaboration. However, cognitive distance, i.e. the difference in cognitive function (Nooteboom, 2000: 73), that exists between practitioners is, as in the example of advertising that Grabher investigates, rather preserved than reduced over time (Grabher, 2004a). This has to do with the specificities of becoming a practitioner in the particular area: for example, a marketer in a fragrance supplier can not quickly become a perfumer because of the significant training and the necessary talent.

[147] The sensory body inspects and inquires what is recognized and experienced through the human senses; in this case, the sense of smell receives particular interest.

[148] For instance, an account manager has basic experiences in terms of olfaction and a perfumer knows about the generalities of a particular account. Gertler (2008: 209) adds in this context: "Given that the basic building block in this process is the individual worker/manager/researcher, it stands to reason that particular attributes of the individuals involved will have an important impact on their ability to understand one another as they engage in collective learning and innovation processes."

In contrast to the setup of the perfumery department, most fragrance suppliers organize the departments of evaluation, marketing, and sales according to particular accounts, i.e. based on the client or brand. This organizational design stresses strong ties between the manufacturer and the supplier as well as the manufacturer and the particular members of the creative team (Grabher, 1993; 2002). The experts are organized in corporate departments that are located in fine fragrance studios in all major markets. These studios vary in size and are organized by function: fine fragrances are created in the studios while functional fragrances are created in New Jersey or in the 'Cosmetic Valley' outside of Paris (Berthoud et al., 2007). The creative team works pro-actively and re-actively; I narrow the discussion down to re-active work. [149]

The following paragraphs focus on the knowledgeabilities and activities of the four experts. Figure 5.1 presents my synthesis of the four practitioners and their roles in shaping the epistemic object. The first part on the perfumer is more extensive since the role is crucial for a fragrance supplier.

5.2.2.2 The perfumer

The role

The perfumer is central for the creation of a fragrance. Perfumers contribute with their particular abilities and capacities to construct perfume. The art of perfumery has traditionally evocated comparisons with other artistic professions (see, for instance,

[149] Pro-active work means that a supplier actually approaches clients to propose a new fragrance or an olfactive concept to the client. This kind of work demands an in-depth background both of the client's existing portfolio, potential new fragrance concepts, and promising new consumer markets. The diction at this point is, yet again, that the client is key: the creative team has to know the brand and its portfolio, the potential to propose an olfactive concept.

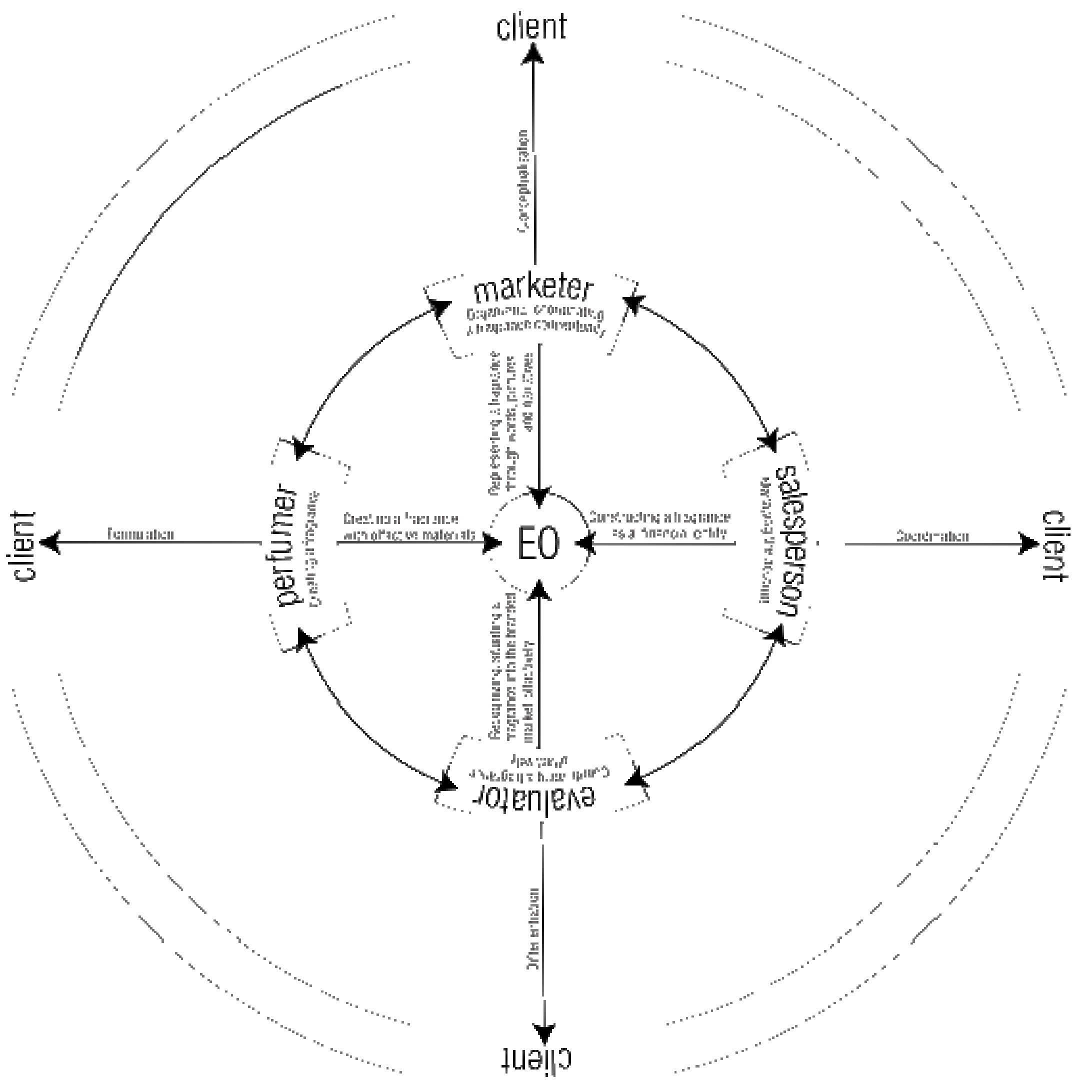

Fig. 5.1 The creative team: abstraction of functions to shape perfume

Berthoud et al., 2007; Krell Kydd, 2007). [150] Connections to architecture, art, and music have been explored in order to make sense of what a perfumer does. Laudamiel (in Berthoud et al., 2007: 102; see also Calkin and Jellinek, 1994) characterizes this work: "In short, he or she is an accomplished architect except that the resulting work is appreciated by one's nose rather than one's eyes, and the effect on the mind becomes as powerful if not more."A perfumer is described as an artist and scientist, a rational designer in chemistry and a connoisseur or composer (Laudamiel et al., 2008).[151] The aspect of chemistry and science can be summarized by the formulation techniques that perfumers work with (see also below). They are based on the particular ingredients in a perfume and follow, in their basic setup, logical processes: a perfume is usually organized according to major notes (= single smells) that guide the perfumer's action during the blending into accords.[152] These accords are the theme of a perfume. Thus, upfront a new fragrance can be thought based upon its representation through notes and accords. In contrast, the aspect of craft, art, and composition is summarized through the inspiration and interplay of fragrant materials.

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[150] In public, perfumers have been understood as creative agents and artisans that are engaged at the crossroads of the exact science of chemistry and the independent work of art (Turin, 2006 ; Blackson, 2008). Boden (1994) characterizes the two major cornerstones of creativity, namely novelty/difference and freedom to express a talent or vision; against this background, the true 'creativity' of a perfumer can be questioned since the freedom of expression is restricted and channelized.

[151] Wolfson (2005: 858) points out that the "scent is like an image" and describes the development of a perfume as "black art" with perfumers who "have a combination of tremendous memory, skill, and a willingness to experiment."

[152] A note is a "characteristic odor of a single material" (Newman, 1998: 41). An accord is a "balanced combination of several notes blended together" (Newman, 1998: 60); for instance, a *pentacord* has five notes that are created with a specific olfactory experience. Newman (1998: 41) characterizes the perfumer as a composer, arranging a three-part fugue – out of a base, heart, and head note (also called top, middle, and base note) – which is arranged temporally according to their evaporation. Laudamiel et al. (2008: 1160; emphasis in original) connect perfumery to music when they stress that "like music, the *Art of Perfumery* plays with the impalpable; molecules and naturals are our instruments, whose odor facets are our notes. Like music, the *Art of Perfumery* juggles with accords and pitches, and with the notions of time and space." Accordingly, a fragrant composition has tonal and atonal characteristics based upon harmonies and disharmonies (Dove, 2008; Laudamiel et al., 2008).

Composing a new fragrance is based on iteration and improvisation.[153] It is not a linear and coherent development but rather based on rupture and revision. This has to do with the caprices of molecules and, in accordance, the organization of work processes. While the perfumer might imagine a smell when she formulates, the actual smell of the created mix sometimes differs from the imagination.[154] “Fantasy. It’s the difference between a chemist and a perfumer. You dream your perfume before you write the formula. It’s not just chance. It’s not just exact science” (Newman, 1998: 49). The dreams are based on the caprices of the muse: a composer is also a bricoleur, thus, a playful organizer of fragrant materials.

The work of a perfumer can be conceptualized according to where they work and what they create. A first differentiation is between school-trained and self-trained perfumers (see below); a second differentiation distinguishes between ‘independent’ and ‘industrial perfumers.’ Industrial perfumers work on the creation of branded perfumes within the large fragrance suppliers.[155] Furthermore, different types of perfumers exist according to what they create. Curtis and Williams (2001) distinguish between creative and technical perfumers. Creative perfumers work in fine fragrance studios on the formulation of fine fragrances. In contrast, technical perfumers are characterized by the ability to solve problems: “how to realize the new fragrance in a

[153] A linguistic connection to music exists: perfumery speaks about notes, accords, and compositions. James Bell, senior perfumer at Givaudan in 1998, “puts on recordings by his favorite jazz artists, listening for musical notes that he can replay as fragrance notes” (FastCompany, 1998).
[154] Nicolini et al. (2003b: 23) mention “breakdowns and “disturbances” that are not only observational occasions (…) but also reflexive learning and fundamental innovation opportunities.” The perfumer might be inspired by this unexpected turn and continues to work from there or might redirect the smell in the intended direction. The perfumer’s experimental approach is based on iterations and imaginations.
[155] In this context, perfumers are described as “professional ghosts” (Burr, 2008: xvii/xviii) because they are traditionally under-emphasized as creative artists in contrast to marketing and promotion of the brand (i.e. designers and celebrities, for example). The fragrance suppliers employ the majority of all perfumers (= the industrial perfumers); in contrast, only a few perfumers do not work for the industry but by themselves on their own, individual creations.

consistent and cost-effective way, in day-to-day production" (Curtis and Williams, 2001: 357). These two types of perfumers differ in their work approaches and freedom to create. Laudamiel (in Berthoud et al., 2007) presents similar differentiations of perfumers. He generalizes perfumers according to their motivation to create. The artist-perfumer is free to develop a scent as she likes; the craftsman-perfumer follows certain guidelines. In fact, perfumers are often involved in both ways of creating. In order to limit complexity, I focus on industrial perfumers who work on fine fragrances.

The activity: crafting

Herafter, I discuss the meaning of practicing perfumery that I summarize under the term 'crafting'. I discuss the aspects of passion, good work, and individual learning before I elaborate on what and how perfumers become knowledgeable practitioners.

A key motive and driver for understanding the craft of perfumery is the consideration of it through dedication, enthusiasm, engagement, and vocation (Calkin and Jellinek, 1994; Gherardi et al., 2007; Krell Kydd, 2007; Sennett, 2008; Kubartz, 2009). These four qualifications can be summarized under the term 'passion' that motivates the engagement with fragrant materials (Amin and Thrift, 2002, 2004, 2007; Gherardi et al., 2007). Passion is inscribed in the understanding that to be engaged in perfumery is driven by the main intention to do a good job for its own sake and not for community appreciation, competition, or financial remuneration (Landri, 2007; Sennett, 2008).[156] The work with materials and the materializations of creative action through

[156] Sennett (2008: 97) stresses that "the pursuit of quality is also a matter of agency, the craftsman's driving motive. But agency does not happen in a social or emotional vacuum, particularly good- quality work. The desire to do something well is a personal litmus test; inadequate personal performance hurts in a different way than inequalities of inherited social position or the externals of wealth: it is about you."

formulation plays a particular role to become and stay passionate. Here, the instrumental understanding of molecules and compositions is juxtaposed by the continuous interpretation and re-interpretation in creative formulations.[157]

However, the word passion implies the challenge that perfumers face in two directions: obsession and organizational settings. First, Sennett (2008: 243) mentions "obsessional energy" of the craftsman: this is meant when the perfumer thinks about what to do about a formula in bed or while he drives to work (Siegel, 2007). 'Work' is, as a conceptual segment of the overall daytime, hard to separate from 'life-time' or 'leisure-time' (cf. the discussion in Ibert, 2009). Second, the organizational setting is a challenge for passion and passionate workers. Often, the setting implies the 'dark sides' of passion where "the desire to do something well for its own sake can be impaired by competitive pressure, by frustration, or by obsession" (Sennett, 2008: 9; also Gherardi et al., 2007).[158] Thus, in contrast to the aspects of belonging to a community and engaging in competition as additional drivers for passionate work, the characterization of recurring work for clients in perfumery potentially streamlines the dedicated good work of the perfumer (Sennett, 2008). It is not about blunt work fueled by passion but about the integration of passion in increasingly rationalizing environments (Kubartz, 2009).

Furthermore, passion of the perfumer is also related to the consumer's craft knowledge, which is "a sensory appreciation of a product's qualities, a modest understanding of different production techniques, and the imagination to construct a product's 'back story'" (Zukin, 2004: 185).

[157] For instance, a perfumer might test and experience the behavior of the raw material 'Bergamot' (which belongs to the Citrus family) in different compositions out of his or her passion for the ingredient. Perfumers become particularly aware of how ingredients behave by 'playing' with them and understanding how they perform. In this context, materials behave differently depending on the quantities of the other materials; this lets perfumers renew their interests in particular molecules on a regular basis. It characterizes the interactive materiality of fragrance substances.

[158] Sennett (2008: 38) adds: "When practice is organized as a means to a fixed end, then the problems of the closed system reappear; the person in training will meet a fixed target but won't progress further."

Second, related to the aspect of passion are the aspirations and goals that recur anew in each project and that are intended to result in 'good work.' However, 'good work' can be understood and more objectively recognized through aspects such as fragrance stability, longevity, and complexity (Burr, 2008). These aspects are significant for manufacturers because they allow quantifiable results and also have potential impact on the decision of which fragrances win competitions. Furthermore, 'good work' contributes to the particular understanding of a perfumer by her colleagues.

Third, learning individual skills and capacities stands in the center of attention; this is similar to other craft-/task-based communities. However, in contrast to other craft objectives, e.g. learning through improvisation (Orr, 1996; Sennett, 2008), the task of perfumery is less communal and objective: recognition of a fragrance relative to its intended end and the urge to change a fragrance formula are, at first hand, recognized by the sole perfumer. Through the alteration of a formula, the perfumer understands the behavior of a particular molecule within a composition. This understanding is partial to begin with and the recognition and appreciation of a specific molecule changes over the course of time. The perfumer actually compares the olfactory creation with an intended picture of the scent. Thus, the craft of perfumery remains rather complex, 'magical,' or 'mystical' for non-practitioners in contrast to other crafts that focus on knowing and learning through visual, verbal, and haptic senses (Lave and Wenger, 1991; Cook and Brown, 1993; Strati, 2003). Communal bonds beyond the community of the olfactively-trained are challenged (Amin and Roberts, 2008b; Gertler, 2008).

Perfumery demands a long period of in-depth training where specific skills are sharpened and educated. The perfumer completes training that focuses on tasks that target the capabilities to make use of the sense of smell and the human body as the organ of experience. This attribution leads to questions of how a perfumer is trained and what she does in order to become a knowledgeable practitioner (Gherardi, 2006).

The training of an industrial perfumer has become standardized through a more-or-less formal education, enculturation, and elaboration of talent in perfume schools.[159] Social and cultural heritage is increasingly uncoupled from the becoming of a practitioner (cf. Lave and Wenger, 1991).[160] The workshop moved from the family home to private institutions (Sennett, 2008). Large fragrance suppliers (also some manufacturers) run perfumery schools; in addition, *The Institut Supérieur International du Parfum, de la Cosmétique et de l'Aromatique alimentair* (ISIPCA)[161] developed as a central institution. This shift characterizes a change in terms of the geographies of professionalization and the role of schools as centres of knowledge creation (Ewenstein and Whyte, 2007; Ibert, 2007a; Hall, 2008; Faulconbridge and Hall, 2009). Similarly, it shows how professionalization has shifted from self-training where formalization was little to an "intense and well-planned instruction" (Calkin and Jellinek, 1994: 11).

Newman (1998: 53) and Calkin and Jellinek (1994) describe what students learn in perfume schools: the raw materials and their classifications, the technique(s) how to

[159] The traditional way of getting into the fraternity of perfumers was based on family relations (compare with Lave and Wenger, 1991). Perfumers were born into 'perfume families' and the skill to formulate was intertwined with the overall socialization at home (Newman, 1998; de Feydeau, 2006; Sennett, 2008). Working, training, and living were closely connected (Sennett, 2008). The system worked on a basis of nepotism and patronage. An interviewee spoke about 'perfume aristocracy' in this context (Perfumer, June 2007; translated from German by the author).

[160] Reasons for this are the upper market characteristics (more products, more brands, more markets), the generally higher demand for perfumers, and the globalizing strategies of the major fragrance suppliers.

[161] *The Institut Supérieur International du Parfum, de la Cosmétique et de l'Aromatique alimentair* (ISIPCA) at the University of Versailles, France was founded as ISIP in 1970 by Jean-Jacques Guerlain. One requirement to enter a perfumery school is the demonstration of a background in chemistry. This is, actually, contrasted by a majority of older perfumers without those backgrounds. This discrimination leads, as Turin explains, to a potential lack of attendance by more art-oriented students (Turin, 2006: 19).

smell, how to develop a vocabulary of fragrances and for scents, the setup of classic perfumes and the different fragrance families, the chemistry of fragrance, how to reconstitute an existing scent, and how to construct a new scent.[162] Doing the craft of perfumery is deeply connected with materials; materiality and the affinity to experience and experiment with single ingredients and compositions in their materialization are significant (see also Cook and Brown, 1993; Strati, 2003, 2007; Sennett, 2008). However, doing perfumery is not based on cognitive memorizations of materials; the example of a perfumer's diary (Dove, 2008) or workbook (Ellena, 1991) shows that memories of scents are personalized and remembered through the description of words and feelings that an individual develops through a material.[163] Personalization actually qualifies the term 'school' in this context: in contrast to the typically cognitive functions of students that are trained and enhanced at a school and are tested on a regular basis, such tests are, only to a degree, possible as well as intended at a perfumery school.

[162] Furthermore, Sennett describes the shaping of three crucial abilities of a craftsman during the training period (Sennett, 2008: 277-280). These are the abilities to localize (i.e. where is something happening?), to question (i.e. why is it happening there?), and to open up (i.e. what can we learn from it through abstraction?). Sennett (2008: 277) says: "The first involves making a matter concrete, the second reflecting on its qualities, the third expanding its sense. The carpenter establishes the peculiar grain of a single piece of wood, looking for detail; turns the wood over and over, pondering how the pattern on the surface might reflect structure hidden underneath; decides that the grain can be brought out if he or she uses a metal solvent rather than standard wood varnish." This can be applied to the perfumer as well. During her career, the perfumer locates a fragrant stimulation first in the nose and, only after significant training, in the brain (from smelling to thinking a fragrance). She gets to know certain materials until she finds out about their different behavior and performances in other compositions; and she actively tries to challenge some materials by purposely bringing them in novel compositions.

[163] The understanding of a sensual experience through fragrant materials remains restricted to the individual sensibility and recognition and is only abstracted through verbal or visual expressions. Dove (2008: 67) explains that perfumers use a diary to "notate the thoughts and associations that each odour evokes, so that when they smell the odour again they can refer back to the book. To illustrate this point, when I first smelt [sic!] patchouli I recalled a fallen tree in the wood behind my grandparents house – damp earth and decay, wet soil and worm-cast." Thus, a diary helps to recall olfactive experiences.

In addition, the student learns the "practice to achieve and [the] practice to maintain" (Calkin and Jellinek, 1994: 12). Materials are learned.[164] Challenging the sensible knowledge of materials is a life-long achievement.[165] Over time, the apprentice learns to understand and anticipate the behavior of certain materials in compositions and how to make use of them. One way to do that is to learn the behavior of certain ingredients by comparing different functional groups of fragrant products: how does a note behave in a fine fragrance versus an 'application' such as a shower gel or a candle? The relationships with materials are, in general, hard to communicate and do not easily transcend from the individual recognition. This enhances individualization but challenges communication that is, in contrast to other craft environments, less universal and objective (Cook and Yanow, 1993; Amin and Roberts, 2006). A non-existing objective language of the sensory stimulation of smell accelerates the difficulty to interact with others. I will document below that perfumers are trained to describe fragrance materials and compositions verbally and that the practice of 'talking' about materials and materializations is a key challenge and learning lesson for the student at a perfumery school (see also Lave and Wenger, 1991). In fact, knowledgeable talk about scents is key to act in the professional community.

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[164] Learning is described by the *Givaudan* perfumer Jean Guichard at the example of the Jean Carles-method: "Here [i.e. in every learning process] our nose will be slowly getting (acclimated) and slowly improving. It (requires) continuous work; exercise is necessary every day. Exactly as musicians need to practice scales with their fingers, perfumers need to practice raw material scales with their nose" (in Krell Kydd, 2007: 41).

[165] Two aspects are connected: first, the individual memory-building capacities through the connection of a scent with a word, memory, or place are challenged by the abilities to abstract. Second, this qualifies the interaction and understanding of materials in the particular case of perfumery: the recognition and memorization is not and can not be objective but is based on personalization. Actually, the intimate relation with natural and synthetic molecules, their smells, and their significance and role in compositions let the trainee develop particular individual relationships with materials and ways and means to formulate. Calkin and Jellinek (1994: 11) mention: "in perfumery, as in painting, photography, or music, there are no set rules of technique" so that "no two perfumers work in precisely the same way."

While the reconstitution of existing scents belongs to the early stages of learning how to compose (see the discussion of 'matching' in the footnote above), the ability to formulate individually takes much more time. Creating a fragrance faces several challenging tasks. First, perfumers have to document their creativity in formulations. It is a complex and laborious process with specific formulation techniques[166] and a mixed integration of the usual steps of writing down formulas, sampling, smelling, changing formulas, smelling again etc. (Ellena, 1991; Roudnitska, 1991; Calkin and Jellinek, 1994). This has to do with the aspect that the behavior of each note in a fragrance is difficult to anticipate. Fragrant ingredients behave unexpectedly so that a gap exists between the written formulation (resembling the fragrance that the perfumer thinks of) and the composed fragrance. Therefore, a fragrance demands numerous reiterations and revisits.[167] Over time, the perfumer develops the ability to anticipate how a material behaves but the complexity of mixtures always challenges 'truths' and 'beliefs.'

Second, perfumery schools provide only basic training of a perfumery apprentice. Sennett (2008) characterizes the typical period of a craftsman as a three-part training period from apprentice to journeyman and, thereupon, master. Only a small portion of the students start to work in the segment of fine fragrances; most of the trained perfumers become, for instance, evaluators, technical perfumers, or work in related domains; these domains require different qualities of the perfumer. Fine

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[166] Examples of such formulation techniques are given by Laudamiel (in Berthoud et al., 2007: 98-102; also in Krell Kydd, 2008) when he mentions the Jean Carles-method [learning natural and synthetic components through similarity and contrast; formulating a fragrance according to the volatility of the ingredients according to the top-middle-base logic], the remix method [formulating in terms of remixing an existing formula or mixing well-known formulas; see 'matching' in Calkin and Jellinek, 1994], and the raw material method [formulating based on the inspiration of one/a small set of key materials]. Jean Carles was a well-recognized perfumer that created important artifacts (Dove, 2008).

[167] However, perfumers are not trial-and-error-based mixers; in reverse, they are olfactive architects with specific techniques to "dress up" a scent (Laudamiel in Berthoud et al., 2007: 102; see also below).

fragrance perfumers learn subsequently though experience and exposure on the job during a stage of legitimate peripheral participation (Lave and Wenger, 1991; Ewenstein and Whyte, 2007).[168]

During this stage, perfumery school alumni usually work with one or more mentors. Young perfumers often work with more than one mentor when they formulate for different products; at the start of their career, they tend to work on projects in different product category areas in order to learn from varying requirements. The collaboration with mentors is typical for environments of task- and craft-based knowing (Amin and Roberts, 2008a) and intends to train the young perfumer holistically: it is about composing, talking about compositions, competing with other perfumers, dealing with clients, organizing multiple projects, traveling between fine fragrance studios, and connecting scents, brands, projects, managers, and manufacturers in an overall view of the creative business. Calkin and Jellinek (1994) add that the mentor is a senior perfumer that maintains the young perfumer's enthusiasm.[169] Furthermore, this engagement facilitates capacities to train and share "a community-specific language, relating stories, building strong ties of reciprocity, trust, and dependence, drawing on facial, tactile, and emotional contact" (Amin and Roberts, 2006: 9).[170] Lave and Wenger (1991) mention that peripheral legitimate participation contributes to develop a

[168] Lave and Wenger (1991: 29) describe legitimate peripheral participation that "provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts, and communities of knowledge and practice. It concerns the process by which newcomers become part of a community of practice. A person's intentions to learn are engaged and the meaning of learning is configured through the process of becoming a full participant in a sociocultural practice."

[169] Calkin and Jellinek (1994: 12) explain that mentors are "instilling in them a spirit of inquiry, while providing them with the discipline and sufficient information to allow them to make the rapid progress that will fuel their excitement and creative self-confidence." For instance, the mentor is challenging the developing preferences for certain materials: instead of just abolishing some materials from the palette of ingredients, the mentor recommends to work with materials that the young perfumer might be opposed to.

[170] Amin and Roberts (2006) stress the significance of the specificity of a *particular* language that helps to communicate knowledge about scents, for example.

professional identity and a form of membership through enculturation. The intention is to lead the perfumer towards the stage of full participation and mastery of the subject; at the same time, it is about a creative stimulation through discussions with the mentor and colleagues for the reproduction of the community as well as the individual definition within the territory of perfumery (Lave and Wenger, 1991). Thus, a mentor is not an instructor but an accomplice that uses the same vocabulary for practice.

Over time, the young perfumer on her way to full participation learns to answer questions that formulas and formulations inherit by herself. The perfumer constructs a career out of the use and work with certain ingredients, approaches to formulate, actual compositions, portfolios of compositions, and sympathies with particular brands. In addition to Sennett's remarks (2008), the component of passion deserves an addition in terms of the management and organization of projects by the perfumer. It often takes up to ten or fifteen years until a perfumer is allowed to work on major projects.[171] Thus, the setup of particular curricula and the emergence of certain schools and locations where industry perfumers are trained (Faulconbridge and Hall, 2008; Gertler, 2008) moved perfumery towards a professionalized craft.[172] Perfumers are increasingly mobile in order to experience different fragrance suppliers and their ways to create a fragrance.

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[171] This has not only to do with the specific organization and hierarchical structuring of the craft, but also with the monetary values of big projects.

[172] Two examples for this change are presented. 1), perfumers do things they have not done before. The traditional focus of perfumers was to compose through the use of the olfactory organ (e.g. in Morris, 1984: 269). Morris (1984: 269) mentions that "the great perfumes of the twenties and thirties were created at consoles such as these [cf. console on a picture], filled with vials of essential oils and products of synthesis, weighed, and evaluated on blotter paper strips. Today, the scale is electrical, and most of the components are assembled by an assistant in an adjoining room." The specific setup of the organization of a workday of a perfumer has changed (Siegel, 2007). In addition, perfumers are largely involved in the development of formulations, the dynamic knowledge of geographical markets and their characteristics, and a repertoire of brands and brand representations (Berthoud et al., 2007; Siegel, 2007). This has occurred because of numerous reasons such as the increasing number of fragranced products and market pressures (e.g. shortened shelf-lives and development cycles). Hayden describes a 'fragrance dilemma'

The initial training at the schools focuses on the basic ‘know how’ to compose; the time-consuming and context-dependent training on the job adds qualifications that deal with a ‘know who’ makes decisions[173] and a ‘know how’ of organizational processes. Thus, the school training focuses on technical capabilities of doing (= the learning curriculum; see definition above; also Gherardi, 2006), the training on the job centralizes the communicability and olfactive-verbal interaction to enable and further full participation (= the situated curriculum; Lave and Wenger, 1991; Gherardi, 2006).

The community of perfumers

Different repositories of where perfumers are active parts exist: beyond the individual practitioner, perfumers work with and monitor the work of colleagues in a firm and the epistemic community of perfumers (Knorr Cetina, 1999; Wenger, 1998; Burr, 2008). The concept of the epistemic community as a community of experts and practitioners develops out of and stresses the significance of the communality of perfumers (Knorr Cetina, 1999, 2001; Grabher, 2004a, 2004b; Gherardi, 2006; Grabher and Ibert, 2006; Amin and Roberts, 2008a). On a conceptual level, groups of perfumers

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since creative formulation is centralized in a few suppliers and the formulation tact is increasing (Burr, 2008; Hayden, 2007; Siegel, 2007; Perfumer and Flavorist, 2008a). Noses have become efficient in their work on compositions and are far from being independent in terms of their creations. The capriciousness and unreliability that has been characterized as necessary and a significant determinant for being creative is put into perspective (Newman, 1998; Perfumer and Flavorist, 2008b). 2), the division of labor has increased over the last decades. Sales personnel, marketers, and evaluators as well as laboratory assistants are only a few examples of functions within fragrance suppliers that re-define the competencies, qualifications, and work environments of perfumers. For instance, lab assistants compound formulas for perfumers; the perfumer is often not involved in compounding anymore and a shift towards formulation occurs. The significance of the increased division of labor lies in the separation of work processes and in the spatial effects in terms of transferability of work across distances. This will be discussed below.

[173] In his focus on craftsmanship, Sennett mentions the issue of authority of a superior versus autonomy (Sennett, 2008). Sennett (2008: 54) explains that “in craftsmanship there must be a superior who sets standards and who trains. In the workshop, inequalities of skill and experience become face-to-face issues.”

can be summarized according to their approach how to formulate. This structures the epistemic community and it describes affinities and loyalties that are connected to specific techniques of constructing a fragrance (Knorr Cetina, 1999). Ellena (1991), Burr (2008: 80-93; 100/101), and Roudnitska (in Perfumer and Flavorist, 2009a) describe major approaches, styles, and schools of thoughts of perfumers; the ways to create are added by the differences in the personalities of perfumers.[174] These are initial ways and means to characterize the shapes of the epistemic community of perfumers and the differences within. One example of a differentiation of perfumers is the characterization of how perfumers make use of ingredients: Burr characterizes a "“Bauhaus school of perfumery” with clean lines, deceptively neat structures, simple formulae, luminescence, clarity" (Burr, 2008: 100) that can be contrasted by an opposite approach: opulent structures, complicated formula, and high degrees of complexity. Roudnitska (in Perfumer and Flavorist, 2009a: 23) relates perfumers to painters and mentions "impressionist, baroque, naturalist, or realist perfumery" and their differing approaches. Thus, a spectrum of perfumers exists. Perfumers work between the mentioned extremes, depending on personal training and the requirements per project.

The work of a perfumer is informally monitored, evaluated, and ranked by colleagues. This takes place in the epistemic community of perfumers beyond the boundaries of a firm. The size and structure of the industry contributes to this buzz in

[174] Burr (2008: 90/91) describes the relationships of perfumers with each other. The total worldwide amount of perfumers and the training in a few schools imply that most industrial perfumers (and beyond) know each other. He qualifies this recognition: "Their strangest relationships are often with each other: competition, collaboration, envy, revenge, admiration. Every perfumer belongs to a corporate camp, and everyone knows what everyone else looks like, and the bosses are always watching, and so at parties, they can but they can't socialize" (Burr, 2008: 90).

the industry (Bathelt et al., 2004; Maskell et al., 2006).[175] Since the majority of perfumers are industrial perfumers, the firm as a legal entity is relevant in terms of the affiliation of a perfumer.[176] The perfumer and the fragrance supplier share reputation. Within the fragrance supplier, informational exchange of news takes place on an iterative, ad-hoc, and often daily basis (Siegel, 2007). However, beyond the firm, creations are signifiers for the work of a perfumer. In this context, other perfumers recognize the scent architecture and, through experience, relate recurring architectures to perfumers.[177] The social processes of monitoring, evaluation, and ranking occur beyond corporate boundaries and they are not organized according to specific routines (cf. the comparison in Lave and Wenger, 1991). The aspect of collective creativity that industrial perfumers increasingly practice with other perfumers is hardly examined. The idea of individuality and the 'single genius-phenomenon' is challenged. I elaborate on this further below.

[175] Another set of potential links for exchange between perfumers exists through associations like the American or French Society of Perfumers, for instance. Sennett (2008) characterizes the historical role of guilds for craftsman. These societies, in essence, organize and conduct events for educational purposes where also a general exchange of ideas takes place.

[176] In fact, the affiliation implies significant aspects for the creativity of the perfumer the go beyond quasi-political relatedness to a specific house but target criteria such as the supply with specific (proprietary and/or unique) materials for the work on particular projects. The success of a perfume, documented in sales' charts, and the nose behind it is often related to the involvement of particular ingredients. Symrise (2008), for instance, shows significant correlations between the research and development of synthetic molecules and the success of specific perfumes or fragrance families in their perfume genealogies. These perfumes have olfactory similarities and perfumers are actually using the popularity of specific molecules amongst the consumers to create successful scents. I discuss below that perfumers recognize the potential successes based on the use of 'hyped' molecules and formulations. Therewith, perfumers are quite successful for a number of years as well (records are, for instance, success rates in winning big projects or producing successful scents). Santagata (2004: 85) speaks about "crescendos of attention" that are defined by a specific generation (of perfumers, in this case) with individual identities, pace, and distinctions.

[177] Perfumers develop certain signatures (Perfumer and Flavorist, 2008b); these signatures stick to a perfumer and might as well stick to specific brands through recurring work of specific perfumers that is implemented in the logic of temporal coherence (Berthoud et al., 2007).

5.2.2.3 The evaluator

Evaluation is a comparatively young function within the fragrance suppliers. It evolved in the 1970s and is a result of the growing consumer markets and the increased division of labor within a fragrance supplier. Evaluators and perfumers experience a similar basic training: they are trained at perfumery schools of suppliers or at ISIPCA (see above).[178] This basic training is, just like in the case of the perfumer, added by a long and in-depth training period on the job. A major difference that separates an evaluator from a fine fragrance perfumer is the ability to compose. Evaluators are excellent critics; however, the creative act of composing is limited. The capability to compose versus to critique is already developed during the training period at a school.

The skills of the evaluator are, first, to distinguish olfactive trends on different geographical markets.[179] The evaluator situates an emerging fragrance olfactively in a particular consumer or geographic market.[180] Second, the evaluator is an institutionalized internal fragrance critic that reviews scents. Evaluators compare markets with each other based on a generalization and 'reading' of different markets in order to inform creative action. This is implied in the professional term of 'fragrance development' and the 'fragrance development manager' (FDM) that nowadays

[178] The training personnel at ISIPCA developed its excellence also through the competence of being able to understand and differentiate the creative potential of the students and schematically differentiate between perfumers and evaluators.

[179] Furthermore, significant characteristics of evaluators are the "excellent knowledge of products launched on the market, an excellent memory to remember notes in the collection, a marked olfactory sense in order to answer requests from the perfumers or sales managers fast, technical command of products, raw materials and production methods, an excellent knowledge of the rules and legislative constraints which frame our profession" (Berthoud et al., 2007: 200).

[180] "Evaluation will review all the fragrances that are already on the market [of a specific client; BK], do like a gap analysis: which area are they covering, what are they missing. They look at the trends where we see the market evolving. Well, if floral-oriental is a big trend right now and in your portfolio you are not covering it then it is time for you to attack this part of the business that you are not covering" (Senior Marketing Manager, August 2007).

increasingly replaces the older term ‘evaluation/evaluator.’ I use both terms as equivalents. The capability to advice enables the evaluator to work as a ‘mirror’ with the perfumer: a central task of evaluators is to give feedback to perfumers and communicate opinions about fragrant creations based on the individual creation and the overall market knowledge. The ultimate goal is to win competitions; therefore, perfumers re-formulate a fragrance multiple times based upon the advice of the FDM. At the same time, the FDM coordinates the internal submission of fragrances per project and, together with the sales manager, chooses which formulations are adequate for submission to clients (Curtis and Wiliams, 2001).

The evaluator recognizes and shapes a fragrance through her olfactive understanding of the scent, the brief per brand, the consumer, and the market. She serves as an outside observer and in-house mirror, which advises perfumers and discriminates between internal scent submissions. Evaluation is a métier where the evaluator stays “behind the scenes for customers, perfumers, and sales managers. Encourage, reassure and advise perfumers and sales managers without ever going outside the role of the ‘silent’ interface” (Berthoud et al., 2007: 200). Evaluators recognize and organize the perfume market olfactively; an evaluator situates the epistemic object within the fragrance market; she coordinates fragrances olfactively within the creative team and differentiates the market for the client on an olfactive basis.

Perfumers and evaluators creatively react upon visual and verbal characterizations in order to come up with an olfactively well-suited product. The perfumer and evaluator are working on the creative and technical side of production in terms of olfactive materials. They mutually enforce their creativity through their interaction in complex and recurring processes of presentation and feedback of presented scents.

5.2.2.4 The salesperson

Salespersons coordinate accounts in project work externally and internally according to a service and a management logic (Grabher, 2004a, 2004b).[181] First, a salesperson is in very close, also face-to-face, contact with the client. ‘The client is king’ in this business-to-business environment where the manager follows the service logic. The supplier is mainly responding to the preferred form of interaction with the client. Sales provide the client constantly with information: what’s the stage of the development of the fragrance, how is the market tested in consumer research, where does it test well, and why is that the case. Those are a few examples that show that the salesperson is an gatekeeper that deals information to the client. The form of exchange (face-to-face, telephone, email) is dependent on the preferences and situations of the client. It is crucial to maintain an optimal relational distance that is determined by the client (Ibert, 2009). Second, the salesperson is the central coordinator of projects within the creative team; in this context, she follows the management logic (Grabher, 2004a, 2004b). She coordinates and leads projects according to milestones and deadlines and trades information internally.[182] Thus, the salesperson coordinates a project throughout the different development stages; the epistemic object of perfume is

[181] In order to develop knowledgeability to practice, the salesperson develops an understanding of how clients function also through employment within those houses. Thus, the work of salespersons in fragrance suppliers is based on reflections from earlier work within the clients.

[182] “If they [the client] know how the bottle will look like I will always ask for it and then show it to the perfumer. I don’t know how much that influences them, I don’t know that at the end of the day but at least they know” (Senior Account Manager, August 2007).

recognized through an organizational and process-oriented point of view. In her work, she is guided by the logic to organize accounts by numerical significance for the supplier (in terms of overall sales) and strategize fragrance submissions to win competitions. Sales views and abstracts, understands, and conceptualizes fragrances according to their financial potentialities for a brand: she constructs and views the epistemic object as a financial entity; she manages accounts within the creative team; and she coordinates projects with the client.

5.2.2.5 The marketer

The functional development of the task of marketing as a constituent within the creative team at a fragrance supplier emerged not until the 1990s.[183] Marketing typically works with the fragrance development department at the client and the departments of evaluation and perfumery in-house. Marketers have internal and external functions.

First, marketers investigate, elaborate, and scout new general socio-cultural as well as olfactive concepts, themes, and trends (Falk, 2008). An example for such a concept is the 'color-as-a-theme' 'black.' A marketer links a specific concept to the general market in order to delineate and characterize where 'black' is located olfactively and conceptually and what it stands for in a market. A significant effort is to visualize and grasp, thus, understand, the market through the development of certain marketing tools that "help [to] understand and analyze trends; trends not only in their olfactive

[183] One interviewee traces the history of marketing: "At one point, people needed to get more specialized because they couldn't do everything anymore. And in terms of marketing at [company xyz], what happens at the beginning is that one of the needs was to know the market. So they started to do little mappings, it was more evaluation at the beginning and then from those little mappings they started to make gap analysis and then from there they started to have an analysis of the advertising and so on. So, step by step they needed to have more and more competences in marketing" (Senior Marketing Manager, August 2007).

reality but also in terms of advertising signals, in terms of packaging and bottle signals, in terms of semantics" (Falk, 2008: 49/50).[184] All this is to inform and update the other members of the creative team internally. Marketers represent overall markets internally for the creative team with the intention to inspire the other creative members.

Second, marketing represents work of the perfumer at the client. Marketers represent with such devices as fragrance pyramids, fragrance families, and the fragrance wheel, which are examples of generalizations and visualizations of a fragrance (Edwards, 2009). Thus, an individual perfume is often represented through a fragrance pyramid according to a top, heart, and base note. The fragrance pyramid is a communication device both for clients and to communicate scents to final consumers; it is reflecting the major constituents of a perfume according to the different time periods of evaporation (Dove, 2008). For instance, in order to be marketed as an olfactive concept, marketers abstract the color 'black' and relate it to fitting fragrant reference materials like tonka beans, mocha, incense, black amber, black suede, anise, and black licorice which are described as dark and heavy and traditionally connected with the verbal connotation of 'black' (Falk, 2007a; Perfumer and Flavorist, 2007a). Marketers emphasize and highlight the concept through narrative connections to multi-sensorial entities that are connected with 'black' (= pictures, fragrant and non-fragrant materials, textures etc.). Individual fragrances are organized and situated into major families (floral, chypre, oriental, woody, aromatic, for instance; Symrise, 2008a) or according to the fragrance wheel by the perfume expert Michael Edwards to generalize and visualize

[184] Falk (2007c) presents the lifestyles of exotica (including exotic botanicals for beauty, home décor and household products), health and well-being (reflecting restful, restorative and uplifting environments and complement consumer desires for soft, calming colors), and luxury living that inspire fragrances and relate to particular accords. Similar examples in terms of flavors are fusion, culinary tourism, and feel good (Perfumer and Flavorist, 2008d).

the overall olfactory market (Edwards, 2009). Marketing performs market research on accords and olfactory concepts in order to supply clients with potential paths for the future.[185] A key requirement is to characterize an accord verbally and visually: why is it important that the new product is launched with this particular note or accord? This helps to grasp existing markets and market potential per brand as far as fillings of conceptual gaps are concerned.[186]

Thus, the marketer studies fragrance markets conceptually and situates emerging branded fragrances in a particular consumer and geographic market; she understands and represents the epistemic object through words, pictures, and narratives; she organizes and coordinates fragrances and fragrance markets conceptually within the creative team; and she conceptualizes fragrances for the client.

Sales and marketing generalize and visualize olfactive markets.[187] The function of sales organizes and coordinates a project within a fragrance supplier. The function of marketing presents, represents, and promotes concepts, materials, notes, and fragrances on their own or in concert. The roles of sales and marketing are described as located between the capabilities of "in-company specialists" – essentially those professions with a significant training and background in olfaction (Curtis and Williams, 2001: 361) – and the client. Overall, sales and marketing coordinate, mediate, and support in order to communicate between the intentions of the fragrance supplier and the client.

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[185] While marketers usually receive information about the brand from the clients, an analysis of the olfactive portfolio contributes to generalize and visualize potential markets for a brand.

[186] Therewith, marketing also proofs that the fragrance supplier as a whole "understands the brand" (Senior Marketing Manager, August, 2007) in terms of brand history and the brand's core values, product history, and overall market development in the particular part of the market.

[187] The term 'generalize' implies that an olfactory and geographical market is abstracted and simplified from its complexity (e.g. particular fragrance families that are successful on a specific geographical market) while the term 'visualize' means that numbers, charts, and statistics help to understand.

5.3 Practices of knowing and spatialities of knowledge

5.3.1 Introduction

The following paragraphs describe and analyze the practices of knowing that are performed by creative experts in the international fragrance industry. This is done in order to examine the particular challenges of work. The subsequent paragraphs are structured by the steps that a new fragrance experiences during its emergent career: the epistemic object develops a trajectory in five characteristic steps that recur in most projects and serve as organizational focus points of interaction. The paragraphs are structured according to the mobility and stability of the epistemic object of fragrance, the activity of people and things (practices of knowing and repositories of knowledge), and characteristic places that are constructed as relevant locales and learning places for knowledge creation and interaction (spatialities of knowledge). The text below uses the procedural analogy of 'meandering,' i.e. moving between different learning places that are depending on the development stage of the epistemic object (Ibert, 2009). I look at the object, how it changes appearance, and how it meanders within and between the manufacturer and the fragrance supplier; I synthesized this in Figure 5.2.[188] The manufacturing of a perfume takes – depending on the manufacturer – between 12 and 24 months; however, over the last few years, typical mass-market projects saw a

[188] I mentioned above that a number of professionals are involved during different steps and with different competencies. The focus below is on knowing in action that is practiced collaboratively by multiple professionals. The structural organization of this chapter should not closely follow the conceptual requirements based on the actor network theory-lens of 'obligatory passage points' (Callon, 1986) or 'space-time diagrams' of the Swedish time-geography (Hägerstrand, 1970), but centralizes the practices that emerge through the behavior of the epistemic object. The focus is on the mobility of the emerging epistemic object between the manufacturer and the fragrance supplier.

significant reduction of development time so that eight to 12 months are now intended. To meander is a necessary requirement for the fragrance in order to gain shape; both the fragrance and involved practitioners remain mobile in order to give the fragrance its shape. This is the case at specific sites of knowledge creation and interaction where learning takes place and the epistemic object is altered. Thus, I delineate which knowing practices are significant for the emergence of the epistemic object at the specific site.[189] A fragrance develops as a highly mobile and mobilized epistemic object. Similarly, the discussion illustrates that a brand is a significant social logic, cultural glue, and organizing mechanism for particular practices of creative knowing beyond the traditional focus on firm-specific, project-specific, and inter-organizational ecologies of knowledge (Grabher, 2002a; Olins, 2003). Thus, the aspect of spatiality is intertwined in the discussion: at the end, the idea of a brand ecology of knowledge is presented that stretches spaces and depends on a non-linear and non-scalar spatial behavior where the epistemic object moves depending on the performance of the fragrance (Amin, 2002, 2003; Amin and Cohendet, 2004).

[189] To reiterate: practice-based approaches to knowledge in economic geography intend to understand the development of specific geographies by looking at practices of knowing (see Chapter 2; Bathelt and Glückler, 2003; Ibert, 2007a, 2007b; Amin and Roberts, 2008). It is the “reading of space that emerges from a heterogeneous interpretation of knowing in action” in order to delineate geographies based on the “shapes and sizes of knowing in action” (Amin and Roberts, 2008: 365). I will follow what Ibert terms “the argument of place” (Ibert, 2007a: 111) examining localized practices but also spatially distributed work.

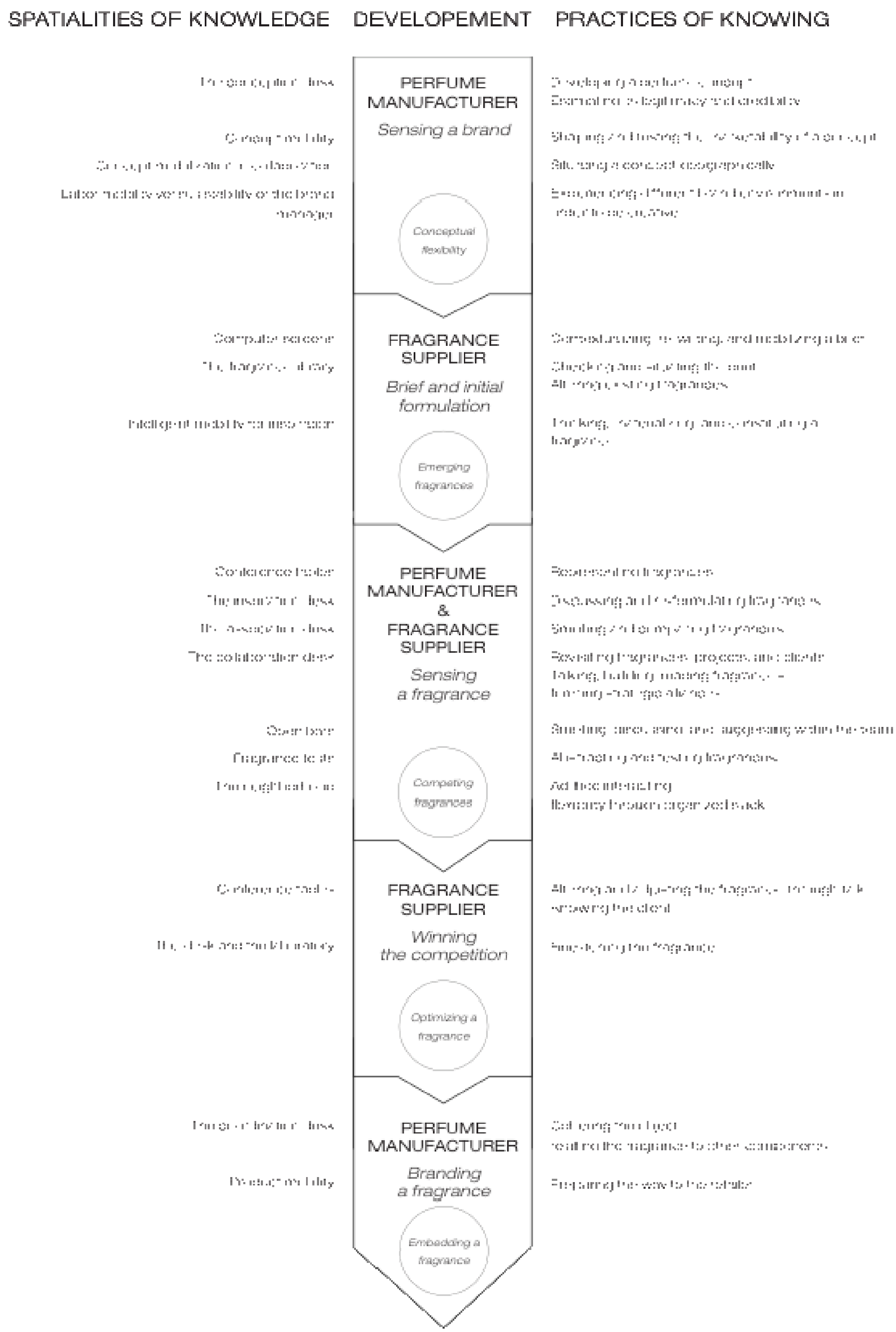

Fig. 5.2 Practices of knowing and spatialities of knowledge in the international fragrance industry

5.3.2 Sensing a brand

Hereafter, I explore the meaning of ‘sensing a brand’ and examine the development stage as one with three major developments: the epistemic object is a flexible concept, a brand manager is actively involved in developing a concept and estimating its legitimacy and credibility for the brand, and suppliers contribute through their work to allow estimations of the success of a brand concept. ‘Sensing a brand’ takes place in the organizational spheres of the perfume manufacturers: at this early stage, the fragrance supplier is, if at all, participating tangentially. ‘Sensing a brand’ is an example of largely cognitive rationalizations of potential actions; this unifies the step with the final one of ‘branding a scent.’ At the same time, the brand manager practices sensible knowledge solely and in concert in the decisions about the epistemic object, for instance. Although I emphasize the role of the brand manager for creative action during the stage of ‘sensing a brand’ I stress that the decision-making processes to develop a new product concept are complex and depending on many different individuals. Furthermore, these processes differ per company. The spatialities that are highlighted are simulated environments.

Conceptual flexibility

The epistemic object evolves through the invention and development of a product concept for a new perfume. The product concept is weakly defined and develops through the competence of the brand manager and related service suppliers towards a more robust conceptual strategy and intention. Throughout the stage of sensing a brand, the concept for a product is tested and cohered in order to allow a summarization of it in a brief.

The brand manager: the conception desk

Here, I focus on the invention and artistic development of a new product concept for a perfume per brand. To limit complexity, I focus on the development of a completely new branded product.[190] In order to come up with a product, brand managers sense a brand. The particular practices of knowing that are characterizing this step are developing a perfume conceptually and estimating the legitimacy and credibility of this concept. This is typically done at the desks and through talk in corporate offices, most often, at the headquarters per brand. Thus, the conception desk of the brand manager materializes as a conceptional space and location where the concept is organized. The ability of performing this development and estimating the legitimacy of a product is connected with study of different markets and different

[190] This development is contrasted by the development of flankers and seasonals to which I briefly refer. The significant growth of flankers and seasonals has been characteristic for the industry over the last decade: “flanker is the industry term for a new version of an existing perfume. *Polo* is a hit; Ralph Lauren puts out *Polo Blue*.” (Burr, 2008: 168). Flankers are, like sequels in the film industry, slight variations of a common concept theme, especially as far as the name and marketing are concerned. Seasonals are launches of a fragrance in a season (most usually ‘summer’). Seasonals are repetitively updated; they are permanent in existence but slightly changing on an annual basis. Both devices are examples of product brand extensions (Tungate, 2005). The logic of flankers and seasonals lies in the ‘economic harvest’ of product names; manufacturers exploit the existing marketing solutions for a branded product. In fact, flankers become a business model on their own since the top performers of the perfume charts are nowadays well-advised to produce flankers. The decision to launch flankers characterizes the exploitation of a successfully sensed brand; however, the decision to launch flankers is increasingly dependent on the project budgets and product significance. Flankers are already planned when the ‘product brand-mother’ is launched. The conceptual overlap is contrasted by the scents of a flanker. Most often, they show only minimal olfactory similarities to the brothers and sisters with similar names (Burr, 2008). Certain parts of the product development process are financially and creatively minimized (naming, for instance), but the development of a scent for a flanker or seasonal is still necessary. Product concepts trickle down within and between brands; this has been summarized under the term ‘product variety’ above (Lorenzen and Frederiksen, 2008). It is an interesting facet of the fragrance industry that concepts, in a way, do not only trickle-down, but they also, in an olfactory sense, trickle-up: the highly-competitive household products-segment invents compositions that are picked up by perfumers for fine fragrances and are integrated into new perfumes.

locales of where the product is launched. Thus, in parallel to the artistic development of a conceptual idea stand the more managerial and project management-driven ideas of leveraging a business plan, extrapolating product and retail points of difference, developing appealing packaging, market positioning, and, towards the end, retail execution (Long and Czajkowski, 2007).

A crucial capacity to develop a concept is an understanding of what a brand signals (= deciphering the brand-DNA; Gobe, 2007) and how a brand can be (re-)interpreted, (re-)mixed, developed, and integrated into as well as signified and represented by new products (= modeling and projecting facets of the brand-DNA). In biology, the term DNA means that "DNA contains the building blocks of life; all information needed to create an organism is coded in the large molecule known as DNA [which is] a linear sequence of four smaller molecules" (Knorr Cetina, 1999: 139). Knorr Cetina adds that "life is the realization and expression of the information contained in the segments of DNA called genes" (Knorr Cetina, 1999: 139). However, in contrast, 'brand-DNA' is a dynamic metaphor for something that exists out of and contributes to a producer-oriented discourse about a brand (cf. Gobe, 2002, 2003, 2007). This DNA consists of core values, a particular history and heritage, and a general ethos, soul, and outlook on the world. The term brand-DNA implies the possibility to create something out of the information in the pre-given stock of this cultural, and not biological, DNA. Thus, a new product shares ideally both the DNA of the overall brand, develops its own product DNA, and helps to strengthen or recalibrate the overall DNA of the brand. Brand-DNA is discursively-created and repetitively altered by parties that are involved in the creation of a fragrance and representation of the brand. The metaphor of the brand-DNA helps to idealize the most important characteristics of what a brand signifies.

The traditional logic of brand management is, as described above, to argue for conceptual connectivity and coherence over time on the one hand (developing brand personality as well as emphasizing and strengthening brand equities in order to develop brand loyalty) and difference to other brands in order to develop unique brand values (de Chernatony, 2009). The brand mediates between strong similarity (with other brands and branded products) and low authenticity versus low similarity and high authenticity. The authenticity of a concept varies between what Power and Hauge (2008: 128) for the case of fashion call "hierarchical brands" (new technologies and trends that are prototyped, tested, and launched in a smaller high-value/niche market) and those that adapt them to the mass markets depending on the status of a perfume brand in a geographical market and within a manufacturing firm. This differentiation exists for the perfume market in a comparable form (Burr, 2008). A major difference is between those perfumes that drive versus those that merely reflect the brand. The latter is characterized by a strong position of the brand itself and the fragrance is developed based on that:

> "We are feeding off what the brand is, the fragrance has to live underneath the brand (…) If you work on designer brands I think what drives that brand forward is much more image and positioning and emotion and then the consumer will follow" (Vice President, Global Marketing, September 2007).

In order to characterize the development step of sensing a brand, I will use the analogy of the concept of a prism and a spotlight. Brand managers put a spot on a particular facet of the brand-DNA through a prism. Perfumes created under the Ralph

Lauren brand, for example, stand for a particular characteristic, attitude, or belief of the designer Ralph Lauren; the brand-DNA that it implies might also be characterized as a landscape of potential concept developments. The landscape of a brand-DNA differs significantly between brands: ‘Ralph Lauren’ and ‘Giorgio Armani’ represent different characteristics, attitudes, and beliefs; they form, so to say, different landscapes. The logic of the prism guides the legitimate practicability of coming up with new Ralph Lauren perfumes. Thus, the prism actually includes all hypothetical conceptualizations within the range of a brand[191]; however, out of the overall prism only a certain part is actually put on the spot, only a part of the landscape is in focus. Two examples how the prism works are given through the conceptual spotlights of ‘black’ and ‘exploration.’ First, the concepts of black and exploration have to be ‘sensed’ in order to understand if they potentially work for the brand (i.e. fit into the fashion statement of a brand) and what these terms mean in the case of Ralph Lauren. This is a highly interactive task that is not only performed by the manufacturer per se (see the discussion below). Second, the concepts are sensed according to the understanding what they imply: for instance, the color theme ‘black’ represents and signifies upper-class (life-)style and conservative modern appearance, the emphasis on the theme of ‘exploration’ represents the search for newness, investigation, interest, and travel. A defining moment both of the two concepts as well as the brand landscape is the aspect that the conceptual ideas of ‘black’ and ‘exploration’ lead to very different connections, narratives, and outcomes when they are spotlighted for ‘Ralph Lauren’ versus ‘Giorgio Armani.’ However, two spots are recreated and marketed as branded representations of the brand Ralph Lauren.

[191] The range of a brand is defined by its credibility, authenticity, and credible marketability, thus the argumentative power to speak for particular concepts and products.

Different characteristics – in this case of the designer Ralph Lauren – have been imprinted into branded perfumes in the past. Overall, the crucial denominator for market success and positive communication of the concept that is put onto the spot within the landscape of the brand-DNA is the ex-ante organizing for the credibility of communication (thus, the set-up of a brand positioning-strategy that is multi-sensorial; Gobe, 2007) as well as the ex-ante anticipation of a potential marketplace for a perfume according to a particular concept and the ex-post coherence of the final product. Thus, the brand enables, just like the metaphor of the prism suggests, creative development in different directions but it is also limited by the credibility which is, yet again, a function of material, immaterial, and communicative characteristics per perfume.

Thus, what is sensed are two significant aspects: first, the ex-ante likelihood of creating and coordinating a branded product that is conceptually credible and graspable for the target audience and, second, the overall direction, cachet, and operationality of a brand for the creation of a particularly conceptualized fragrance. It is about the following question: "is there white space [i.e. conceptual emptiness] in the marketplace that *we* can ultimately explore and develop a real brand?" (Vice President, Global Marketing, September 2007). Thus, the brand landscape and the overall market landscape are brought into discourse, are investigated, and a concept is developed through brand management.[192]

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[192] The industry press gives an example mentioning how the brand *Playboy* fits, first, into the portfolio of the umbrella company and, second, in terms of the perfume concepts that can be developed: ""Playboy is an aspirational lifestyle brand that embodies a very playful, metropolitan lifestyle of success and sexiness. Playboy is the perfect match to create a new men's fragrance, as it is a brand that inspires a lifestyle of fantasy and desirability," stated Steve Mormoris, SVP Global Marketing, Coty Beauty" (GCI Online, 2008). Thus, in this specific case the brand *Playboy* is translated for the marketing profession: first, it represents a specific lifestyle and, second, lifestyles like this are typically connected to specific types of consumers. The intention to integrate the brand into the portfolio of brands has to do with the longevity,

Service suppliers: concept mobility

This investigation is not only performed within the boundaries of the manufacturing company. In contrast, the focus is on two other sets of actors that play significant roles for the becoming of the perfume concept: trend and market researchers. The creative practices of knowing that they perform are, at different points during the creative process of inventing a concept, that of shaping and testing the concept.

First, trend researchers provide advice up front and during the creative process. They shape a perfume concept through their unique set of information. Trend research agencies provide general information of developing trends in terms of colors, textures, scents, fashion, and, overall, social developments. These trends are screened and looked at in order to stimulate product development. Thus, input as far as general trends on the fragrance and fashion market are concerned is provided during the conceptual and pre-product development stages. Trend agencies provide information through the publication of trend books (with general information) or the specific work for a client. One major international creator of these trends and publisher of different trend products (e.g. books, visual media, workshops, presentations etc.) explains in an online presentation that "our publications are polysensorial to the eye and the touch, combining photos, fabrics, material samples, swatched colour palettes, prints, patterns, silhouettes, sketches and print descriptions" (NellyRodi, 2008). These multi-material and multi-sensorial trends serve as a starting point for creative thinking about and initially ideally delineating a concept. Thus, a first task is to understand

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the idiosyncracy, the complexity of a brand, and with the existing portfolio of brands. A question that guides the initial implementation of brands into brand portfolios is if it allows enough prism space to be spotlighted and market potential to create and communicate concepts and stories out of and for a brand. Secondly, the brand narratives per perfume are correlated so that a coherent whole develops.

> "where the market is going to go – we are very linked to fashion also – (…) let's say ecological, natural, organic et cetera; where are we, where are we not, and where is our competition, and is there a spot there. And if we find that there is a spot there then based upon this we will define our concept." (Vice President, Global Marketing, June 2007)

Second, trend researchers serve as a way and mean to determine and/or visualize the landscape per concept, per brand, per consumer, or per geographical area. Thus, beyond the general societal trend development, trend researchers are involved to consult on a brand-specific level. The concept of the color theme 'black' might possibly do well for the brand Ralph Lauren because it is *en vogue* for the target male consumer between the ages of 18 and 49 in the US and Europe. Trend researchers therewith often validate what brands already planned – depending on the cachet of a brand, trend reports are often only used as argumentative mirrors what to do or what not to do.

Second, internal and external market research coordinates action at this point.[193] Market researchers perform creative practices of knowing of testing a concept on one or more markets. The common result is that the concept is altered according to the test results and targeted geographical consumer markets. The initial concept is often tested in focus groups (Catterall and Maclaren, 2006):

> "We went in [into focus group research] and it [i.e. the concept for the product] was all about being outside, all about being free, it was all about being open, and it was all about sunshine. That is what that [product] brand is about on a very simplistic level. Simultaneously we went in with a number of different names. (…) If we are far enough ahead we may also have some very preliminary packaging ideas that we may put on the table to sort of gauge what would be the consumers point of view and where do we stand? (Vice President, Global Marketing, September 2007)

[193] Market research has often been criticized for 'dumbing down' a perfume (Burr, 2008). However, product creativity and complexity might be traded against market success. However, testing a concept is not a trial-and-error approach to make a genuine concept work at the expense of losing its uniqueness.

This quote presents the intentional proximity to the targeted consumer group – a point that continues and accelerates in complexity during the following development stages of parts and the whole product. Market research is a significant device to reflexively create and visualize a market in order to extrapolate the competition of the developing perfume concept (Cochoy, 1998; Burr, 2008).

The brand manager: collaborative mobilization

However, the manager is guided by the brand's past, present, and intended future. Sensing a brand is, therewith, not simply dependent on the brand manager and his faculties but takes place in a community with the involvement of brand-affiliated decision makers. The concept for a fragrance necessarily travels across the world in order to receive legitimacy and to develop shape during its journey. The international brand manager, most often both functionally and bodily located in the headquarter offices of the manufacturers in New York or Paris, has a general understanding of a brand and the potential performance of a concept in particular markets. The time-intensive practice of sensing is backed up by intensive talks with the brand owner and other team members once the concept becomes more elaborated and clearer. Creative interaction starts during the initiation of a new concept and runs until the ultimate product is presented and adapted to the retail environments in a country.[194] The crucial competence and practice of knowing is, however, connected to the question how to make a concept geographically sensible and sound. Thus, during the stage of 'sensing a brand,' the epistemic object travels as a concept. Since brand understanding and

[194] Furthermore, communication is also based on the downstream characteristics of implementation of the product (distribution, retail) where questions deal with brand positioning in a market.

performance is different according to specific markets, the brand manager receives feedback from brand affiliates that are experts of the brand in a particular country or region. These individuals are affiliated with each other through the brand and, accordingly, monitor the market performance of the brands' products. The reason for the travel of a concept is to examine and test the operationability to situate a fragrance concept in multiple markets. The local brand affiliate, for instance, looks at how a globally launched perfume concept can be inserted into the national context: under which circumstances and with which attributes would the concept for this brand work for the specified consumer segment? Does 'black,' for example, fit with a particular face that is nationally recognized? Thus, the interaction is about the strategies how to communicate and translate a global concept in targeted markets (Hankinson and Cowking, 1997). This thinking involves not hierarchical decision-making but work in exchange with the brand manager. The initial conceptualization is checked against the portfolio of fragrances within the market. This seems to be necessary in order to understand how a brand is recognized and to shape its recognition in the future. Brand affiliates stay familiar within quickly changing brand environments. The situation of an affiliate in the local context allows for a relational understanding of some challenges and problems of conceptual implementation within the specific country. Thus, the concept is mobilized across space and conception desks. The brand manager maneuvers between local brand affiliates, the brand owner, and trend and market research in different countries of the world. Fragrance concepts travel across spaces and coordination takes place in relational proximity (Bathelt and Glückler, 2003; Amin and

Cohendet, 2004). Distanciated creative knowing and learning emerges out of the co-alignment of different viewpoints in working on a perfume.

The brand manager: labor stability versus mobility

However, not only the concept travels, also the brand manager is highly mobile; she is involved in permanent mobility that enhances employability and this mobility accelerates her ability to develop and estimate concepts (Ibert, 2007b). A brand manager breathes, lives, and represents a brand in a business-to-business context in order to argue for or against artistic developments. The question about the enhanced skill-set and experience through professional mobility relates back to the professional ethos and enculturation of the brand manager. Most brand managers have marketing or business school backgrounds, which affect how they approach and visualize their work tasks and, more generally, the market (see Cochoy, 1998; Lury, 2004).[195] Thus, brand managers are both shaping the market economy through branding and reshaping their own activities at the same time (Cochoy, 1998). They become enabled to do so through the intelligent mix of staying with a brand (= labor stability) and switching affiliations (= labor mobility).

Labor stability versus labor mobility of marketers within the fragrance industry represents, in essence, the mediation of loyalties between the brand and the individual career (see also Grabher and Ibert, 2006). On the one hand, labor stability is significant for the brand and the brand manager. The brand manager receives security and an

[195] Branding, just like marketing, is a performative discipline (Lury, 2004) or performative science (Cochoy, 1998); this means that subject matters are simultaneously described and constructed. "'Performation' of the economy by marketing directly refers to the double aspect of marketing action: conceptualizing and enacting the economy at the same time" (Cochoy, 1998: 218).

understanding of a brand in concurrent projects; the brand itself and its connotations serves as a trajectory for the brand manager to creatively act and direct. The market setup and recurring projects with the fragrance suppliers allows that brand managers to develop loyalties from one particular project to another in order to solve the problem of making scents successful. These loyalties emerge out of the actual problem and its solution whereby trust and problem solving-capabilities develop. Vice versa, some companies prefer to keep brand employees loyal for a long time because they can be sure that the personnel 'know the brand' and that processes are coordinated smoothly. This is reflexively integrated into the self-understanding of employees as belonging to a club/elite and strengthens the loyalty to a brand (Kärreman and Rylander, 2008). Labor stability characterizes the experiential depth in developing and estimating a concept as a practice of knowing that is beneficial for the longitudinal trajectory of the brand.

On the other hand, labor mobility is similarly relevant for the brand and the brand manager. First, the individual skills, experiences, and reputation of a brand manager is intensively coordinated and maintained. Marketers remain active agents for a particular brand only for a few years – at least within the biggest companies. Job changes enable individuals to be confronted with new brands and branding environments. The brand manager trains the practices of developing and estimating concepts with professional mobility between different brands. Temporality enhances employability and enables brand managers to provide fresh and creative ideas as well as to push the career and increase the individual market value (Arthur, 2008; Kärreman and Rylander, 2008). Thus, similarly brands benefit from labor mobility in that new managers repetitively alter the brand trajectories and rejuvenate the brand-DNA through novel approaches. While brands that are summarized through traditional values intend to retain human capital, the market environment of progressive brands sees brand managers with fluctuating affiliations as more common. Thus, too much mobility harms a brand and scrutinizes the depth of the experience by the brand manager. In this case, sensible knowledge of the brand and the brand-DNA is rather limited.

Labor mobility has a significant geographical note. A brand manager experiences her understanding in geographical terms of how a brand is understood and embedded in major markets. This is the case both organizationally as well as artistically. Brand managers typically are experts on specific markets: the global fragrance industry works with a separation according to different major markets such as North America and Europe. The brand manager contextualizes brands in geographical sense: does a concept work and fit into a particular market? This brings into question how the development of brand conscience is enabled and maintained across space.

> “What I bring to the party is not only a full understanding of the fragrance industry but also just brand imaging and also how to make brands slightly more global versus more regional” (Vice President, Global Marketing, September 2007).

Both brands and scents are with the exception of a small number of truly international companies locally inherited. Nonetheless, brand managers often switch affiliations geographically to become knowledgeable not only between brands but also between context, thus across different countries.

Third, professional temporality of the brand manager helps in understanding the different facets of branding; while the knowing practices of developing and estimating a concept are trained and enhanced through permanent re-locations in the brand sphere, the brand manager also benefits from horizontal labor mobility: she often worked for time periods between six months and a year in sales, communication, or public relations for either a manufacturer or supplier. The understanding of fast-moving consumer goods (FCMG, see Chapter 3) is more crucial than being involved in one or two branding environments only. Thus, the aspects of breadth are negotiated against the depth of insights into a brand. In order to remain mobile in a highly-competitive labor market it is imperative to understand different aspects and ways of how branding is performed. The practice of developing and estimating a concept receives, therewith, a more circumstantial affection because brand managers get experienced in other genres that help to enculturate the professional in fashion-driven cultural industries.

Overall, the economic performance per brand reflexively brands the manager: (a), by the occupations and functions that s/he has been involved in, (b), by the brand that s/he is or has been working for and, (c), through the work in specific geographical markets. Therewith, the branding performance of the manager also characterizes her in industry circles. The industry press is closely monitoring and reporting which brand is moving into which retail environments, for instance. Such characterizations contribute to the employability of the brand manager. It becomes the strategic capital for brand managers to cautiously mediate between rupture and flexibility: too many job changes are as harmful as stasis. The practice of developing and estimating a concept is mediated between the loyal brand manager who knows a brand in depth versus the mobile brand manager who moves between brands in order to practice in different environments.

5.3.3 The brief and initial formulation

In this part, I explore the developmental stage where the brief and the initial formulation of a fragrance are in the center of attention. Therefore, the brief, the briefing process, and the initial round of formulation by a fragrance supplier are discussed according to their practices and spatialities. Multiple fragrances are developing during this stage, the creative team within the fragrance supplier is put on the spot, and the object exists in a multiplicity of first instantiations in a highly mobile and changeable form (Ewenstein and Whyte, 2009). I will examine three major instances below where practices are performed.

Emerging fragrances

The epistemic object develops in two significant steps: as a brief and an initial formulation based on the brief. First, the largest manufacturers of perfumes have internal fragrance development and evaluation departments in which the brief is written (see above). A brief is a loose condensation of the epistemic object after the initial concept of a new perfume has become manifest. In the brief, the new perfume is summarized as far as the general ploy of it is concerned; it contains information in regard to the overall characteristics, target group, price margins (production and retail price ranges), and potential ingredients, for instance (see Pybus, 2006b; for a critical view see Burr, 2008).[196] Thus, the brief is both a summary of the product concept in

[196] In general, the precision of the description and the content of a brief vary enormously per brand. However, the major cornerstones of the fragrance are mentioned so that the creative process can begin; the olfactive shape of the emerging fragrance is already determined and channelized at this point.

terms of the fragrance and an instantiation of the epistemic object. It works as a guideline with potential restrictions and parameters (it is a rough sketch and a general outline which, nonetheless, defines potential formulations; Perfumer and Flavorist, 2007b); it is a materialization since the fragrance, based on the overall perfume concept, is summarized as a written abstract on a sheet of paper or in an email, for example.

Second, the brief is moved from the manufacturer to suppliers. Typically four or five suppliers receive the creative brief. This number allows creative freedom but also restricts the overall number of emerging fragrances. The interaction with fragrance suppliers is related to logics of strong ties (Grabher, 2004b): core lists of between two, three, four, or even eight preferred fragrance suppliers limit the potential birthplaces of a fragrance, highlight the relevance of particular suppliers, and enable long-term planning security but also specific power relationships between the two actors (Turin, 2006; Burr, 2008).[197] Core lists are advantageous for suppliers since they guarantee work in reduced competition pools for specified amounts of time; at the same time, core lists are related to concessions that fragrance suppliers give to their clients. The same brief goes to the suppliers that compete against each other. Every supplier usually submits 6-10 fragrance prototypes towards the end of this developmental stage; in total, up to 50 fragrance drafts exist. Depending on the relevance of the project, this process takes place over a couple of weeks to a few months. The manufacturer discriminates between the competing scents in the next step.

[197] The briefing process is increasingly coordinated and restricted in terms of who is allowed to participate in the competition. So-called ‘core lists’ structure the briefing process (see also Chapter 3): these formal agreements imply only a handful of preferred fragrance suppliers that “handle needs on a global basis” (Fragrance Development Manager, September 2007) are listed as legitimate for the supply of fragrances for a certain price, in a certain amount, and for a particular time period. These lists are reviewed on a regular basis in terms of certain criteria and altered when necessary.

The salesperson and the evaluator: computer screens

The arrival of a brief on the desk of an account manager initiates a project at a fragrance supplier. The two sets of processes – the brief enters the supplier and initial formulation starts – connects the functions of sales and evaluation in different places. The salesperson and the evaluator are busy in the practices of contextualizing, re-writing, and mobilizing a brief.

First, the brief enters a fragrance supplier through sales.[198] Computer screens are mobilizing devices that allow the creative brief to travel: sales contextualize the brief. The salesperson evaluates and situates each project according to its significance in terms of project budget, product quantity, and geographic scope into the overall project load per brand and brand portfolio. Global and national projects are differentiated. In global projects, the manufacturer intends to launch a perfume on multiple markets; national projects focus on a single market only.[199] According to the scope of the project, the sales manager builds the team for a project. In terms of marketing and evaluation, the team is often already pre-determined through the work on accounts.

Thus, the salesperson moves a brief to the evaluation department and to the FDM that oversees a particular account. People working in the evaluation department

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[198] This part describes reactive work of fragrance suppliers. In contrast, also proactive work exists. While the work on a brief is a reactive process (a client starts the creative process and intends to receive a fragrance from the supplier), the creative team and in particular sales as a connection point to the client is proactive: she approaches the manufacturer with her ideas in order to anticipate project potential and secure creative work in the future: "BK: Who is actually organizing this teamwork on both proactive and reactive projects? Sales: This is where sales runs the show. We are reacting to the ongoing brief, we are trying to be proactive on anything we can give our clients to feed them information, the more they hear the more we have a chance to win. It's all about face time" (Senior Account Manager, August 2007).

[199] The reach of the product defines the authority who coordinates a project: if a French brand intends to launch a global perfume, for instance, the sales manager becomes in charge of the account. Most often, the international sales manager is co-located where, in this case, the French brand's fragrance development center is headquartered. Proctor & Gamble's fragrance department, for example, is located in Europe: therefore, the head of sales for the P&G account is located in the same region.

typically rewrite a brief. This is done so that the rewritten brief can be used as an instructive orientation by perfumers. The degree of rewriting differs per supplier. This rewriting intends to generate and guarantee a higher degree of clarity for the perfumer and pre-arranges the creativeness of the involved perfumers. It is an example of the fact that the overall business is translation-intensive: since no uniform and objective language exists, the clarity of words can only be enhanced through mutual experiences and understanding of involved professionals. Thus, the initial epistemic object alters at the desk of an evaluator. Depending on the size of the fragrance supplier, an initial meeting of the involved project members follows where discussions are focused around the particular brief, brand, the targeted consumer market, and the geographical market.

Thereupon, the brief is mobilized in order to evocate creative feedback from different perfumers. For example, if a fragrance should be launched on a global level with a high prestige, the salesperson submits the brief to the most important other fine fragrance studios across the world. The goal is to receive multiple submissions in order to increase the variety and breadth of potential submissions and to win the briefing process. The logic is to increase the olfactive breadth of formulations:

> "I always need to have submissions that come from Europe, just to have a mix. When I come back to my clients with a range of fragrances I want to have some European fragrances in there" (Senior Account Manager, August 2007).

The brief is mobilized and travels through computer screens internally worldwide in order to reach other evaluators and perfumers. The creative work of a perfumer is based upon her choice, motivation, and vision to work on a project. Perfumers decide individually on which project they want to work.[200] However, in addition, sales and evaluation approach particular perfumers directly in order to reap the experience of a perfumer with a particular brand and client; in a few cases, also the manufacturers approach individual perfumers. What is actually targeted and exploited are the personal networks that a perfumer has built during her professional career. Thus, in order to win a brief, a perfumer is approached that is experienced with a brand in creative and personal senses. Sales and evaluation recognize the strengths and weaknesses of perfumers in terms of successes for particular clients and particular markets and pre-organize the competition and, therewith, competitiveness of perfumers. In this case, the individualized integration of particular perfumers through sales and evaluation leads to an internal ranking that is based on brand expertise and individual affinities. This can be of particular value for the fragrance supplier when it comes to significant projects. The recognition of perfumers has a brand-specific and geographic connotation: some produce better for particular brand and markets. Thus, the individualized decision by a perfumer to work on a brief is added by the structured approach of sales and evaluation to integrate specific perfumers.

The evaluator and the perfumer: the fragrance library

Industry perfumers start with their work that is based on the discursive interpretation of a brief with the evaluator.[201] Perfumers and evaluators form alliances since they speak the same language of olfaction: they are negotiating the meaning and

[200] The decision to become engaged in a project is dependent upon the current workload, deadlines, brand, interest, and overall size of a project.
[201] A brief cannot be a detailed plan that tells a perfumer what to do. Rather, it is a suggestion with a lot of room for interpretation. This suggestion is based on the relation between the perfumer and the evaluator and the communication between them.

longitude of a brief in the context of the brand (Gherardi, 2006). The communication helps to analyze the brief, situate the emerging fragrance in a group of existing branded products, or relate them to previous projects of the fragrance supplier. The knowing practice of checking and situating the brief against the existing market is based on the interactive engagement and communication. It is positively connected to spatial proximity where iterations can take place on an ad-hoc basis. However, in addition to this communicative solidarity and experience, an initial collective learning place emerges as significant at this early point. A first learning place where the practicing evaluator and perfumer alter the epistemic object is the fragrance library. In the fragrance library, creative work is secured and shelved; knowledge sediments on a regular basis in the sense that fragrances are deposited in the library and taken from the shelf when necessary (Grabher, 2004b; Ibert, 2007b).[202] The fine fragrance exists in a fragrance library as a material and a formula within a supplier-specific computer program. The fragrance library is a learning place of sedimented knowledge that becomes relevant and activated for the creation of new knowledge in particular cases. First, it is a potential place for inspiration of the perfumer. Creative work on big projects can receive inspirational feedback from the fragrance library. Second, within the mass market-segment, for example, a hierarchy of projects exists in dichotomies

[202] For instance, the creative work on previous projects where a competition has not been won is stored in order to be used or to get an inspiration from for new projects. In general, fragrances that are located in the library can be differentiated according to an experimental or trial number and a corporate number: creations of the former are "experiments to see how your idea really is – maybe in reality your idea is not so great as what you desire;" however, "when its determined that the company wants to send, and its good enough to send that perfume to a client then it moves from an experimental number to a corporate number" (Senior Perfumer, February 2006). In order to move from an experimental number to a corporate number, the supplier needs to guarantee that it can reproduce the scent, determine the exact price, and communicate the availability. Numbers are given sequentially and a scent, over the course of a project, receives different numbers during its emergence. Furthermore, the creator of a fragrance is mentioned on the bottle in order to guarantee access of the creative nose.

between, for instance, lower-ranking scent compositions (e.g. ‘me too-products’) and the development of a completely new perfume. ‘Me-too products’ serve as an example to examine the role of the fragrance library; these are fragranced products that are copies or clones of existing top sellers. Product development time shortens and the necessity to launch a ‘clone product’ after an olfactive brother or sister (which is similar in olfactive terms) tops the consumer markets forces suppliers and manufacturers to come up quickly with a formula (Siegel, 2007). The creative work that develops with the intention to create a ‘me too-product’ is a fairly simple one: a perfume is a top seller on the market, a competing manufacturer wants to take a share of the market success; a fragrance supplier is instructed to create a similar product; the perfume is purchased by the supplier, decoded through GC/MS, re-composed, and slightly nuanced by the perfumer (= matching; Calkin and Jellinek, 1994; Turin, 2006); and, finally, it is put on the market under a different name for a similar consumer market group.[203] Accordingly, the approaches to create a ‘me too-product’ versus a new fragrance differ.[204] The differences lie in development time and the spatializing practices how to compose and where to create. Shelf fragrances and the work on them according to the logic of “rip, mix, and burn” (Currah, 2006) using economies of recombination[205] (Grabher, 2004a) is *en vogue* for ‘me too-products,’ smaller projects and non-strategic brands. During the above processes of re-composing and ‘nuancing,’ existing shelf fragrances are ripped (taken out of the previous context), mixed (re-composed in order to serve the relevant

[203] Most often, legislation that affects the rights to use a particular package and name is, for instance, not harmed by the manufacturer that re-produces a successful product.

[204] Shelf fragrances are fragrances that did not win earlier competitions but are shelved in fragrance libraries in order to be potentially used in the future. All work is stored in libraries. A shelf fragrance might show conceptual similarities with the brief of a previous project.

[205] Grabher (2004a: 1497) mentions that economies of recombination develop out of bricolage, thus “the creation of novel combinations of familiar elements and by-products from previous projects.”

purpose), and burned (tested and submitted to the client). Knowledge sediments in the form of a fragrance and formula in the library and is taken out of the context in order to be re-formulated when necessary.

The fragrance library enables the evaluator and the perfumer to learn and practice sensible knowledge through the materialization of previous work and the discussion how to alter a scent. Early on in a project, evaluators browse the fragrance library to find a base to start working from; the basis of this work is previous creative action. However, a fragrance library exists in two spheres: as a physical space in the form of a room at a fragrance supplier (following a specific architectural setup in the fine fragrance studio according to the logics of olfaction) and as a sensible space in the memorizing brains of evaluators and perfumers. The prospects or sparks to work with a shelved fragrance are, however, both depending on and fueling practices of interactive sensible knowing: the ability or necessity to work with a shelved fragrance is based on smelling, discussing, and forecasting how to operationalize and situate a fragrance for a project. The epistemic object is very flexible but materializing; initial discussions between the perfumer and the evaluator are significant for the guidance of the object.[206]

Thus, the fragrance library becomes a learning place where the emerging epistemic object can be instantiated and receives an initial and materializing orientation and direction (Ewenstein and Whyte, 2009). Its value lies in the quick delivery of fragrant proposals that are results from previous work; the fragrance library has become more important over the last few years since the work rhythm of the manufacturers

[206] How does a perfumer become knowledgeable as far as the ‘brand requirements’ are concerned? The market setup with the major manufacturers, the major fragrance suppliers, and the development of core lists lead, first, to a streamlining of creative competition between the major fragrance suppliers and, second, to the organization of the perfumer’s creativity according to brands (Burr, 2008).

fluctuates quickly. Fragrance suppliers are advised to feed work into libraries in order to be able and respond to the manufacturer at a fast pace. Thus, the fragrance library is not only a space for storage but a place of activation of previous work. Thus, fragrance suppliers have materialized memories through these libraries where knowledge sediments.[207] The relevant practice of checking the brief by the evaluator and perfumer is added by the practice of knowing how to alter an existing fragrance in order to submit it to the client. Fragrance libraries are storage media that enable the recollection of previous work and give prospects of new sparks for creative formulations.

The perfumer: intelligent mobility for inspiration

After the initial discussion between evaluator and perfumer, the perfumer starts to probe his ability to imagine a scent. Thus, a second set of knowing practices of thinking, materializing, and constituting a fragrance is relevant for the initial formulation; these practices and the related spatialities become significant as environments where the perfumer is 'doing knowledge:' at a desk, on the go, and in the laboratory. These environments are qualitatively heterogeneous but represent idealized spatialities of knowledge. The desk and the laboratory are learning places while 'on the go' is an example of circular mobility of the perfumer (Ibert, 2007a). The perfumer moves intelligently within and between places where she is enabled to practice knowing in order to start the creative process and get inspired. 'The desk' and 'travel' determine environments of inspiration, 'the library' serves as a place to experiment with and

[207] However, this memory is short-sighted since it is not, as in the individual cognitive context of the human brain, 'collective:' other perfumers that read a scent do not automatically know the history of its development and the context of its evolution.

exercise this inspiration: thus, creation in perfumery has a mental and emotional as well as a technical side (Calkin and Jellinek, 1994; Hume, 2009; Perfumer and Flavorist, 2009b).[208] Perfumes are, first, thought and, second, materialize based on the thought fragrance (Hume, 2009).

A perfumer usually initiates work on new projects at a desk in a fine fragrance studio. Desks are learning places that develop in different contexts; I call the desk at this point 'inspiration desk' since the perfumer's invention and inventiveness becomes recognizable there. The inspiration desk becomes an integral learning place during this development stage and will reveal its significance in the following steps of 'sensing fragrances' and 'winning the competition.' Inspiration starts with cerebral competencies of linking a brief with specific natural and synthetic materials that contribute to a potential composition. Inspiration is also related to the processes of thinking by the perfumer who relates one project to previous experiences or other perfumes on the market. The perfumer is not 'free to create' because a number of limiting or "restricting factors" exist (Small, 2006: 143).[209] The brief (and, implied therein, the price and the target consumer) and the brand pre-determine adequate and potential notes and ingredients.[210] For instance, most mass market-perfumes are made of materials that

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[208] The perfumer Maurice Roucel (in Perfumer and Flavorist, 2009b) argues that "the most difficult thing is to have the idea ["knowing how to express yourself," Maurice Roucel, ibid.]. After that, it's a question of technique."

[209] The so-called "perfumery degrees of freedom" are skin safety, environmental safety, acceptable odor, cost, stability, performance, physical properties, and added value (Small, 2006: 143/144); safety, as it has been shortly delineated in Chapter 3, plays an increasing role that informs, discriminates, and determines the shape of a fragrance (see the REACH regulation). These degrees are to be added by all aspects that are related to the brief and the brand.

[210] The aspect of emotional branding (Falk, 2007a; Gobe, 2007) summarizes the tendency that fragrances are a sensorial communicator for the historicized characteristics of a brand. The perfumer Pierre-Constantin Gueros of drom (in Falk, 2007a: 55), for instance, discusses the trajectories that fragrances delineate over time: "The original in the blue pot had a big influence on all the perfumes of the Nivea brand line. Fragrances were adapted to the different bases. Perfumes launched by a brand on the fine

stem from a rather commercial palette of ingredients that is determined by the aspect of price (Dove, 2008). Some ‘reference materials’ might stand for particular fragrances and help to set up the basic structure of a fragrance. The formula develops as an ingredient list and is informed by the affinities by the perfumer to use particular materials (her likeability and sensibility for particular ingredients), the availability of materials that is grounded in the finitude of the present stock at a studio, and the connectivity between the brief, brand, and material (see also Perfumer and Flavorist, 2009c). Thus, even with the restrictions that I mentioned above, it is up to the individual perfumer and her understanding of and vision for a brief that informs the individual formulation; this understanding differs between people and projects. For that reason, decentralized creativity across corporate boundaries but also within companies is beneficial (Lave and Wenger, 1991). Good perfumers keep two different logics and guides in mind for their initial set of experimental formulations: on the one hand, the briefing client looks for a formula which is creative; on the other hand, the client also looks for economic efficiency of the formula construction so that the company also benefits from the formula in terms of relatively low-priced mass manufacturing. The aspect of creativity, therein, is not just to create a new accord but an accord that is “novel, but that is also likeable, in a form addictive and that can create a certain kind of well-being“ (Senior Perfumer, April 2008; translation from German by the author). The likelihood of having a completely creative versus a more conservative scent is depending on the brand attitude.[211] Ultimately, a formula has to fulfill both creative and

fragrance market, as another example, may be translated for line extensions and reflect the degree of sophistication that the brand wants to convey in these products.”

[211] In general, even the most creative mass fragrances have some degree of similarity with other perfumes in order not to confuse the final consumer. Thus, fragrances that are targeting the young male market

reassuring requirements and the perfumer constructs initial sets of fragrances accordingly at the desk.

While these processes of ‘thinking a scent’ are often performed with the evaluator, the desk becomes a learning place where the perfumer translates these thoughts into formula as visual representations. The desk develops as an important learning place to pin down the inspiration: it is not a blank space but inhabited by material infrastructures for the production of knowledge (Knorr Cetina, 1999; Livingstone, 2003). Examples of this are the increasing competencies of the computer (or, more traditionally, a sheet of paper) and the unique software that abstracts a fragrance from its sensible materiality (Burr, 2007, 2008; Hayden, 2008).[212] The perfumer thinks the fragrance in terms of its overall structure as far as the top, heart, and base not are concerned that determine the temporal experience of a fragrance; however, she develops the formula according to the chemical constitution (Turin, 2006) and an absolute price (= reading as a formula with particular ingredients and with a particular overall structure; see also Calkin and Jellinek, 1994; Curtis and Williams, 2001; Sell, 2006).[213] However, the formulation is not only dependent on the brief and brand but

might include some floral notes, but overall the fragrance typically includes woody or marine notes in order to convince and reassure young males.

[212] Inspiration can be read in two ways: first, from a creative side and, second, from a more technical side. Two examples follow. First, “Eight years ago, the designer Karl Lagerfeld asked Jacques Polge, Chanel’s elegant, talented perfumer, to make a perfume out of Coco’s favorite flower, the camellia, which has no smell. The limpid and lovely result is ‘Une Fleur de Chanel,’ a product of pure imagination. This is not distillation, obviously; it is almost a kind of abstract expressionism for the nose.” (Burr, 2007); thus, “the creation of a ghost” (Burr, 2007) implies that it is not the flower but the idea of the flower, thus, a simulated flower that is formulated (see also Hayden, 2008). Second, “How should the alcoholic product smell from the bottle or atomizer? How will it develop on the skin once applied? How long should it last between applications” (Small, 2006: 143).

[213] The perfumer discriminates between different versions of a raw material (versions of natural versus synthetic Bergamot, for example) on the basis of the price, impact, and her likeability of materials.

also on the inventory of available materials that are listed, actively known, and preferred by the perfumer.

The sets of materials that are available differ per fragrance supplier and studio[214]. First, I mentioned above that the largest fragrance suppliers are active in R&D in chemistry in order to create new molecules that can creatively be used in fragrances. Thus, perfumers work with different palettes of materials. Second, the number of similar materials differs per fragrance supplier – some fragrance suppliers may have five different Bergamots while others have ten. Furthermore, a perfumer does not know all Bergamots so that long lasting linkages to particular materials develop. “I personally don’t know all the qualities, for example all the Bergamots, all the Roses. I smelled them three years ago, but I’m still using the ones that I liked best” (Perfumer, June 2007). Third, while the same materials that a fragrance supplier owns are usually available at every studio, stocks are temporally uneven and run out at one studio while time pressures determine the work with another material. Thus, the perfumer is affected in his formulation by the materials in their computer-mediated abstract materiality. In addition to the restrictive brief and brand, these material restrictions let a formulation be far from coincidental. The computer on the perfumer’s desk allows exact information in terms of prices and availability of substances for creation. Computers guarantee that fragrance formulas are ‘safe’ in terms of the used materials (i.e. non-allergic ones).[215] Thus, with the introduction of new safety regulations to the industry in 2001 in terms of the toxicology of materials, the computer and its software was lifted up. The computer

[214] Even beyond this search for usable captives, the supply with raw materials is diverse and the molecules that are listed on the screen are coming from different suppliers and have different histories of becoming so that every fragrance supplier differs significantly in terms of available materials for usage.

[215] Over the last years, self-regulation and external regulation (see REACH in Chapter 3) have affected the industry in terms of the safety of certain materials and the ability of perfumers to use these materials.

increasingly informs the creation and creativeness of the perfumer with the description of allergic information. To complicate the process of developing a ‘safe formula,’ however, especially for smaller suppliers, clients have different standards per country. Finally, computers allow that formulations travel – this is a feature that is relevant for interaction as it will be discussed later. Thus, computers are ‘life-lines’ in terms of chemical constitution, prices, availability, and safety regulations which are more and more complex to overlook by perfumers and evaluators without this technological equipment.

In contrast to the manifestation of knowing practices in particular places, I describe the aspect and impact of circular mobility of the perfumer in this paragraph (Burr, 2005; Ibert, 2007a, 2007b; Perfumer and Flavorist, 2007b; Burr, 2008). Perfumers use sensible experiences while traveling in order to get inspired to create a fragrance; thus, for the development of a new fragrance travel complements the inspirational sources of the brief, the brand, available materials, and the interaction with the evaluator.

Professional mobility is described as one vehicle to document the movement of knowledgeable practitioners and how they contribute to the movement of and change in practiced knowledge (Livingstone, 2003; Barnes, 2004). Professional mobility not only enhances and feeds into the employability of these experts, it also describes the significant characteristics of knowledge circulation and the significance of certain environments for learning (Barnes, 2004; Ibert, 2007a; Hall, 2009). Temporary and permanent mobility of the perfumer have to be differentiated.

First, the perfumer chooses to be temporally mobile in order to come back to a learning place (Ibert, 2007b). The aspect of mobility has, just like in other industries where mobility implies potential innovative benefits from irritation (Ibert, 2007b), a connotation of multi-sensorial experiences in certain atmospheres: the imagination of scents – often dependent on a fickle mix of visualization, sensual perception and reception, and general understanding and characterization – demands reflection with 'the real' that is based on local experience and affection (Burr, 2007). The example of the travel to Egypt by perfumer Jean-Claude Ellena in Chandler Burr's work (2005, 2007, 2008) indicates the necessity to, in this case, mirror an already drafted olfactive idea of the Nile with reality of the experienced atmospheres at the Nile.[216] Temporary mobility implies, in this case, the multi-sensorial experience of the particular environment and situation in order to enhance creative work (Burr, 2005). Imagination/idea is matched against the perceived 'reality.' However, the example shows that the difference between imagination of a garden in Egypt and the proximate Sahara and reality had a particularly beneficial outcome: not fitting into the imagined multi-sensorial picture implied and enforced ideas to rethink and reconfigure a scent. This was subsequently done through the inspiration that came from green mango (which served as the base for the fragrance) following the initial experiences in Kitchener.[217]

[216] Inspiration through travel can be a driver that is based on and contributes to the above aspect of passion. Burr's (2005, 2008) description of the actions and interactions of the perfumer Jean-Claude Ellena for Hermes shows that creation potentially involves inspiration in the local setting (in this case, the perfumer and other corporate representatives traveled to Egypt) and the discussion about it after the realization of a scent that followed the inspiration. Otherwise, inspiration is often fueled, maintained, or actually imitated by other corporate professionals such as marketers who present the perfumer with particular representations of ingredients and general concepts.

[217] "As Ellena walked through Kitchener ["Kitchener was a formal, ordered garden, the kind Ellena didn't like;" Burr, 2008: 18], the perfume he had built in his head disintegrated and blew away; now he had nothing" Burr, 2005). Burr continues to describe the actions that Ellena performed after being inspired from the green mango as the theme of the fragrance: "When they returned to the Old Cataract Hotel,

Alternatively, temporary mobility is strategically enhanced through firm-specific programs of geographical knowledge exchange of personnel (Perfumer and Flavorist, 2007e).[218] This practice copies the traditional period of a journeyman on an international scale for a short period of time and is an example how the concept of a community of practice is operationalized (Lave and Wenger, 1991; Wenger, 1998; Amin and Roberts, 2008a; Sennett, 2008). Furthermore, it exemplifies the practice of knowledge interaction on a technical level. However, travel is often not intentional: perfumers do not travel with the goal to get inspired and do not travel for each creation; however, they do especially for high prestige-projects. Inspiration cannot be accomplished just through travel but enables and requires a mix of skills, experiences, and sudden sparks in a differing locality. Also, travel cannot be instrumentalized: sometimes inspiration coincidentally hits the perfumer through a sensible experience that developed from previous travel (Perfumer and Flavorist, 2007b). This relates to circular mobility where travel does not have to mean experiencing a completely

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Ellena went quickly to his room and took out the orange notebook. Not allowing himself to think too hard about it, he scribbled down a rough formula of thirteen ingredients, some naturals, some synthetics. They were not things he'd found in Aswan. These were thirteen perfume raw materials in his lab that he would use to re-create the feelings and emotions of what he'd found in Aswa" (Burr, 2008: 21).

[218] Two reasons can be separated: market experience and exchange of ideas. First, market experience of a perfumer is enhanced through work in different markets. The creative abilities of a perfumer enhance through the work for a period of 18-24 months in different studios. Which qualities are connected with the market experiences that the perfumer collects through work on different markets? First, work rhythms of fragrance suppliers are pre-given by the tact that the client determines and the amount of clients that belong to the specific market that a fine fragrance studio covers (see also Siegel, 2007). This tact differs significantly. Thus, the specific unique work environment – consisting of colleagues, office space, laboratory, and socio-economic context, for instance – differs and this plays a role for the work of the perfumer. Second, bigger fragrance suppliers recently set up particular programs that encourage the discussion of perfumers amongst themselves. The "perfumers' academy'-program" by Symrise, for instance, intends to enhance the exchange of ideas between perfumers at different stages: apprentice, junior, and senior are educated in "communication and presentation skills, business management/finance, and the latest chemistry" (Perfumer and Flavorist, 2007e). This represents an institutionalized way to enable the exchange of ideas between perfumers within the company that work in other studios. Furthermore, magazines such as Perfumer and Flavorist enable continuing learning on the job parallel to the everyday practices (see also Ewenstein and Whyte, 2007, for the case of architects). In addition, some companies have regular meetings of the perfumers in a fine fragrance studio where they smell in concert.

different setting; rather, it acknowledges the sparks for inspiration that are hiding in a picture, movie, or café (Boden, 1994).

Second, permanent or long-term mobility implies the intended and strategic hire of personnel within and across geographic and corporate boundaries in order to benefit from individual experiences of a perfumer. Vice versa, also perfumers strategically plan their mobility not only in order to enhance employability or raise salaries but to work with different materials, colleagues, and brands. Successes in creating market hits fuel the employability of the perfumer. Overall, both temporary and permanent mobility are significant and structured by the tasks that the specialists are involved in.[219]

Finally, the compounding laboratory is a recurring work environment and a learning place for perfumers (see Fig. 5.3). The lab is mentioned at this point to discuss that the idea needs to materialize after the initial ideas and inspiration have grown at the desk and through travel. Therewith, the knowing practice of constituting a scent through the intelligent mixing of ingredients plays a key role and, therewith, the lab develops as a learning place. After a perfumer started to work on a fragrance at her desk, lab assistants compound the submitted formulation into a fragrance. This materialization is necessary so that the initial ideas that are based on the perfumer's inspiration can be correlated with the practicability of the intended formulation: does the newly created

[219] Salespersons, for example, recognize the effects of professional mobility during their professional career through work for manufacturers. This is a useful and necessary task in order to get a more holistic understanding of the intentions and requirements of the involved parties. Mobility between fragrance suppliers is usually connected to promotions in terms of geographic or account-specific responsibility. The necessity to be geographically mobile is in the case of the salesperson rather limited. Knowing an account and knowing clients does not change significantly between different markets. "[For] a salesperson to be creative is to actually work for a brand, is to cross the suppliers site and work for a brand site… to get an understanding how things are done within a brand" … "That type of work [ie sales] is more important than having a network in Paris, for example, because if you are a good salesperson you can go to Hong Kong and be as successful as you are in New York because you know how things are done if you have some method and organization. You bring this in your bag with you and just have to establish your sales over there" (Senior Account Manager, August 2007).

Fig. 5.3 The laboratory at the fine fragrance studio of *drom*[220] in New York City (accessed through http://www.jankorasic.com/ on July 18, 2009)

fragrance materializes as the perfumer thought it would (cf. similar discussions in Callon, 1986; Law and Hetherington, 2000)? The transformation from a formula to a substance takes place through the work of laboratory assistants. The lab assistant follows the instructions of the perfumer and compounds the ingredients as it is put down in the fragrance formulation (cf. the practices of metering, weighing, and blending in

[220] drom is a second-tier fragrance supplier that is headquartered in Germany. It has fine fragrance-studios across the world. The company serves only as an example for the mentioned learning places.

Boeck and Fergen, 1991).[221] While the work of and with the laboratory assistants is crucial, the material infrastructure of the lab (for instance, bottles with essential oils and absolutes, machines such as scales and mixers; Boeck and Fergen, 1991) and the situatedness of the fragrant substances in it is important for the emergence of the fragrance (see Fig. 5.4). Substances inhabit the lab that all differ in their chemical setup and structure, in their olfactive characterization, and the inherent availability or lack. In this context, the lab holds as an already existing material structure and context, but is activated as a learning place for practitioners on a regular basis (Gherardi, 2006).

Fig. 5.4 The work environment in a laboratory (accessed through http://www.time.com on July 27, 2009)

[221] Increasingly, fragrance suppliers use technology for the creation of fragrances. Time Magazine (2007) reports about an example at IFF: "IFF's robotic mixers blend ingredients for samples that are sent to clients. Technicians still mix oils by hand when creating a new scent or flavor, but it is more efficient to use automatic mixing when assembling batches of samples for outside clients."

The perfumer interacts with the lab in order to become a participant in a greater play of materials, materializations, and infrastructures (cf. Knorr Cetina's work, 1999).

Furthermore, apart from the materialization and enactment of the compounding laboratory per project, the lab iteratively but repetitively materializes as a learning place where the perfumer is enabled to 'play.' 'Playing' is a necessary and important practice in order to remain on top when it comes to natural and synthetic materials. In this context, the verb 'to play' stands for non-intentionality and practiced passion without an intended goal. One perfumer exemplified its significance by pointing out that "I need it. It is necessary to do it, to refresh my brain" (Perfumer, June 2007). Perfumers repetitively smells known materials and recalibrates her sensible knowledge of smelled materials, contrasts the remembered ones by materials from other suppliers, tests new materials, or adjusts formulations that do not communicate as intended.[222] Curiosity for materials and materializations structures the playful work of perfumers at times: the craftsman demands time periods where she is intensively engaged in playing with materials and understanding the materializations of fragrance formulas. Thus, the perfumer needs to practice her passion. Skills are developed out of work that does not exist without passion as engagement in the doing (Ellena, 1991; Gherardi et al., 2007; Burr, 2008; Kubartz, 2009).[223] Thus, the laboratory is an environment to practice

[222] Another instance for the laboratory as a learning place for the perfumer is when a scent that is composed is not functioning as intended or behaves different from what the perfumer expected – which is quite regular (Calkin and Jellinek, 1994).

[223] Thus, engagement in the doing helps to experiment with passion; experimenting can be qualified: Sennett (2008: 58) stresses that the "larger understanding of how to use what one knows" is superior to a "brute imitation of procedure." This is, even more so, the case in perfumery where brute imitation does not meet the passionate intention of the perfumer, cannot guarantee the full acceptance in the community of perfumers, and the wins of large competitive projects. Thus, the introduction and implementation of the GC/MS-technologies as well as the significance of "matching" (Calkin and Jellinek, 1994: 12) have to be used intelligently in order to steer between "too much teaching and the giving of too much information" (Calkin and Jellinek, 1994: 11). Calkin and Jellinek (1994: 12) stress that "Matching

sensible knowledge in terms of a rich situatedness of ‘real materials’ (i.e. not those that are memorized) and the potentiality of just-in-time (and, often, just-over-time) effects in the creation of a scent.

To summarize, the decision to compose a particular fragrance and to add it to the set of fragrances for submission is depending on the approach of the perfumer. A perfumer tries to read a brief from different angles in order to come up with a range of perfumes.[224] The diverse approaches to a brief are necessary in order to enable a potential win of the competition. The crucial aspect is to read a brief so that creations go through evaluation and sales in order to receive positive feedback from the client. Perfumers often produce five to six different experimental versions of a scent at this stage. Thus, different decision-makers are involved which make a strategic planning challenging. The coordination of the submission of fragrances is crucial for a perfumer since it determines the future involvement in a project. The juggling between projects and different fragrances describes the working environment of the perfumer. Towards the end of these sets of processes, the perfumer submits several prototypes of fragrances to evaluation so that a decision can be made on which to continue work and which are presented to the client; this decision is shared with the account manager.

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provides one of the best ways of learning perfumery (…) But too much matching can have a paralyzing effect on the minds of aspiring perfumers. They risk becoming creatively lazy and dependent, and neither their imaginations nor initiatives are allowed to grow. Today, however, much of the drudgery has been taken out of matching by the use of gas chromatography, allowing young perfumers to become familiar with the composition of many of the great perfumes within a comparatively short period of time.”

[224] This has to be connected with an aspect that the perfumer Cecile Krakower (in Perfumer and Flavorist, 2008b) speaks about when she characterizes different understandings of ‘lush’ or ‘fruity.’ This perception is, first, geographically uneven and, second, varies between actors: perfumers amongst themselves might use common expressions (e.g. through the use of specific materials and molecules) to ‘stabilize a connotation’ and allow an understanding of what a term means.

5.3.4 Sensing a fragrance

In this part I explore the stage where fragrances are sensed. After the initiation of a project through a brief and the following initial formulation, the stage of ‘sensing a fragrance’ is dominated by fragrances that compete with each other in order to win the briefing competition. The epistemic object develops through the repeated interaction between the involved fragrance suppliers and the manufacturer. On the one hand, the repetitive rounds of competition challenge the work of the creative team at each supplier. Perfumers compete through their formulations in-house; this relates particularly to the sensitive relation of the perfumer with the evaluator. Similarly, marketers are involved in representing fragrances and fragrance concepts. Sales represents the creative work in front of the client; additionally, evaluators advice on an olfactive level. On the other hand, the perfume manufacturer is continuously sensing fragrances in order to figure out which fragrance is adequate for continuing participation in a project and alteration of a formula. Both brand management and fragrance development at the perfume manufacturer are involved. Sensing a fragrance is a significant interactive and communication-based step since it implies multiple iterations of getting back and forth. The competition between the suppliers is organized and coordinated by the client; the client determines the activation in a supplier from ‘off’ to ‘on.’[225]

[225] The project work of fragrance suppliers is during the competitive stage of bidding constantly switching its status between ‘on’ and ‘off’: a fragrance that leaves the fragrance supplier determines that a project is inactive (= ‘off’; the creative team is, if at all, not working on it or only monitoring the processes at the client); when the clients comes back to the supplier it becomes active again (= ‘on’; the creative team is actively working on it). Thus, the creative work on a project is connected with a high

Competing fragrances

The epistemic object exists in a multiplicity of olfactive versions at this point: up to 50 different fragrances compete with each other.[226] However, competition is temporally structured by the manufacturer-supplier relationship. This lets manufacturers and suppliers connect in different, though related tasks. A competition between the fragrance suppliers takes place in a couple of rounds where the client organizes the competition; in the next paragraphs I examine how this affects the different practitioners in their practices of knowing. During the repetitive rounds of competition, the creative team is involved in idiosyncratic activities that are described below. The epistemic object is reduced in number over time: fragrances are presented per house and evaluated by the manufacturers. Thus, the epistemic object meanders between the manufacturer and the supplier multiple times and, ultimately, one fragrance follows its trajectory to out-compete the others. In order to make 'objective decisions,' fragrances are repetitively investigated of how they perform. The overall process takes a couple of months (determined by the manufacturer and the amount of tested materials). It is seen as an 'on-off process' by the fragrance supplier (since it is not sure if a project will come back after a submission) and a 'decide-and-return process' by the manufacturer.[227]

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degree of financial and organizational uncertainty (in terms of how to structure the work of members of the creative team).

[226] The competitors are, however, not known between the fragrance suppliers: scents are presented to the manufacturers by house either at the supplier or at the manufacture, which depends on the fragrance supplier. Fragrances develop their own trajectories from where they start respectively. In addition to the 50 fragrances that compete, numerous trials and experiments of fragrances exist that are either completely dis-regarded or shelved in the fragrance library in order to be potentially used in the future.

[227] Brand managers sense the presented scents. Thus, they make sense of a fragrance by the simple, though very complex and discursive, process of matching the initial concept and the brief with each presented fragrance. Sensing a fragrance leads to the ex-ante anticipation of potential product coherence and brand connectedness to the overall brand. Burr (2008: 194) exemplifies this poignantly: "L'Oreal has ensured that the perfumer weaves in the same filaments. Brand unity. You smell the links subtly but distinctively, not as materials but as style, the juice olfactively finished in that instantly recognizable

The marker: conference tables

The conference table, both at the manufacturer and the supplier, is a learning place that is repetitively enacted and activated throughout the creative process. At this point, however, I focus on the marketer who creates with his unique techniques and ways of representing interactive spaces of knowledge creation as well as knowledge interaction (Livingstone, 2003). Here, I emphasize an ontologically different materialization of scent: marketers make use of different forms of visual and verbal presentations and representations. Marketers present and represent fragrances through words and visualizations at conference tables. In contrast to brand management at the perfume manufacturers, the marketer in a fragrance supplier focuses and develops experiences with multiple brands (Falk, 2008).

The relevance of the marketer at a conference table is reflected in the practices of knowing how she represents a scent: since brand managers are largely working based on their visual and verbal skill-sets, the marketer translates a fragrance into these dimensions (see also Ewenstein and Whyte, 2009). Marketers participate in client meetings during the stage of 'sensing a fragrance' in order to represent fragrances conceptually. Thus, the marketer receives information from evaluation or perfumery about a fragrance that has to be presented.[228] Fragrances are characterized in terms of their relative and absolute characteristics. The relative characteristics imply that the

matte, sleek, silver-gray Armani polish. An aluminum carapace, one part light to two parts dark, and the perfumers manage to convey it in smell." The brand manager works collaboratively during the stage of sensing a brand: she often consults a fragrance evaluator within his or her own company. Fragrance evaluators usually work for multiple brands and provide interactive feedback both to the brand manager and the fragrance supplier.

[228] "I need to smell [the fragrance] in order to match it with the brief. I need to know if it's supposed to be a sparkling fragrance, is it full of light, is it dark, (…) is it intimate, is it bursting, whatever the fragrance is doing so you follow what you are writing just to be sure that you write something that fits the fragrance" (Senior Marketing Manager, August 2007).

marketer situates the fragrance in the spectrum of all fragrances per brand, per geographical market, per fragrance family, or per competitors in terms of similar brands on a market (Symrise, 2008b; Edwards, 2009).[229] The absolute characteristics reflect the idiosyncracies of the individual fragrance in terms of its characteristics such as significant materials and stories around those materials (where they come from, what they communicate). A traditional device to represent is the fragrance pyramid. The setup of a fragrance through the visual representation in a perfume pyramid, for instance, but also the documentation and description of where the key ingredients come from (= movies, pictures), the representation of the motivation and passion of the perfumer(s) to submit a particular scent (= story), and arguments to embed a particular fragrance into the brand portfolio of the client (= comparison) are important examples of the ways and means to represent a fragrance based on narrations. These narrations are visual and verbal ways and means of constructing stories around the presented (set of) fragrances. For instance, a focus of these narrations in recent years has been the story-telling around materials, their histories and geographies, and their significance in current perfumes. Thus, raw materials are, ‘marketed’ according to their real or imagined geographical heritage of where they come from and what contextualized baggage they carry. In other

[229] *Symrise* (2008b) lists nine large fragrance families (in alphabetical order): chypre, citrus, floral, floriental, fougère, fruity, green, oriental, and woody; beyond this, fragrances are additionally qualified as and situated in numerous sub-families or sub-categories such as, for instance, ‘edible’ (including impressions of chocolate, vanilla, caramel, coconut, nuts, cream mild, pastry, and cinnamon) or ‘spicy’ (including piquant, savory or pungent spices such as pepper, nutmeg, clove, and cardamom). Accordingly, fragrances can be organized and described on a chart, for instance; additional information in terms of creation date/launch date helps to track the success of a fragrance, enables to produce clusters of fragrances with similar olfactive characteristics, and overall contributes to a historical organization in genealogies of fragrances: *Flower by Kenzo* (for woman) contains a spicy floral fragrance that was launched in 2000. Therewith, blind spots as well as traditional or well-frequented areas are represented. However, different organizations of fragrances into families exist and Dove (2008: 70) lists six fragrance families (three per gender) according to the harmonious setup of a fragrance.

words, materials are reinvented as interesting and competitive. This has enabled an increasing development towards trends in perfumes (see Turin and Sanchez, 2008).

Another solution to stand out in contrast to competitors is to find marketing solutions for fragrances that do not follow the typical pyramid form: some traditional as well as historical perfumes intend to challenge the pyramid towards a lacking top note or a star-shaped fragrance composition (thus, in the shape of a tetrahedron; see the perfumes by the niche brand '*Humiecki & Graef*'). Therewith, the marketer is enabled to discuss the heterogeneity and contrast to more common-sense approaches of perfumers. Within the creative team, marketing as a translator of the creative action of the perfumer is both inspiring but also challenging the work of the nose: "I have the feeling that, if marketing speaks about perfume, they are talking about something else. They have to make my perfume sexy and compatible for the brief" (Perfumer; June 2007; translated from German by the author). At the same time, marketing is representing the relative and absolute position of a fragrance on a market also in terms of number-driven marketing that sets the presented fragrance in context with existing markets. The contextualization of numbers and materials enhances the likelihood of winning a competition. Thus, against a 'fluffy representation,' numbers are added to allow a convincing positioning strategy.

Marketers contribute with their texts, pictures, and other visual or verbal narrations and, therewith, accelerate how a fragrance communicates at the client. The epistemic object receives additional information through the technologically-mediated sayings of the marketer (Gherardi, 2006). The effectiveness of this multi-sensorial orchestration of the fragrance by the marketer is connected to the co-presence of the submitted fragrance. This is due to the tendency that “with words you can convince a lot more than with what is in the bottle” (Perfumer, June 2007). The fragrance is acting upon the marketer and her informed talk and argumentation (Gherardi, 2006: 204). The marketer is both a spokesperson for the perfumer and the fragrance (Callon, 1986). Thus, the interaction between the marketer, the fragrance, and the participating other members of a creative team in front of the client is as important as the experience of the fragrance alone. Vice versa, brand managers are enabled to recognize the different fragrances in a multi-sensorial way: they are not only dependent upon the fragrance by itself but information is presented in a multi-sensorial way.

However, marketing is, as the name suggests, a ‘market making-discipline’ (cf. Cochoy, 1998; Lury, 2004). The marketer is not just simply representing a fragrance through multi-sensorial devices as it is; she is adding value and guiding the fragrance for the client through her imaginations in words, gestures, and tone of why a fragrance is the best choice to fulfill the requirements of a brand. In the literal sense, marketing is the process of reinventing a fragrance as a marketable item that is fit to be put on a market (Callon et al., 2002). A crucial competence in order to win a competition is to proof that the intentions and goals of a brand are understood: it is about the adequate representation of a fragrance in the context of the particular brand by the supplier.

The perfumer and the evaluator: the interaction desk

Creative space develops through the interactive work of evaluators with perfumers. What started during the initial formulation of a set of fragrances continues when perfumers coordinate the formulations through discussions with the evaluator in order to re-submit altered fragrances. This happens on a flexible basis and is determined by the urgency to formulate for a particular project. However, the places where this takes place also differ but, typically, the desk of the evaluator or the perfumer is such an interaction place. Therefore, I will examine the 'interaction desk' at this point.

Thus, the evaluator criticizes the work and, depending on the individual characteristics of the evaluator, shows directions in terms of how to alter the creation in a positive direction that enhances the uniqueness and competitiveness of the scent. An example is the exaggeration of one ingredient in a composition: the evaluator makes the perfumer aware of the over-representation that might signify the scent as 'too niche.' A second example is correlating an evolving scent to the specific client: because decision-makers at the manufacturer might prefer scents with a significant rose accord, this material should ideally be integrated in a fragrance. The perfumer increasingly becomes 'blind' over the course of a project and does not know if a fragrance smells as intended: "when you work on things you lose your perspective" (Perfumer, April 2007).[230] Therefore, the FDM gives feedback. The analogy of the evaluator as a mirror of the perfumer describes that work is actually intending to let the fragrance supplier benefit from a collaborative interaction; at the same time, the evaluator is also a guide who gives advice to the perfumer how to change an existing formula for 'the better' – where 'the better' exists only as an estimate and not as an objective improvement of the object.

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[230] "When the business becomes more and more complex, you need experts. And I think also it's like when you cook at home. For the cook, you know when you have your nose, cooking your meat the whole day, you are no longer…you don't appreciate it. You don't appreciate the dinner because you have smelled it so much that, in fact, you are saturated. And because you are saturated, and you are much into what you are doing, you cannot judge it. Maybe the day after you made the dinner, because it's something you can cook in advance, it's much better the day after because then you are like a baby, you are neutral. You can really judge. And in perfumery it is like that. And very often in perfumery, could you taste it and tell me, is there enough salt, pepper, is it strong enough or is that okay? You ask someone outside who has a fresh nose – because taste is nose, right – who can judge it much better than you are. You will be able to judge it, but the day after" (Head of Evaluation, August 2007).

However, perfumers are constantly urged to reconsider and challenge what they have learned because brands remain to be ambiguous and flexible (Grabher and Ibert, 2006; Burr, 2008). Especially at this point, the perfumer is guided by the suggestions of the evaluator who actively 'reads the market' by smelling scents from a brand and comparing the smells to other brands.[231] Thus, at this point the creation is emerging out of negotiations between the perfumer and evaluator of what a brand is about and how one brand differs from a similar one. This difference is ascribed both to artistic as well as managerial and organizational discrepancies.

Against an over-socialization of the interactions between evaluator and perfumer, a critical distance between these two functions exists. This distance is necessary in order to allow the evaluator objectively to review scent submissions during the competitive stage. Thus, evaluators have to stand back and smell scent submissions for competition independently from the name of the creator.[232] Thus, the work of a perfumer is, again, dis-connected from the creator in order to assure a critical distance. Furthermore, this distance between the perfumer and the evaluator helps to allow coincidental misinterpretations of a brief and the following formulation that potentially that lead towards unique developments. A misinterpretation potentially motivates novelty. At the same time, the critical distance implies risks of misunderstandings. There is a fine line between a necessary and malicious relational distance between the perfumer and the evaluator: the outcome of relations that are too close or too far are both negative. For instance, when evaluators and perfumers do not share the same elaborated language

[231] The evaluator investigates the wider market according to the olfactory characteristics while the perfumer creates the scents and, only partially, monitors the market. These competencies already resurfaced when the evaluator and the perfumer talk about a brief.
[232] This is a particularly difficult task since good evaluators recognize the specific approaches of perfumers over time. The knowledge of the idiosyncracies in creating can potentially subjectify decisions.

because they work in different fine fragrance studios, physical distance has the potential to increase misunderstandings for the worse.[233]

A perfumer learns about the preferences of specific manufacturers and brands through work over time. Similarly, perfumers also learn about the preferences of an evaluator and vice versa. While both functions are participants of the creative team that formulate in order to win a competition, learning also takes place between the perfumer and evaluator in terms of the preferences, work approaches, and capabilities.[234] Negotiations create and open up the ways and directions that a fragrance takes: it is either about another round of reformulations of the perfumer at the desk or in the lab, or it is about the submission of the reconfigured fragrance to the client. What is trained and experienced at the desk of the evaluator or the perfumer is a “cultivated sensitivity” (Ewenstein and Whyte, 2007: 701) how to speak about a fragrance and how to alter it accordingly. Sensible knowledge is shared in different rounds of talking.

[233] I present such a misunderstanding below that has to do with differences in conceptualizing, understanding, and approaching ideas about a scent. This misunderstanding emerges out of differing geographical characterizations. The perfumer Cecile Krakower (in Perfumer and Flavorist, 2008b: 29) mentions the personalized character of vocabulary of scents that has to be abstracted from the specificity of the individual and decoded in order to understand its meaning. However, she describes this tendency in a geographical context: “American evaluators would ask for fruity notes, which Krakower interpreted in her European way as peach, which in turn had nothing to do with the US understanding of the concept. Through trial and error, she was able to interpret her colleagues’ requests. “Now I know it [‘fruity’] needs to be luscious, mouthwatering”” (Perfumer and Flavorist, 2008b: 29). The same verbal descriptions were used but connected with different olfactive experiences. A similar example is given by Pybus (2006b: 140). Thus, even with an open direction of how to manifest a scent as fruity, the interpretation of the word, characterization, and implementation of fruity for a scent leaves space for creativity.

[234] “So, you know they all have their talents and it’s true, just like with our customers, the more you work with them, the better you know them, the better you communicate with them (Head of Evaluation, August 2007).

The perfumer: the association desk

The desk materializes yet again as a learning place during the stage where fragrances compete with each other. At this point, I emphasize the role of the desk for association and call it the 'association desk.' The desk has been described as an inspirational place where the perfumer gets inspired and where he starts to formulate either through the technological support of the computer or sheets of paper. At this stage, the association desk is characterized as an environment where bottles with fragrance samples and blotters/touches populate the working space of individual perfumers; these material objects have been described as significant mediums for the reading of a scent, particularly at this stage (Calkin and Jellinek, 1994; Turin, 2006; Burr, 2008). Thus, the sensibility of the perfumer and his ability to recognize the fragrance samples is dependent on these carriers and containers of fragrances. The knowing practice that develops together with and out of these instruments is the practice of smelling and comparing. In this context, comparing scents with each other but also with the idea of what the fragrance was intended to look like are important.

Blotters matter because "different kinds of molecules are leaving the strip at different rates, small ones bailing out early, large lumbering ones staying out until you finally trash the strip" (Turin, 2006: 36). Thus, fragrances are compared with each other through blotters on trees and evaluated by the perfumer according to technical standards (Turin, 2006).[235] Sensible knowledge of the perfumer is constructed out of these objects and how they change over time. The perfumer starts an informed conversation with a fragrance since the fragrances are talking about themselves: they are changing over the

[235] Towards the end of a project (in stage 4 and 5), fragrances are also tested on the human body in order to learn from the perfumed skin instead of blotters or bottles.

course of time depending on the mixture. An important factor in this conversation with a fragrance is the temporal aspect of how a fragrance alters over time: while marketers work with fragrance pyramids in order to explain the change of a fragrance according to its major constituents, blotters represent this for the perfumer. Furthermore, blotters are the surfaces where the perfumer understands effects of re-formulations and re-organizations of a fragrance (Knorr Cetina, 1999). Perfumers come back to formulations on a regular basis in order to smell the re-formulated scents multiple times.

The workday of a perfumer is organized by project deadlines of submissions. Submissions during the first rounds of competition let the perfumer manage them according to the projects by themselves based upon the creative input and financial output, the relevance of the brand and client for the supplier, and the importance of a project for the work portfolio of the perfumer.[236] The latter aspect of the 'importance of a project' has different connotations and facets (recognition and reputation-building within the supplier but also in the community of perfumers). Ideally, there is an adequate ratio between less challenging work on big projects versus creative work for niche manufacturers. Core lists are formal agreements that mirror strong ties between the manufacturer and supplier; creative work that takes place within the fragrance supplier characterizes weak ties between the perfumer and the brand (Grabher and Ibert, 2006). Thus, the knowing practices of smelling and comparing are also structured by the work of a perfumer on multiple projects.

[236] A perfumer who already worked successfully for a brand might understand the brand equities and the intentions of the brand managers better: the intention of the manufacturer is clearer and connections to brand managers persist over time.

The perfumers: the cooperation desk

The perfumer’s office and desk becomes a learning place for collaborative work on formulations. Therefore, the aspect of collaboration is stressed through the examination of the cooperation desk. Collaboration should be characterized in the form of the interaction of the perfumer with other peers at this point; I briefly introduced to this facet above. The impression that perfumers are sole creative noses is challenged: perfumers, as recent launches and top sellers on the perfume market document, are active and creative with others (also in Berthoud et al., 2007). In general, collaboration is an interesting facet for two reasons: first, the work of a perfumer is characterized by the individualized understanding of materials and approach to formulate. Second, the work of the perfumer is mostly guided by ideas of competition for projects (cf. the above description and Burr, 2008). While perfumers compete with each other to win a fragrance brief, collaboration with perfumers is, at the same time, a necessity and occurring on a regular basis. Two arguments are presented that describe collaboration and show why collaboration and competition can co-exist. First, in this case, there is a strong loyalty towards the employer that is benefitting from winning a brief no matter which perfumer created the fragrance. Second, the benevolent side of creative work is that no pre-existing better or worse solution for a problem exists (cf. Sennett’s analogy, 2008: 250): perfumers cannot anticipate a ‘better’ formulation ex-ante. “No one has got the right or wrong creation” (Head of Evaluation, August 2007). Therewith, collaboration has a connotation that it is not harming the social relationships of the perfumers amongst each other. Fine fragrance studios typically house 8-10 fine fragrance perfumers depending on the size of the supplier and the relevance of the market(s) that the studio is covering. Collaboration is informal and strategic.

First, informal collaboration is trained from the beginning on; the collaboration of the young perfumer with the mentor serves as an example. Since perfumers are often located door-to-door in a fine fragrance studio, a perfumer is enabled to stop by the office of one of the peers. Informal knowledgeable talk has often been characterized as significant (Calkin and Jellinek, 1994).[237] However, communication and mutual understanding takes place for the manufacturing of a fragrance (see the discussion in Amin and Roberts, 2008a, 2008b). Communication with peers is not an instrumental or instrumentalized activity to ask for help but serves as a training exercise or for the exchange of thoughts, ideas, and understandings of clients.[238] Thus, perfumers learn to revisit and talk about specific materials and materializations through the interaction with other peers so that their sensible knowledge is nuanced and recalibrated over time. Furthermore, perfumers experience specific materials and materials in compositions differently and are enabled to use a language that is commonly understood. The diversity and depth of the used language is often depending upon the previous collaborative work. The richness and depth of language, both for strategic as well as informal collaboration, connects perfumers in unique ways. Thus, the perfumer is able to talk and be understood. Comparing a material or composition with a different one is an example of how knowledgeable talk organizes and increases mutual understanding.

[237] Calkin and Jellinek (1994: 28) mention "sophisticated and differentiated vocabularies to describe (…) small differences in odor between similar products." Thus, collaborative activities do not only challenge these vocabularies, they also recreate passion.
[238] "War stories" are ascribed to reproduce knowledge in the case of Xerox technicians, for instance (Brown and Duguid, 1991; Orr, 1996), or in particularly problematic and difficult cases (Lave and Wenger's reference to midwives, 1991: 108-109).

In addition, participating perfumers learn from the sensibilities of their colleagues because every perfumer recognizes and relates to a natural and synthetic raw material differently. The perfumer talks to colleagues on an iterative but regular basis. Qualities of this collaborative interaction are, for example, based on suggestions in regard to the overall composition, the composition in comparison to the brief, and the composition as far as its structure and complexity is concerned. Towards the end of a project, a perfumer becomes increasingly ‘blind’ so that she asks for creative feedback on which steps to take and how to change a formulation. The interaction is based on ad-hoc ideas of the perfumer. The co-location enables quick visits. Sensible knowledge is shared at the cooperation desk.

Second, collaboration is strategic. Increasingly two or three perfumers create a fragrance (Berthoud et al., 2007). This is, in parts, a marketing solution to cast perfumers as stars within the industry but also co-determined by sales managers or by the client (Perfumer and Flavorist, 2008a). In the case of the manufacturers’ preference to work with specific perfumers, previous links to those perfumers relate to the connectedness that extends individual projects and the communality in personal networks (Grabher, 2004a). The interactions are maintained with colleagues from the same company at the same or from a different fine fragrance studio. Creative action is often geographically distributed. These interactions are rather based on strategic work: thus, collaboration with a particular perfumer on a project is intentionally chosen. Perfumer collaboration is highly selective and depending upon her individual recognition and appreciation how a perfumer formulates. At the same time, collaboration requires a clear documentation of participation in a project: in order not to harm relationships, computer software documents the impact and involvement of each perfumer per project.[239] In an interview with the fine fragrance perfumer Thierry Wasser (the new 'house perfumer' of Guerlain), Berthoud et al. (2007) point out that

> "Today, we don't always work alone. Perfumes launched on the market are often developed by two, even three perfumers. There is always a spark to start off with. That only comes from one person. Sometimes, it is essential to work with two or three to finish the story."

The project work of perfumers shows a three-partite differentiation according to particular collaborative practices. It is based on the knowledge practices of talking, building, and reading scents. First, collaboration is based on the mutual understanding of how communication about scents is organized. Perfumers 'talk a scent' before they start to work. This talk about the potentials of the scent situates the emerging fragrance within the landscape of already existing work on the branded market. It necessitates a similar background in terms of characterizing notes, accords, and comparing them to other contexts. At the same time, in order to enhance the outcome of the collaborative work and the collaboration itself, it is beneficial both for the development of a scent and the learning experience of the involved perfumers that perfumers "know 'different things'" (Gertler, 2008: 208). While Gertler recurs on the different stocks of knowledge that the participating economic actors have and bring into the collaboration, a perfumer phrases the sensible difference of understanding a material in the following way: "[perfumers] have different sensibilities for components in a fragrance" (Senior Perfumer, April 2008; translation from German by the author). The difference in sensual recognition is another example for the difference of experience by sensory

[239] This is a solution in order to guarantee adequate remuneration and participation in the financial results of a successful launch.

bodies (Knorr Cetina, 1999). Thus, through these differences in trained sensible knowledge, the developing fragrance grows. Perfumers contribute to and read different aspects out of the emerging scent. Overall, collaboration is enhanced through a similar educational experience, for instance at ISIPCA, and the elaboration of olfactive language there (see also Gertler, 2008).[240] Second, collaboration demands a technical understanding of the approach how perfumers work and construct their formulas. This is meant by the emphasis of 'building a scent;' different schools of thought (see above; see also Calkin and Jellinek, 1994; Burr, 2008) how to formulate have already been mentioned. Fragrances from multiple perfumers benefit from the different likeability of specific materials. Third, for collaborative work of colleagues that have not been working together, the practice of 'reading a scent' and relating it to a specific perfumer becomes important in order to better understand where the perfumer is coming from; this, in addition to talking with colleagues, is of particular importance when work takes place across distance. Based on the previous or recurring collaboration on projects, the strengths and weaknesses of colleagues become clearer for the involved perfumer. This contributes to the readability of perfumers amongst each other and leads to collaborative networks within the company. At the same time, it increases the chance to win a competition. Sensible knowledge is not necessarily dependent on the perfumer's desk but develops through mobility. Perfumers become unbound from their traditional work environment and are mobilized through the implementation and use of technology. New dimensions of collaboration with other perfumers are opening up without time frictions.

[240] This relates to Gertler's (2008: 210) description that "If they [in this case perfumers] have studied at the same university, their affinity is likely to be even stronger. Finally, if they happen to have been classmates, the commonalities between them are likely to be stronger still."

With the independence from the former olfactory organ and the focus on formulation, perfumers have become less bound to a specific location. While it remains important that perfumers recursively go back to materials and formulated materializations and creations on a regular basis, they are much weaker linked to a particular place and enabled to be mobile. Fragrance formulations travel easily to other fine fragrance studios throughout the world. Fragrances switch their materiality from a written formula on paper or on a screen to a substance and back in a heartbeat. Traditional creative spaces and spatialities (the organ, the laboratory) are increasingly challenged and altering their significance because of technological and socio-economic changes in terms of the required skills of perfumers and their collaboration.

The creative team: Open bars

Architectural interior design is in itself a basic pre-condition and an enhancer of practices of knowing. The micro-geography signifies interactive spaces of how and where fragrances are created, discussed, and changed (Ewenstein and Whyte, 2009). In addition, the presented example of architectural design in what I subsequently call an 'open bar' contributes to the knowledge interaction in sensible practices of knowing. Architectural design creates and affects the knowing practices between the members of the creative team positively. The aspect of the openness of a bar is, just like in the regularly known case of a pub, related to the availability of space for interaction. Thus, open bars delineate inspirational spaces and become learning places for the either coincidental or planned interaction between members of the creative team (Perfumer and Flavorist, 2007b); bars are places where collaborative smelling, discussing, and suggesting is done. This enhances the collaborative work within the creative team since the participants – even when not all four members are present – learn about the work requirements of the others.

Interior design of a fine fragrance studio goes beyond the absolute location of a studio in Mid-Town Manhattan or Tribeca, for example, and covers the interior organization of a fragrance studio, which often contributes to orchestrate knowledge interaction in learning places. [241] In fact, a fine fragrance studio regularly materializes as an overall learning place; however, at this point I focus on a particular space of knowledge interaction for the creative exchange of ideas. I summarize this learning place as an 'open bar.'[242] The mentioned studio in Tribeca is designed as a perfume bar to eliminate traditional office space (see. Fig. 5.5).

Instead, it has a single counter and incorporates "multiple open work spaces, allowing perfumers to interact and exchange ideas" (Perfumer and Flavorist, 2007b: 32). While the interior design and setup differs significantly between the fragrance suppliers, the general intention to enable spaces for potential interaction is recurring per company. Aside from the corporate philosophy and branding strategy that are imbricated in the setup of the mentioned fragrance bar, immediate interaction and collaboration between the creative team can take place ("tweak formulas in real time which can be sent to the

[241] I will later on mention that fine fragrance studios are often situated in particular parts of a city like Paris or New York City. The neighborhood Tribeca in New York, for instance, is described as an "inspirational space" (Perfumer and Flavorist, 2007b) and qualified as "a perfect fit. Set amid a vibrant community of artists, architects and designers, this exclusive neighborhood provides the dynamic environment necessary for innovative fragrance design" (Perfumer and Flavorist, 2007b: 32). In addition to the aspects of design that is informed by the intention to create studios that appear modern and cool, a functional logic is often implemented in the architecture that is guided by technical requirements for adequate ventilation (so that strong odors can not migrate into other offices, for instance) and work environments of the olfactively-trained, in particular.

[242] Actually, the studio resembles in its appearance 'a bar' where the customer orders a drink, for instance.

lab, located downstairs;" Perfumer and Flavorist, 2007b: 33). Thus, the laboratory, in this case located downstairs, as another learning place materializes as soon as necessary. Also the customer can engage at the bar or in one of the adjacent rooms that are organized through openness (openness highlighted through the extensive use of particular materials such as glass).

Fig. 5.5 The fragrance bar at the fine fragrance studio of *drom* in New York City (accessed through http://www.jankorasic.com/ on July 18, 2009)

The organization of corporate space contributes to the constitution of knowing in action that is targeting cross-functional talk within the creative team. Such spaces of interaction are organizational solutions to serve as a meeting point for the creative team. Open bars are meeting points that are unbound from separate and closed rooms that were uni-directional and -intentional in their constitution and closed off from coincidental walk by-traffic. These spaces are at the crossroads of employees' paths so that quick meetings and talks can take place, even with coincidental strollers. The multi-functional, open, and pervasive spaces are, actually, aestheticized and promoted to contribute to enhance the exchange of creative ideas between the involved practitioners. Talk at the bar targets the actual project and the actual fragrances but also experiences and stories from past projects.[243] Furthermore, bars represent facets of the industry that stand for discourse and communication in contrast to caution and secretiveness.

For the shape of a fragrance the architectural setup and design matters. The management and service logic (see above; Grabher, 2004a) also pervades the architectural setup and design of a fine fragrance studio: open bars exemplify that the setup is intended to enhance intra-corporate exchange as well as supplier-client interaction. Examples in this respect are 'showrooms,' where specific fragrance compositions are presented to the client. These showrooms are often decorated, set up, and managed by marketing. For instance, the goal of the four international "citrus showrooms" is to "let clients experience the extraordinary citrus know-how (…) [in] special 'experience rooms' where clients are recognizing the citrus world of *Symrise*

[243] "Stories" are characterized and described as follows: "Stories emulate experience. They do not, for example, reduce experience to abstract rules or instructions. Though they are often rudimentary and focus upon essential parts of the events without much regard for suspense or poetic refinement, they keep some part of the experiential context in the picture" (Knorr Cetina, 1999: 106).

(Symrise, 2009: 31; translation by the author). These rooms serve both for strategic as well as creative meetings as inspirational spaces around the fragrant theme of citrus. In addition, the relevance of open bars for the client has also an overall geographical aspect: clients in the United States, for instance, see the significance of a fragrance also by its representation (the fragrance supplier needs to deliver a ‘sexy product’), while other clients on the European market stress the functionality and uniqueness of a fragrance. Accordingly, open bars as showrooms and architectural representations for creativity become more central in the United States versus Europe.

Open bars are particularly important during the stage of sensing a fragrance where a project still has to be won, which demands more interaction than in the pervious or later stages. They are examples of ambient spaces for the development of a fragrance; they exemplify that architectural design is an enhancer of practices of knowing where interaction is strategic as well as coincidental.

Perfume manufacturer and fragrance supplier: market tests

I described above that market tests of fragrances have become an organizational necessity for mass brands and an integral part for the development of the epistemic object; in this paragraph I elaborate on this in further detail.[244] The involved practitioners perform practices that are abstracting, recognizing, and comparing fragrances based on their numerical performances (see Lury, 2004, for instance). Thus, market tests serve as a “seeing device” (Knorr Cetina, 1999: 114) and are a simulation

[244] Green (1991) describes that in the 1960s large pharmaceutical companies with little or no knowledge about the industry started to take over companies. Currently, perfumes and related fragranced goods have to pass many tests at different points during their development until they are market-launched.

environment that informs action (Baudrillard, 1996). The research is significant for the reading of a fragrance and its hypothetical performance, for understanding the market in terms of the reactions of target consumers through quantitative statistics, and for separating effective creations from non-effective ones (see for the relevance in general: Lury, 2004; Lorenzen and Fredriksen, 2008).[245] In addition, tests are representatives for a spatial separation of creative work from the environments within a firm (the fragrance library, the desk, and the laboratory) and stand for a fragrance that encounters a test without the supportive contribution of the creative team (e.g. marketing). Market tests are argued to be mechanisms to reduce the inherent financial risk of launching a new perfume; furthermore, they are performed so that creative personal receives answers to the question in which direction a scent can potentially be altered. The tests differ in terms of their number, participating fragrances, points in time, and significance of a test for the overall development of a perfume. The relevance of these criteria is dependent upon the valuation of a test for a brand and the self-defined significance to work with 'well-tested' fragrances. Both manufacturers and suppliers perform market tests for which they usually contract specific service companies; in addition, consumer and market research specialists are inside the manufacturers and fragrance suppliers in order to process the submitted information. The supplier and the manufacturer have different amounts of scents at hand – the supplier only tests the own fragrance creations, the manufacturer tests at certain points between a few scents. Furthermore, different information is received from the tests that depend on the general setup of a study and

[245] Lury (2004: 24) emphasizes that the development of consumer tests is an outcome of the implementation of "economic, social and psychographic demographics to map the target market." However, the fragrances that are created are not examples of 'good work' but of work that is effective since it is reaching its intended goal (cf. Sennett, 2008).

the submitted results that are extracted and used thereupon. Finally, the intention of the tests differ: fragrance supplier want to make sure that consumers like a fragrance (= tests as consumer development tools) while manufacturers want to make sure that a fragrance fits within the overall product concept.

Fragrance suppliers invest significant amounts of money into quantitative and qualitative market research in focus groups (eg Catterall and Maclaren, 2006, also Gobe, 2007). This documents the intention to win a competition in the short range and the interest in a better understanding of the final customer on a product-by-product basis in a medium range. Moreover, it reflects the important point of the necessary flexibility of the epistemic object. In general, a shift of responsibilities has taken place over the last few years in that fragrance suppliers take a more pro-active role in their work for major clients.[246] Fragrance suppliers are increasing their involvement in market and consumer testing activities in order to understand and make sense of the final consumers.

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[246] Additional long-term value comes from the intention to connect consumers with brands through the vehicle of fragrances and the emotions that they evoke. Thus, in contrast to the manufacturer who has interest in understanding which fragrance works best for the targeted consumer of a particular branded product, suppliers are interested in how the final consumer relates to accords. Falk (2007a), Gobe (2007), Perfumer and Flavorist (2007d), and Time Magazine (2007) describe long-term market and consumer research in a fragrance supplier. Gobe (2007: 49) explains that one of the key suppliers "chart[s] the emotional profile of the fragrances" based on a global database with emotional responses of consumers from over 30 countries to almost 5,000 scent ingredients and fragrances (also Time Magazine, 2007). The goal of this internal proprietary database called ScentEmotions (Perfumer and Flavorist, 2007d) is to "create fragrances that will leave an indelible mark on consumers and brands that will have sustainability in the marketplace" (Gobe, 2007: 49). Thus, the big suppliers have integrated "emotionally driven discovery techniques" which are "used as a way to develop fragrances for its clients that has now become a source of inspiration for major fragrance brands as well" (Gobe, 2007: 45). Suppliers do not only increasingly share branding efforts but they back it up and intertwine it with 'scientific evidence' of emotional research on consumers (see also Falk, 2007a; Perfumer and Flavorist, 2007d). Fragrance suppliers become pro-active in emotional branding. Thus, 2.0-perfumes do not only smell pleasant, their fragrance is an intelligent connector between the consumer and the brand. Scents are decoded in order to be instrumentalized and purposefully put to work thereupon (Falk, 2007a; Lindstrom, 2005). Finally, the intentions behind this emotional research are not only to secure short- and long-term collaborative links with manufacturers (Perfumer and Flavorist, 2007d), but to develop forecasting skills of the performance of accords and fragrances per geographical market as well as to stay competitive and independent from increasingly fewer large clients. The expensive research is restricted to the largest suppliers, but they show a direction of how scents become smart and potentially drive perfumer's action in formulating.

Overall, the further a fragrance moves within a competition, the higher is the likelihood of being tested by a supplier and the more urgent is a good test result for the survival of a scent.[247] Testing is typically related to abstracted test environments in 4-15 sites (for a market such as the US) and results are based on regionally sampled research "to ensure the results are nationally representative" (Customer Research Manager, September 2007). Complexity increases with the number of markets that a perfume will target. Scents run through an average of 4-5 tests within a fragrance supplier, but the amount can vary between 0 and 25 tests. Additional telephone or online tests are also conducted. Typical moments to perform market tests by a supplier within the stage of 'sensing a fragrance' are those "when the creative team needs consumer feedback to focus resources and guide development next steps, and when the fragrance submission decision is needed" (Customer Research Manager, September 2007). The stage of

[247] However, three reflections are discussed in this regard. First, the intended goal of reducing uncertainty and making products successful through a more adequate reflection of the market can not explain the flop rates which are, like in other cultural industries, high (Kaiser, 2008; Lorenzen and Frederiksen, 2008). Second, market and consumer tests represent logics on their own. Brand managers rarely approach the risk of arguing for a perfume without having relevant numbers at hand. Thus, the tests actually enable brand managers and other decision-makers to visualize a product for a market (see Callon and Munieza, 2005; Munieza et al., 2007). Tests are solutions to discriminate between fragrances. Third, the understanding of what perfumery is and what the fragrance industry is about clashes at the example of market and consumer tests. The business practice of market and consumer tests is not without criticism from the inside. The tendency to use market and consumer research in order to make perfumes more successful – i.e. to make fragrances work (Burr, 2008: 150) – is criticized by perfumers-as-artists. Thus, the understanding of perfumery as "business" or "art" clashes at the example of these tests. First, Jean-Claude Ellena, currently the house perfumer of Hermes, argues that "market testing is the best way to repeat or copy perfumes consumers already know [and] not to create" (Thomas, 2007: 162). Christophe Laudamiel, senior perfumer at IFF (Berthoud et al., 2007; Burr, 2008), mentions that tests guide the creation of the perfumer: "The perfume is conceived or, at least, guided by external and essentially calculated criteria. The data dictates the perfume's design" (in Berthoud et al., 2007: 103). Laudamiel (in Berthoud et al., 2007: 103) presents some thoughts that the perfumer will think about when she creates a perfume: "Does it please 60% of a given population of a country or of a continent? Does it diffuse for x hours on skin or fabric? Does it diffuse in a shower? Does it remain stable in a soap? Does it mask an unpleasant odor?" These quotes represent the struggle between different agents – the marketer versus the perfumer, for instance – and the work that numbers do for scents: they dictate what is possible and what not. Consumer feedback and potential sales performances counter the heterogeneity of scents. Courageous niche houses can be distinguished from more orthodox mass-market brands in this regard. Thus, creativity wanders from the thoughts, hands, and sensual perceptions of the perfumer to the simulated reality in a market test.

‘sensing a fragrance’ sees recurring tests with three major goals: “screen a large set of fragrances down to a smaller, higher-potential set of fragrances,” “provide feedback for modifications,” and to “select fragrance(s) for submission” (Customer Research Manager, September 2007). Thus, tests lead to a reduction of the total amount of presented fragrances per house and, through the tests of the manufacturer, of all fragrance suppliers. They are manufacturing devices that reduce complexity (Knorr Cetina, 1999).

Manufacturers run tests in order to compare submissions from different suppliers. The manufacturer’s goal of market tests is to ensure that the brand fits well with the scent.[248] Market tests are examples of how and where a scent is married to a brand: through the statistical correlation the ultimate match is subsequently extrapolated. Thus, in contrast to the fragrance supplier and their interest in consumer acceptance, the manufacturer wants to make sure that a fragrance works for a concept.

The competition between fragrances is organized through the métier of statistical methods and calculations (Callon et al., 2002; Callon and Munieza, 2005). Tests are significant towards the end of a project for two reasons: first, they are crucial because the direction of how a fragrance is shaped in its becoming can be determined. Thus, it is determined which fragrance and where a fragrance is created both in organizational and geographical terms. A fragrance is discriminated according to the statistical results that hypothetical consumers create. Fragrance tests are ideal examples for the mobilization of the epistemic object to make it competitive. Scents and scent performances are calculated and translated into numerical abstractions (Lury, 2004;

[248] This technique shows that, in the end, both manufacturers and suppliers have in the targeted and idealized consumer the same denominator to which they share their loyalties.

Callon and Munieza, 2005). Second, test results create confidence and argumentative power for the manufacturer. The numbers per fragrance do not allow decisions by themselves but knowledgeable personnel such as customer research and sales make informed decisions.

Market tests are intermediaries that are materials by themselves but that allow effective action upon fragrances (Gherardi, 2006). What do market tests do in regard to action and the work of practitioners? Market tests serve as an example to approach the concepts of power and trust (Gherardi, 2006). First, in terms of power, the argumentation often goes that if a perfume underperforms on the market, the brand manager is not to blame: "if it's a flop it's not my fault" (Head of Evaluation, August, 2007). This is an example how powerful a market test can become. The dominant logic is that of the belief of brand managers in tests. Brand managers more and more depend on the security that rests in market tests. A heterodox challenge of this logic is the sensible knowledge of the experienced brand manager that speaks against a market test:

> "I was obliged to fight a lot against my boss. But I had the feeling it wasn't a good point to take the best one [i.e., the fragrance that tested better than the one she preferred; BK] but to take the other one with more risk. It was a question of feeling, to be convinced. Like my boss said: we have to be convinced first and have the proof after" (Fragrance Developer, June 2007).

Thus, in this case the individual is managing and deciding on a sensual and sensible basis. Ex-post, she faces the applause or the criticism based upon the market performance of a perfumer; however, market tests are examples that not only numbers speak in order to let managers make decisions but individual feelings and guts to decide against a test are significant as well. This shows that experienced brand managers are also working with sensible knowledge.

Market tests create and disseminate narratives on their own over time and affect the way of how scents are formulated. They create ‘realities’ that brand managers can work with: this scent performs well, this scent does not; these experiences are memorized through talk (Orr, 1996; Knorr Cetina, 1999; Brown and Duguid, 2001). Similarly, the creative action of the perfumer is informed by market tests. Essentially, markets tests are devices that also inform the creative approach of a perfumer and determine the aspect of passion for creation. All perfumers criticized the malicious effects of tests for their creativeness. This is because the tests reduce the creativity of the perfumer and make her a puppet of tests. Passion is streamlined – in contrast to an over-emphasis of passion for creation, the perfumer is urged to infuse passion in different degrees depending on the work she is involved in. Thus, the orientation along general socio-economic trends as well as market research determines that specific materials and materializations cluster in time and co-determine the olfactory creativity of the perfumer. For example, the current market is characterized by the influence of cereals in perfume (“basmati rice on the boil”; Turin and Sanchez, 2009: 8). This contributes to the tendency that perfumes are re-created as more natural and eco-sensitive. However, such trends also guide perfumers what and how to create. The self-determined creativity is contrasted by industrial logics.

Second, for the study of ‘trust,’ some of the ‘created realities’ from fragrance tests are historicized to become mass-market specific ‘truths.’ A ‘truth,’ once detected, created, communicated, and learned is trained across generations of practitioners. This also affects perfumers and the creative team more generally. An effect of this is the streamlining of creation. Market and consumer tests do not simply test so that an automatic alteration of a fragrance follows: they infiltrate and inform the practices of the creative team. Thus, tests also alter the social approach to risk in a product. Tests imply the potentiality that they are read differently – they lead to specific knowing approaches of perfumers per project. Fragrance suppliers read out of test results, for instance, why submissions have or have not been successful. This is implemented in future creations: according to the used materials in a fragrance or the structural organization of the top, heart, and base, particular setups of a fragrance are approached or avoided. Certain 'truths' recur and affect the ways and means of how perfumers choose materials for a fragrance. Second, market tests represent how professionals understand and represent geographical spaces: it is about the customization of scents for particular consumer markets through a technique of creative benchmarking and the exploratory addition of particular fragrances to the set of existing scents in a brand.

Thus, the epistemic object is urged to leave particular learning places within the boundaries of the fragrance supplier or the manufacturer in order to be tested. During the competition of fragrances, the epistemic object does not develop out of a particular learning place and a singular testing site but it depends on its mobility and mobilization. The epistemic object is mobilized from the corporate contexts of the manufacturer and supplier and tested in order to inform the relevant decision-makers which creations are likely to be successful. It comes back to receive informed alteration based upon the statistical performance and how involved practitioners evaluate the particular test results that it produced in different consumer environments. The overall market research gives general feedback and potential directions at different points in time. At the same time, it is often the final decision of the brand manager in what direction a scent moves.

Perfume manufacturer and fragrance supplier: the neighborhood

Especially during the later stages of a fragrance competition, frequent interactions between brand managers and the creative team are enabled and enhanced through organized slack (Lash and Urry, 1994; Grabher, 2004b). This promotes interaction in spatial proximity within the neighborhood: this conceptual characteristic of network communality, prevalent in the software industry (Grabher, 2004a, 2004b; Grabher and Ibert, 2006), is also en vogue at this stage. However, the reason to emphasize the role and relevance of this socio-spatial metaphor (Grabher, 2004b: 115/116) lies also in the specific materiality of the cultural product. This paragraph describes the geographical setting of where fragrance suppliers are located.

The main argument behind the location in a particular geographical neighborhood is that of easy access and accessibility of individual clients. A number of fragrance suppliers and manufacturers are co-located in New York and Paris and this guarantees the quick availability of personnel and material.[249] Towards the end of a project, geographical proximity between the fragrance supplier and the client gains importance. Frequent interaction at a short notice is preferred by the clients of the fragrance suppliers: while creative processes for consumer products are taking place in New Jersey or the 'Cosmetic Valley' (Berthoud et al., 2007), the work on fine fragrances is done in proximity to the headquarters of the manufacturers. The quick and easy access and accessibility is also stressed by the creative materialization and materiality of fragrances that let suppliers co-locate in proximity to their clients.

[249] Fine fragrance studios are usually located in Midtown Manhatten or the 16th arrondissement in Paris. These areas in both cities show high densities of all fragrance suppliers. While the manufacturing plants to produce fragrances according to fragrance formulas are usually further away (New Jersey or the so-called *Cosmetic Valley* near Paris; cf. Scott, 2000a; Ansel in Berthoud et al., 2007), formulation takes place in proximity to the clients based on the logic of quick interaction.

Geographic proximity is backed by the necessity of interaction to explain as well as discuss fragrant submissions on an ad-hoc basis: scents are presented by the supplier and altered based on face-to-face interactions where the brand manager, (parts of) the creative team, and the fragrances are co-present. The different professions comment and contribute to alterations of a formulation from their specific viewpoint in order to shape and contextualize the epistemic object. However, the potential social solutions that are inherent in geographical proximity are, in addition, added by frequent exchanges via telephone, email, or short-notice visits. The exchange is continuous but based on temporal ruptures: it is hard to anticipate when the client comes back again with further demands and suggestions regarding the winning fragrance.

5.3.5 Winning the competition

In this part I explore the developmental stage during the creative process after one fragrance won the competition. At the end of the previous stage, fragrances are sensed by the manufacturer, which declares a winner of the competition. After several rounds of submissions and competitions, one fragrance has been chosen that wins the process. The fragrance suppliers that are outcompeted store their work in the above fragrance libraries. However, the successful scent and the supplier behind it are not at the end of the creative work: a fragrance is altered many times more before the final formulation is reached. In the fragrance supplier, the functions of sales and perfumery receive an uplifted significance after the successful fragrance is chosen. Thus, this stage is, yet again, determined by the activities of the fragrance supplier.

Optimizing a fragrance

The epistemic object is optimized after a fragrance supplier won a competition and one fragrance outcompeted the others. The participants of the development are significantly reduced since only one fragrance supplier and one creative team with a specific perfumer are involved. Thus, the concerted effort is focused on one particular team only. This work with the winning fragrance supplier involves the epistemic object, which evolves and develops in directions that are determined in intense and recurring discussions by all project participants. The fragrance that needs to be optimized is increasingly channelized and pre-determined according to its initial setup that serves as a trajectory of how it can develop in the future. While Dove (2008: 70), for instance, mentions the practice of balancing a fragrance based upon the evaporation of the involved materials, the perfumer is actually socially-balancing a scent based upon the rejections and acclamations of the client.

The brand manager, the salesperson, and the perfumer: conference tables

Conference tables are, yet again, a significant learning place. However, the demands and wishes of the client are put on the spot to guide and alter the formulation of the fragrance. At this stage, perfumers join salespersons to discuss changes of fragrance submissions. Thus, the co-presence of the perfumer, who often stands back during the initial rounds of formulation and re-formulation, gains significance after a competition is won. The urgency of her presence lies in the direct interaction.

Face-to-face meetings between the fragrance supplier and the client are typical and this is an intention of the manufacturer as well as the perfumer and salesperson. The representatives of the fragrance supplier and the manufacturing firm enhance their relationships through interaction and discourse per project; therewith, they engage in both adjusting the scent during its optimization and discursive knowing with individuals and decision-making procedures for the future.

For the perfumer, the practice of verbal representation, documentation of work, and defense of the creative efforts becomes central at the conference table. “It is not enough to make good formula, but also to speak about the formula“ (Perfumer, June 2007; translated from German by the author). While this was a crucial task for the marketer previously, towards the later stages of a project the perfumer gains significance in performing this task. Thus, she is practicing passion through words at the conference table: the practice of talking about a fragrance is central (i.e. what has been done in order to change a formulation; see also Lave and Wenger, 1991). This talk can both focus on the different materials and their effects that were appropriated or can also imply the effects that an alteration has for a brand. While a major role was the key involvement in composing a fragrance and out-competing the other presented scents before, now the important task is to defend her creations, document how she has altered a fragrance as intended by the client, and why she has done it in a particular way.

On the one hand, some companies guarantee more creative freedom of the perfumer. Thus, instead of just participating in ex-post talk with participants of a project meeting (the evaluator and the salesperson, in particular), the perfumer understands her involvement at meetings as crucial. Crucial aspects of participating in the meetings are the possibility to participate in the discussions about a formulation and, therewith, recognize and experience decision-making processes first-hand per client.

“Sometimes it’s a word that makes a difference” – thus, perfumers relate to words and what they mean for a formulation differently than other members of the creative team. The perfumer gains experience in dealing with brand managers and related decision-makers. She experiences the individual preferences of them and how this potentially affects the processes of deciding which fragrance wins and why this is the case. These relationships matter for the future. Thus, personal links to a manufacturer by the perfumer can be beneficial in the long run. Perfumers are not only bound to a specific fragrance supplier, they also promote and work on their own careers; a perfumer is sharing her reputation: 50% of it goes to her own career and 50% to the supplier. The participation in meetings with the manufacturer enhances the long-term links and ties with certain industry professionals that persist after a perfumer changed affiliations.

On the other hand, manufacturers urge to see and talk with the creative noses. The client is interested to know more about the intentions of the perfumer and her ability to present and represent a composition as well as the motivation of the perfumer to revisit and change a fragrance according to previous discussions. The salesperson has a mediating and coordinating role. “We have to be very versatile and very eloquent about how the fragrance is” (Senior Account Manager, August 2007). Thus, the co-presence of the perfumer and the salesperson at the manufacturer insures that both practitioners engage in the informed conversation about the creative work. Brand managers contact perfumers even when they leave one supplier and start to work for a different company. Thus, the aspect here focuses both on the development of the winning fragrance – thus, the alteration of a scent in order to make it even better – but also on developing relationships between the different involved actors.

The perfumer: switching between the desk and the laboratory

The perfumer continues to work on the winning fragrance formulation and many more iterations take place. The desk and the lab continue to be the center of attention: the general formulation exists but the calibration of it takes place in the library. The difference lies in the requirements in regard to a scent: a fragrance is scrutinized from many different perspectives and fine-tuned. For instance, questions target the aspects of longevity (i.e. “how long does it last on your skin”), strength (“how much of a trail does it leave behind”; is the scent in the right concentrations, i.e. “not 15% but 16% might be a better concentration for the fragrance”); stability (does the fragrance stay similar over time or does it alter its smell, constitution, and color?); compatibility with the product concept; and safety and toxicology testing (quotes from Fragrance Development Manager, September 2007). The answer to this question can only be given after period of testing time that is necessary to let the formulation develop. Thus, fragrances need to macenerate before clear statements can be made about the stability of the fragrance. In the particular case of functional fragrances, the aspect of application (thus, the applicability of a fragrance in a specific product like a shower gel or a soap) is tested at this stage. While blotters and bottles used to be materials for the perfumer to recognize idiosyncracies of one and differences between scents, employees in the company serve as ‘test persons’ that put on the new fragrance, give their individual feedback, and let perfumers smell from their skin at this point. The materiality of a fragrance is recognized on different levels according to the stage of the creative process.

5.3.6 Branding a scent

During the final part of the development process, the winning fragrance is intensely branded. ‘Branding a scent’ shows overlapping aspects with the previous part: already during the stage where a winner of the fragrance competition has been found, a scent is actively branded. From an artistic point of view, all aspects communicate and represent similar ideas. The ultimate goal is to construct coherence and congruence in a branded product.

Embedding a fragrance

The epistemic object is increasingly connected and related to all other material and metaphysical product characteristics towards the end of the creative process: “the scent needs to express the brand concept” (Marcy Fisher of Liz Clairborne, in Falk, 2008: 49). It is connected with, for instance, the shape, color, and size of the bottle, the material and the components of the package, the advertising, and all other accessories through brand narrative associations: the bottle, the package, the fragrance, and the branded product story, for instance, all match. This matching is validated in tests, for instance. At the end of this stage, the epistemic object moves to the targeted retail environments. I explained above that during the stage of ‘sensing a brand’ largely the cognitive and rational aspects of the fragrance business stand central; this is the case during the stage of ‘branding of a scent’ again. The epistemic object is intertwined with all other parts to become the sensual and cultural product perfume.

The brand manager: the coordination desk

Thus, the fragrance has changed in order to be actively integrated into the relational network of all other product components. The network of the other product components (bottle format, bottle color, package, name, photo model, ad copy) also transcends the tangible product to include other representative devices and agents that take care of it (communication strategies, retail strategies etc.). Thus, the new perfume is increasingly targeted towards the specific markets where it is launched and introduced. Branding a scent is based on shifts in project pace and ruptures[250] in the progression of making a perfume work (Burr, 2008). Not all materials and immaterials reach the manufacturer at the same point in time; however, it has to be guaranteed that the highlighted spectrum of the brand-DNA is adequately represented and integrated in the overall market appearance of a brand. In the end, the epistemic object is intended to tell an interesting story on its own in order to be uniquely positioned on the market. The brand manager is cohering the object. She is doing that at the coordination desk.

Just as in the beginning of the conceptual development, at the end the different brand affiliates and decision-makers are involved again in order to give their opinion about the final product. At the end of the developmental process, the product is branded not only by itself through its material and immaterial features but it brands back: the involved actors are understood and memorized through their particular participation in the creative process of becoming as well as the market success that it receives once it

[250] With "paces and ruptures" I mean the frequent change of working paces between the manufacturers and suppliers: manufacturers might accelerate or delay project work through in-house coordination (for instance: the brand manager is supposed to meet with the brand owner, i.e. the fashion designer, but s/he is traveling and unavailable and delays the process).

reaches the consumer environment. Thus, each development process is contributing to the recognition and reputation of an industry expert.

The brand manager: product mobility

The brand manager coordinates the way of the perfume into the retail sphere for consumption. While this is already taking place at the beginning of the whole development process, at this point the manufacturer can show the product to the retailer. The knowing practice of relating the product to the retail environment as well as concertedly shaping this environment accordingly together with the retailer becomes important. This is performed in the space between the corporate desk and the retail environment that are intellectually connected. Depending on the size of the brand and the significance, retailers give brands and their products more credit and attention in terms of particular places within the retail sphere of a store or, overall, a retail chain. Decisions are also made by the manufacturer where to launch and where to present and promote a fragrance: some consumer markets and, within the markets, some distribution channels might be more adamant to a brand and a branded product than others. Furthermore, the significance of the new perfume is highlighted by particular promotion in stores and commercial deals. The retail atmosphere is also affected by the changes of product brand advertisement over the course of the year. For instance, certain days matter (Christmas, Mother’s day, for instance) and these days play a role for manufacturers in several ways such as, for example, promotion through special deals (buy one, get one free).

Retail also determines the pace of manufacturing of the large and smaller brand licensees. For instance, a interviewee argued that “if I need something quick and if I see that my ranking is going down, I have to react just in time” – thus, sometimes, perfume concepts and scents are stored at the manufacturer and/or the fragrance supplier in order to react quickly upon changes in the marketplace that are reported on a short-hand notice. It is about the organization and coordination of the product and the retail space that is also co-organized by the brand manager. Long and Czajkowski (2007: 59) argue: “The retailer provides a venue to merchandise, and supports a brand within its structure but the ultimate responsibility of driving the business always rests with the brand’s management.”

5.4 Toward a brand ecology of knowledge?

It has become clear that brands are key authorities for the manufacturing of a perfume. Thus, in the following paragraphs the concept of the brand community or, better, brand ecology of knowledge is introduced as a way to conceptualize the meaning and significance of brands for creative interaction (see the analogies with Grabher et al., 2008; also in Amin and Cohendet, 2004; Grabher and Ibert, 2006; Amin and Roberts, 2008b).[251] I will subsequently explain the three terms of ecology, brand ecology, and brand ecology of knowledge.

[251] The term ‘brand community’ is typically related to communal bonds that consumers develop through the interest for a specific (set of) brand (e.g. McAlexander and Schouten, 1998; McAlexander et al., 2002). Thus, the traditional literature on brand communities focuses on consumption and not production. In contrast, the understanding of a brand community or brand ecology of knowledge rests on the manufacturers in the presented case and their involvement in producing and interacting knowledge.

First, the term ‘ecology’ is developed out of two arguments: first, as Nicolini et al. (2003b: 22) discuss, the practice-based understanding of knowledge is particularly aware of the social character of action and interaction in particular ecologies (thus, communities, activity systems, and local cultures, for instance); this has to do with the particular sensual and sentient connotations of doing in this industry. Second, the term ‘ecology’ in economic geography represents a socio-spatial concept to characterize aspects of loyalty and rivalry, trust and competition, weak and strong ties in industries in order to conceptualize and investigate the different socio-economic, organizational, and geographic characteristics of organizing work in a sector (Grabher, 2002a, 2002b).

Second, the term ‘brand’ integrates the significance of brands for action within the ecology – thus, the significance, reach, representation, and understanding of the brand that differs across spaces influences and shapes the ecology. Economic geographies of knowledge in cultural industries increasingly require an understanding and examination of the role of brands for action, interaction, and creative knowing. While Amin and Roberts (2006, 2008b) discuss the lack of a source for cohesion and mutuality in an expert community, a brand is as a cultural glue a potential enabler of mutuality (Olins, 2003). A brand is an inter-organizational “symbol of belonging” (Kärreman and Rylander, 2008: 117) and enabler of mutual understanding. Thus, a brand is also a potential organizing logic and platform for the interaction of different communities that are involved in the production of branded cultural products (see also Power and Hauge, 2008). These communities quickly migrate between different materials and textures: Calvin Klein is both a brand for jeans, glasses, perfume. Thus, branding takes also place between different materials and materialities. A brand organizes work both artistically but also in organizational terms. Within the perfume manufacturers, logics of manufacturing are cohered under one organization that runs multiple processes at the same time.[252] Brand ecologies develop because the brand's initiation of work, which is done in project-based settings through the trajectory of the brand as an organizing logic, is followed by multiple interactions and collaborations with suppliers that run throughout one project and transcend multiple projects. Thus, several suppliers contribute to the knowledge creation and interaction in the ecology.

Third, the involvement of the term 'knowledge' in a brand ecology signifies the multi-sensorial practices of sensible knowing that actors in this ecology necessarily need to develop and retain. A brand covers the spheres of consumption, distribution, and production and, therein, serves as a symbol for creative knowing between different firms and across individual projects. Within the sphere of production, I discussed Amin and Roberts' (2006; 2008a) four specific forms of knowing in action in order to characterize the differences between communities of practice. The authors connect each knowing practice with a particular form of community. While the work of the perfumer has been connected with craft/task-based knowing, the work of a brand manager shows close similarities with epistemic/creative knowing (Amin and Roberts, ibid.).[253] The presented knowing practices promote and contribute to an

[252] The international manufacturers of perfumes are characterized by a multitude of different brands that exist on different geographical markets. They are organized as 'umbrella companies:' the manufacturer provides a number of central functions that are accessible for all brands but beyond that, the creative independence of the brands is relatively high. The function of the umbrella corporation is to play a coordinating role between the brands: brand equities are compared, brand plans and product launches coordinated, general market development is observed, and potential harm monitored (e.g. brand cannibalization and market exclusion). Initiatives to coordinate between different branded products horizontally (clothing, jewelry, accessories etc.) and to build brand unity (Burr, 2008) are typically organized by the licensor.

[253] Brand managers have a mediating role between the upstream legal brand owner, the suppliers, the brand associates on different geographical markets, as well as the downstream distributors and retailers.

> “ecology of knowledge that combines expert knowledge with high levels of creativity, that tends to be characterized by relatively fluid organizational associations and considered actor autonomy or cache, and that frequently involves high-energy peer interactions structured around project-based work” (Amin and Roberts, 2006: 16).

What is the relevance, the purpose, and what are the benefits of a conceptualization of the brand ecology of knowledge? First, the brand ecology of knowledge is a conceptual tool and addition to investigate social relationships beyond the firm, the community, and the project (Knorr Cetina, 1999; Grabher, 2002b, 2004a; Gherardi, 2006). This ecology develops out of a mélange of the concepts of the firm, the community, and the project, added by the material and immaterial coordination aspects of a brand. Numerous companies contribute to the emergence of a perfume; every corporation develops specific ties and relations to other firms. Beyond the firm, communities of practitioners exist between participants of the same and different professions within and beyond a firm. Work is performed in projects and this means that work recurs because of the particular set-up of the industry (Grabher, 2002b; Grabher and Ibert, 2006). However, in addition of these three major conceptual pillars, a brand enables to examine and characterize action that develops out of the immaterial depth and breadth of a brand (Grabher, 2004a, 2004b; Grabher and Ibert, 2006). Connected to this are different social repositories and networks that are created and altered according to the relevance of a brand for the different actors. The example of the major perfume brands shows that ‘the brand’ is an immaterial, but stringent organizer of creative work. Brands organize and structure work of several experts in material and

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The brand manager coordinates the different production processes in a spatio-temporal as well as artistic sense.

metaphysical contexts: they reach beyond the boundaries of a firm, affect the practices of different knowledgeable practitioners, and serve as trajectories beyond individual projects. Therewith, the brand ecology of knowledge becomes another conceptual tool for economic geography to study the socio-spatial logics of manufacturing in cultural industries.

5.5 Summary

This chapter examined the international fragrance industry according to typical practices of knowing and repositories and spatialities of knowledge. It contributes that the overall logic behind the manufacturing of a fragrance is the idea that a fragrance develops in particular places but is also mobilized and travels in order to become: a qualifying feature of the meandering process is that the supplier views projects as temporal organizations that are continuously interrupted because of the decision-making processes at the client (see Amin and Roberts, 2008a, for example). Thus, even with the highlighted stages during the emergent career of the epistemic object, it is characterized by vagueness and uncertainty. At the same time, the strong loyalties to a shared problem (namely the composition of a new perfume) connect brand managers with suppliers rather than the umbrella corporation.[254] Over the course of work within a project, different members of the creative team are central for the becoming of a fragrance.

[254] On the one hand, the large manufacturers of perfumes mainly orchestrate the work of the brand manager on a general level where brand plans are presented, adjusted, and coordinated in-house. Financial budgets are discussed and arranged. Furthermore, information about the competition and general market development in different geographical markets is provided. The umbrella firm provides central functions for all brands. However, brand management structures the artistic direction. On the other

Certain learning places exist as infrastructures of human subjects, material objects, and developing and changing materials and materializations. The fragrance library, the conceptualization, inspiration, and coordination desk, and the compounding laboratory are learning places and sites of knowledge production: knowledge develops in and out of these places. The conference table, the collaboration desk, and market tests are sites of discursive knowledge creation: knowledge is based on the contribution of different participants (Livingstone, 2003). Some learning places like the desk are revisited multiple times. This depends on the necessity of the epistemic object to come back to a learning place in order to unfold and alter; these places inherit different qualities for action. The visits and re-visits are depending upon the successes of a fragrance in other spheres and spaces (e.g. tests in particular sample-areas) and how successful they perform there. This is depending on the stage of the product development process, the relevance of the place, and the demands that the object has in a place. Thus, the laboratory at the beginning of a project has a different meaning and relevance than at the end: the epistemic object is different and the practitioner approaches it differently. Spatial proximity to clients become of central importance towards the end of the creative process when the winning fragrance has been determined and is fine-tuned.

At the same time, knowing is done in action across different human senses, corporate functions, and geographic spaces. On the one hand, spatial distance to peers within the firm at points remains important in order to come up with unique and creative fragrance formulations (cf. Ibert, 2007a, 2007b). The relational proximity

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hand, the creative development of a perfume has become and interactive and integrative task. The brand manager is necessarily connected with the activities of the creative team in the fragrance supplier.

between two perfumers of the same fragrance supplier, for instance, is characterizing fruitful interaction in practices that persist across geographical distance. On the other hand, spatial distance is independent of the creative success of a fragrance supplier that develops a fragrance at the beginning: it does not matter at the start of a creative process where the fragrance is coming from. Third, distancing to the object enhances both manufacturers and fragrance suppliers ability to enhance the olfactive shaping of a fragrance formulation: fragrance tests serve as guides for the development of a fragrance.

The traditional knowledge-debate in economic geography saw the complexity of tacit knowledge as a driver for the co-location in geographical proximity.[255] Research started in a city or a region in order to grasp, understand, and project knowledge at and onto a particular scale. In contrast, the practice-based view on knowledge develops (multiple) spatialities out of knowing that is accomplished in doing. Learning places develop and, over time, change their significance through their particular locality and context-specificity and the conscious enactments of space and time (Ibert, 2009). Furthermore, the practices of knowing are based on sensibility and aesthetic understanding of practitioners and how they present and represent olfaction in different forms (fragrances themselves, charts, pyramids, pictures etc.) and for different participants (within the creative team and in front of the client, for instance). This qualifies the spatialities of knowledge: some places where materials are located and materializations occur in complex mixtures matter while, at other points in time,

[255] The materiality and phenomenality of a perfume and the characteristics of the buyer-supplier relationships that are necessary for its emergence stress the significance of physical proximity for certain knowing practices (Knorr Cetina, 2001; Thrift, 2004). However, this is the case only at some points.

fragrances are mobilized in order to be re-organized later on. The epistemic object is mobilized and traveling in order to be altered again after the travel. Thus, the practice-based approach develops a nuanced and multi-faceted geography of knowledge that is contrasted by scalar nesting of the traditional approach to knowledge in economic geography (Amin, 2002; Amin and Cohendet, 2004; Grabher, 2004a). “A geography of mobilities and placements” develops depending on the affinity of knowing to be performed in a particular place or, like Amin adds, depending on “travel, virtual communication, special meetings, short-hops, away-days, knowledge brokers, consultants and drama workshops” (both from Amin, 2003: 129).

CHAPTER 6

SUMMARY AND CONCLUSION

6.1 Research summary

This study contributes to the nascent literature on practices of knowing and spatialities of knowledge in economic geography. The international fragrance industry serves as an example to add insights from my empirical research to the knowledge discussion in economic geography. The goal has been to investigate geographies of knowledge in the industry at the example of the manufacturing of perfumes according to the knowledge practices, repositories, and spatialities. The focus is on the upstream part of this industry and, in particular, the creative processes within and between perfume manufacturers and their suppliers of fragrances.

The universe of perfume manufacturers consists of a small amount of international brand licensing houses. A license enables the manufacturers to produce perfumes for a certain amount of time; in contrast, a large amount of small houses exists. The big and small manufacturers are active in corporate networks with numerous suppliers who provide materials and immaterials (Scott, 2000a; Power and Scott, 2004). However, the most important supplier of a manufacturing company is the producer of the fragrance. While the scientific and popular literature have usually highlighted and emphasized the creative work of perfumers, the study explored and examined practices of collective creative work on fragrances.

After the introduction to the theoretical foundation of the practice-based approach to knowledge in the social sciences and in economic geography in particular in Chapter 2, a characterization of the historical and sectoral development of the industry (Chapter 3), and the methodological approach to it followed (Chapter 4). Chapter 5 started with a brief description of major experts and the development of their knowledgeability that was developed out of the existing literature but intertwined with the knowledge discussion. I organized the empirical part of the study in the second part of Chapter 5 according to a typical biography of the epistemic object of perfume in order to examine the practices of knowing and spatialities of knowledge. The second part drew mainly from the empirical material and intertwined it with relevant literature from the wider discourse.

The biography of a fragrance is determined by geographies of knowledge where a fragrance is developing. In Figure 5.2, I synthesized significant practices of knowing and related spatialities of knowledge. In order to distinguish between different practices, repositories, and spatialities, I named, examined, and characterized five idealized development steps. Within these five idealized stages, the epistemic object meanders between the manufacturer and supplier back and forth. The concept of 'meandering' (Ibert, 2009) described the understanding of a mobile epistemic object: a fragrance moves between different leaning places that are enacted through the presence of different practitioners in order to create and consolidate knowledge. The process starts with the conceptual intention to launch a new perfume by the manufacturer; in the second step the move of the creative brief to fragrance suppliers and related processes within the supplier take place. In a third step, the interaction between the manufacturer and the supplier is significant and fragrances meander between both actors several times until a decision is made which scent wins the competitive process. Finally, the manufacturer decides to work with one formulation and, towards the end, connects the component of ‘fragrance’ to the overall set of other material and immaterial product characteristics.

In Chapter 5, I excavated, examined, and depicted typical situations and places for learning where social relations and interactions become recognizable through specific work tasks that connect several practitioners with each other. For instance, I highlighted the relevance of desks and their changing functionality depending on the practitioner and the stage during the creative process. Desks receive their significance as a learning place through the practices of the specific agent. I argued that different learning places depend on the alignment of several practitioners that interact in spatial proximity; a practice of knowing relates to an accomplishment of the involved participants as well as the involved materials. At the same time, I highlighted the relevance of mobility during the creative process so that the epistemic object can unfold. What became clear throughout Chapter 5 is that the fragrance industry is an interaction- and communication-intensive business that depends on and contributes to the creation, development, and continuation of particular knowing practices in their spatialities (Amin and Roberts, 2008a, 2008c).

Thus, the investigated practices, repositories, and spatialities of knowledge are examples of how and where experts engage with each other across individual knowledgeabilities. The developing spatial theory of knowledge creation in economic geography is informed by qualitative insights how knowledge is done in a cultural industry (Livingstone, 2003; Ibert, 2007a, 2007b). The brand ecology of knowledge serves as a conceptual tool for the further investigation of the relationships between firms, communities, projects, and brands.

6.2 Research limitations and contribution

At the beginning, I present five arguments that discuss the limits and limitations of this study.

First, the total amount of interview material was limited and is unevenly distributed in the sense that only New York and Paris were used as entry points to approach the field. New York and Paris served as examples of where to enter the field; since the globalizing economy is increasingly understood as set up by corporate networks, a territorial approach to conduct research is challenged by a topological one (Amin, 2002; Amin and Cohendet, 2004; Grabher, 2004b). Thus, in contrast to my organization of fieldwork per city I could have followed experts in their corporate network(s) instead.

Second, the interview data were distributed unevenly in terms of the participating individuals and companies. In Chapter 4, I mentioned that the depth of insights is restricted, especially in the case of the major perfume manufacturers. This is due to the described difficulties of gaining access to those companies. In this context, the roles and functions both at the manufacturer as well as the fragrance supplier might not have received their adequate representation and implementation in the overall process. Some roles might have been over-emphasized, others are under-emphasized. A larger amount of interviews could re-evaluate and clarify the under-represented roles and functions.

Third, data was collected in a verbal form only. This characterization is related to the limits of interviews as an adequate research method to study how sensible knowledge is practiced. Participant observation of a perfumer, for instance, would have added more insights beyond the spoken word.

Fourth, the biography of a fragrance was investigated not by focusing on one singular project and how it is characterizing practices, repositories, and spatialities. In contrast, the study investigated typical processes in the industry in order to come up with the five-stage development process of how a fragrance is manufactured. Thus, a narrower focus on one or a few projects could have provided more in-depth insights.

Fifth, the focus in the study is on 'compliant practices' – thus, these practices that are done in order to make a fragrance work. In contrast, the investigation of 'unruly practices' or breakdowns and interruptions in the productive process could enlighten how different companies cope with frictions, problems, and organizational difficulties (cf. Gherardi, 2006: 232) and, therewith, be truly innovative and learning environments.

However, the study contributes to discourses in economic and human geography more generally. I will list four arguments of how this has been done hereafter. First, the study examines knowledge through the practice-based approach. The practice-based approach is contrasted by the resource-based approach that conceives knowledge as a mental stock and asset that can be mobilized as an economic good. In contrast, practices of knowing are only recognizable through research on the actions that are performed by involved practitioners. Amin and Roberts (2008a, 2008c) delineated practices of knowing previously; at the specific example, they are integrated and co-aligned so that successful new creations can develop. It is not about the clear separation of creative knowing versus task- and craft-based knowing, for instance. However, in order to manufacture a perfume, both sets of practices are related and brought into fruitful interaction. The study showed that these major sets of practices can be broken down into several other practices and that they interact with each other in order to enable the successful development of a cultural product. Collaboration receives a special relevance in this environment but collaboration is challenged because of the struggles of clear verbalization and communication. Two aspects for human geography are relevant.

First, related to the focal shift from having to performing knowledge is the focus on the repositories of who participates in knowledge production. The traditionally centralized firm is juxtaposed by networked relationships that develop out of and exist throughout diverse repositories and organizational contexts. Economic geographers are increasingly interested in understanding in what kind of repositories knowledge is practiced and where this is taking place (Taylor and Asheim, 2001; Yeung, 2003). The recent emphasis on practice and community within economic geography crystallizes at the example of Amin and Roberts' (2008a, 2008b, 2008c) sympathetic critique of the literature on communities of practice. Thus, the focus changes from knowledges to practices and involved actors.

Second, the practice-based approach to knowledge challenges geography in that it does not take existing spatial configurations for granted but, as in other streams of non-representational theory (Thrift, 2004, 2005), challenges taken-for-granted knowledge and questions if knowledge can be stabilized. Thus, the conceptual mapping of practices of knowing in terms of the spatialities of knowledge opens up a much more flexible and dynamic picture of geographies that matter for economic geography. The practice-based approach enables a fine-grained micro- and meso-scalar view on learning places. At the same time, the study contributes to the understanding that knowing as a situated activity also happens across corporate space within certain regional spaces (Amin, 2002, 2003). It has become clear that the firm is still relevant in certain instances (supply with materials and R&D of new molecules) and that networks develop out of the ways and means what kind of roles these spaces play internally. For instance, the example of the neighborhood focuses on a certain area within the city and why and how the location of the manufacturers and suppliers in a specific city matters for the creative process. However, it is too short-sighted to limit the whole creative process to an urban or regional container.

The second major argument is that the study makes use of sensible knowledge that was conceptually developed in the area of organization studies and organizational theory (Strati, 1999, 2007). I outlined the idiosyncracies of sensible knowledge for the domain of olfaction. Again, two advantageous contributions are connected to the implementation of sensible knowledge in economic geography.

First, sensible knowledge highlights the relevance of materials, materiality, and materializations. More generally, only recently has human geography re-integrated objects and materials into its perspective in order to make human social action holistically conceivable (Amin and Thrift, 2002, 2007; Anderson and Wylie, 2009). This characterization is not only significant for the description of the epistemic object and how its ontology is unfolding, but also for the analysis of its mobility and mobilization so that it can become the cultural product of perfume that consumers approach. Thus, the implementation of materials, materiality, and materializations enables a view on how objects inform action of practicing subjects: materials are far from in-active but inform the doings of practitioners by their unique ways of becoming, behaving, and touching back. Thus, the study suggests and applauds a deeper consideration of the merits of bringing materials and materiality back into discourses also in economic geography.

Second, sensible knowledge enhances the understanding how practitioners perform their sensible knowledge in this artistic industry on the basis of how they experience and make sense of olfactive, visual, and verbal representations and the complex multi-sensorial interactions thereof. I discussed many instances of how and where sensible knowledge is learned and practiced per practitioner. For instance, the capabilities to recognize the complexity of a fragrance are based on the training of the individual human senses of participating practitioners, the ability to abstract these affections visually and verbally, and, therewith, become a knowledgeable and active participant in a comparatively small community of practitioners. However, beyond the individual practitioner, the latter characterization is connected to the necessity of learning how to articulate and communicate sensible knowledge through words, pictures, and narrations. Thus, sensible knowledge also requires a collective approach to it. Garfinkel's concept of indexicality (see Chapter 2) re-surfaces during the creation of a fragrance on a regular basis. The dynamic comprehension of each other is enabled through the interpretive work of the other actors and the ways and means of how they bring a fragrance concept, a brand, a consumer, and a fragrance in a fruitful context.

The third crucial contribution is that the study integrates the relevance of brands and the facets of the sets of practices that belong to the domain of branding into the discussion of knowledge. In general, the significance of brands in economic geography has only recently taken place (Scott and Power, 2004; Power and Hauge, 2008; Pike, 2009a, 2009b). However, the discussion has not been connected with the recent knowledge discourse and the re-interpretation of knowledge through the epistemology of practice. Against the narrow productivist focus in economic geography, the study of brands and branding has often highlighted the perceptions and actions of specific types of consumers (Pratt, 2004; Grabher et al., 2008). The dissertation contributes to out-differentiate branding and describes creative practices of knowing that characterize the becoming of a branded product. Furthermore, it presents that and how brands connect the brand manager with fragrance suppliers (Amin and Roberts, 2008a). The term 'branding' is broken down into different practices that challenge the temporal homogeneity of one coherent task. The concept of the brand ecology of knowledge is presented towards the end of Chapter 5 in order to emphasize different organizing logics of involved actors. A brand represents a collective cultural glue for orientation during the manufacturing stage that affect the involved actors (Olins, 2003). Discussions of practitioners in the industry do not solely evolve around fragrances, but actually how to read brands, brand managers, and other decision makers in order to create fragrances accordingly.

Finally, the study of the international fragrance industry contributes to the literature on cultural industries. It describes a cultural industry as in-between the driving forces of artistic creativity and economic rationales of returns on investment and well-performing objects on international markets, for example. Fragrances as cultural and business artifacts challenge the traditionally separate spheres and logics of ‘culture’ and ‘economy’ (Amin and Thrift, 2004, 2007).

Thus, the major discourses on practice, knowledge, and spatiality in human geography are covered in this study. The discipline would benefit from a relational and integrative understanding of these three conceptual building blocks. However, in contrast to the mentioned contributions, the study also raises questions for future discussions.

6.3 Future research

Future studies can benefit from the integration of ethnographic work, which will enrich the depth of findings. However, the complexity for the participation of researchers during the creation of a perfume lies in the communication challenges that are related to the industry. First, future research can approach the industry in the following ways: a network approach beyond the focus on the entry points of ‘New York’ and ‘Paris’ through the continuing focus on one or two projects across different geographical spaces, for instance, can enable more in-depth and less general data. Burr’s book is an example how to set up such research (Burr, 2008). Second, economic geography would benefit from a more in-depth examination of the role of brands for economic action. The concept of the brand ecology of knowledge is a hint towards the potential benefits to bring the literatures on brands and branding in a fruitful, more detailed, and coherent discourse with the discussion of knowledge and project-based forms of organizing (Grabher, 2002a, 2002b; Amin and Cohendet, 2004). Third, the brand ecology of knowledge is created and altered by multiple other companies. Thus, many other authorities are participating in the creation of a new perfume. An integration and informed discussion of these other authorities and their production logics would enhance the understanding of practices of knowing as well as their repositories and the created spatialities. Fourth, the focus has been on the upstream part of production only: however, the recent interest in distribution networks as well as retail would be beneficial for the understanding of the industry and the involved logics also through actors that determine these fields. The involvement and the significance of retailers have also been stressed in the research interviews.

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