

## **Lost in Innovation: Artists as Liminal Residents in the Fuzzy Front End**

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### **Abstract**

The case of Robert Bosch GmbH, who integrated an artist-in-residence program into innovation management, is the basis for this explorative study on artists' experiences and attitudes towards corporate residency programs. 11 semi-structured interviews with artists who took part in the program were submitted to inductive thematic analysis in order to explore benefits and challenges of the residency. The findings are discussed along the concept of liminality and its specifications within organizational theory, both as a framework of explanation and a basis for hypothesizing on peculiarities of artist-in-residencies embedded in corporate settings. As liminality is a temporary, transformational condition between two states defined by diffused norms, non-status and unanchored identity, the residency program under scrutiny has characteristics of a liminal space. The program demonstrably offered artistic freedom and space for personal development as well as an intercultural challenge linked to the artists' prominent outsider status. The artists actively performed strategies to cope with their liminal position betwixt and between the artistic realm and corporate environment, and adapted to operational requirements. On a social level, however, they refused to be engrossed by corporate demands and resorted to their artistic identity. By maintaining their autonomy, the artists demonstrated a particular liminality competence that is anchored in their artistic self. The study contributes to research by illuminating the position of artists-in-residence in non-art environments and offers practical implications for framing interdisciplinary residencies.

**Keywords:** Artistic intervention, Artist-in-residence, Artist residency, Innovation, Liminality

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## **Lost in Innovation: Artists as Liminal Residents in the Fuzzy Front End**

Entering an artist residency is like migrating into no man's land. Artists-in-residence are dwelling in a place outside their domicile and familiar cultural environment, intentionally exposing themselves to the unknown (Steyerl & Buden, 2006, p. 29). Residencies are meant to be spaces for pursuing individual or collective artistic endeavors often aiming at new works or practices. Artist residencies differ widely in art form, scope, timeframe and resources. In essence, they are stimulating retreats with good working conditions, as they grant fellows a temporary relocation and hiatus from everyday life. Aside from time, they may provide financial, spatial and social resources for reflection and untroubled artistic work (Lehman, 2017; Lithgow & Wall, 2017).

While offering access to networks and markets and spanning the boundary between local art scenes and an international audience, residencies are potential catalysts in artistic careers (Lithgow & Wall, 2017). The more than 1,300 artist residencies that exist worldwide (UNESCO, 2018) belong to a far-reaching and diverse infrastructure of cultural promotion. They represent an essential element of artist mobility and cultural diversity, which are actively supported by state cultural or location policy and multinational political programs (EU, 2014; UNESCO, 2018; Lehman, 2017; Bernava & Bertacchini, 2016).

During the approximate 125-year history of artist residencies, the field has broadened from secluded rural studio spaces funded by patrons to residential art centers with a global outreach. Whereas a wave of artist-in-residence programs in the 1960s was guided by a vision of social discourse and political change, a second boom during the 1990s responded to globalization with an international grassroots mentality, culminating in international networks into the next millennium. During the last decade, residencies have offered spaces for exploring the artists' role in culture and society and promoted interdisciplinary approaches as well as artistic research (EU, 2014).

With "embedded artist-in-residencies" (Lithgow & Wall, 2017, para 2) the residency idea has spread to non-art settings. Whereas public research facilities established "artist-in-science-residencies" (Farman et al., 2015, p. 419) to foster mutual benefits in exploration and outreach, companies initially discovered the artist residency as a form of value-added arts promotion. Offering studio space, equipment and fellowships for company-related artworks or artistic interventions as rendered in return became a facet of corporate social responsibility (CSR) or, more precisely, corporate cultural responsibility (CCR) (Herranz de la Casa et al., 2015; Maon & Lindgreen, 2015). Although CCR-type artist residencies are superficially committed to artistic development and advancement, business goals referring to corporate identity, branding or organizational change determine their precise design (Lithgow & Wall, 2017).

With creativity as a key resource for business innovation (Amabile, 1996; Florida, 2002), companies increasingly seek ways of not only embedding artists in innovative management practice (Schiuma, 2011; Carlucci & Schiuma, 2018) but also involving them in product innovation (Smagina & Lindemanis, 2012). While collaborations between artists and scientists or engineers in private business are framed as art-science residencies, the concept is given a fresh function in corporate research and development (R&D). In a highly competitive business environment, integrating artists into new product development seems to be a promising way to disrupt routines and inspire idea generation (Stüer et al., 2010). Under this premise, artists enjoy similar benefits in terms of resource allocation but are confronted with company expectations different from a CCR-type corporate residency and all the more merely artistic residencies.

The present paper takes a look at the case of the artist-in-residence program at Robert Bosch GmbH, a global technology corporation based in Stuttgart, Germany. It explores the under-researched artists' perspectives of experiencing the corporate environment and dealing with contacts in research and advanced engineering. This work is part of a larger study that seeks to illuminate the impact of Bosch's residency on both researchers and artists on an individual level. In this sense, the residence program provides a framework but it is not the study's objective to systematically evaluate its features nor to assess its benefits on an organizational level. The key questions for the given explorative study are how artists experience, handle and judge their stay within the company and their encounter with researchers at Bosch.

After an introduction into the origins and nature of corporate art-science residencies, the program at Bosch is depicted as a research context along with a description of the study's explorative methodological approach. The findings of an inductive thematic content analysis applied to interviews with artists who took part in Bosch's residency program are subsumed and discussed within the concept of liminality and its offshoots in organizational theory as a framework of explanation. From this perspective, artists-in-science-residencies are "liminal spaces" or "interspaces" (Küpers, 2011; Schnugg, 2018) that denote interstices betwixt two realms: the world of business and that of the arts as well as a transitional position between outsider and company member. The artists at Bosch themselves appear as border-crossers in search of identity.

### **Corporate art-science residencies as an emerging field**

In an effort to exploit mutual benefits for science and the arts, some salient art-science residencies such as *Arts at CERN*, *Fermilab Artists-in-Residence Program* and *Knowledge Link through Art and Science (KLAS)* from the Max Planck Society emerged, combining arts promotion and the attempt to convey research to a wider audience via the arts (Williams, 2017). Some art-science residencies go beyond fostering artistic development, such as the residencies that since 2017 have been facilitated by *STARTS*, an initiative of the European Commission. They foster interdisciplinary collaboration and unfold hybrids of scientific and artistic research while reaching out to society (Shanken, 2005; Farman et al., 2015; Henchoz et al., 2019).

As an impetus to product development and innovation, a growing number of companies within and beyond the creative industries have established residency programs (EU, 2014) thereby turning artistic learning environments (AIR, 2015) into spaces for interdisciplinary encounter and exchange. The continuous programs launched at technology companies such as Autodesk (since 2012), Facebook (2012), Planet Labs (2013), Microsoft (2013), Nokia Bell Labs (2016), Google (2017) and Amazon (2018) have their historic forerunners in the last century.

From 1966 onwards, the Artist Placement Group were the first to position artists within industrial, governmental or administrative settings and introduce them as "incidental persons" who left the isolated studio for site specific work and social relations (Walker, 1995; Lane, n. d.). In the tradition of *Experiments in Art and Technology (E.A.T.)* in the late 1960s, Xerox's Palo Alto Research Center (Xerox PARC) started a program of yearlong residencies that paired artists with engineers. *PARC's Artist-in-Residence Program (PAIR)* ran from 1993 to 2000 and would become a blueprint for similar corporate concepts. The artists involved in the program "revitalize[d] the atmosphere by bringing in new ideas, new ways of thinking, new modes of seeing and new contexts for doing" (Brown, 1999, p. xiii).

Outside of a merely artistic context, artist residencies are "longer artistic interventions, whereby artists enter organizations over a period of several months or even years with a mutual learning orientation" (Berthoin Antal, 2012, p. 46). As artists become part of organizational

life, staff are invited to witness or even be part of artful creation (Schiuma, 2011). Depending on the artistic substance of the endeavor, residencies may be termed artistic interventions (Berthoin Antal, 2009), arts-based interventions (Taylor & Ladkin, 2009), arts-based initiatives (Schiuma, 2011) or simply placements (Lane, n. d.).

In artistic interventions, the creation of artworks is subordinate to the encounter and interaction with members of the hosting organization (Berthoin Antal, 2012). Artist-led interventions allow their recipients to experience and reflect the daily work environment as well as business issues through arts-based methods and artistic practice. Interventions are interruptions that are meant to break and shift structures, routines and thinking patterns (Barry & Meisiek, 2010; Johansson Sköldbäck & Woodilla, 2013; Meisiek & Barry, 2014). Consequently, artist residencies in corporate settings typically neglect artistic development and place innovation of products, services and business processes or issues of organizational change center stage (Berthoin Antal, 2012).

Although details of innovation-driven artist collaborations differ in how they are framed, a central common feature is providing artists access to expertise and equipment and fostering interdisciplinary exchange with R&D staff, who in turn hope for creative stimulation and shifts in perspective (Stürer et al., 2010). This notion particularly counts for art-science residencies that are embedded in the early phase of new product development, the so-called fuzzy front end of innovation. Comprising early discovery, idea generation and opportunity recognition, the front end is highly informal, erratic and afflicted to uncertainty (van den Ende et al., 2015).

There is little empirical research on how the value unfolds of artist residencies in non-art settings (Lehman, 2017). The few cases under academic scrutiny indicate that these programs offer inspiration and foster creative solutions as employees are exposed to modes of thinking and problem-solving, they are usually unfamiliar with. If artists trigger reflection on product lines, procedures, working conditions and corporate culture, both business innovation and discussions about value systems can emerge (Berthoin Antal, 2012). The artist residency works “as a critical lens on the organization and its practices” (Lee et al., 2018, p. 444) and can lead to an improvement in work climate (Styhre & Eriksson, 2008).

To date, reports and empirical research on this subset of artist-in-residency programs focus on the value added for the hosting organizations—an academic myopia that may be explained by a subliminal pressure to justify the dedication of public and company funds respectively for allegedly peripheral issues. Hence, evidence of artists’ experience in non-art contexts is scarce and only covers notions of learning and insight, leading to personal development and enhanced artistic practice (Lee et al., 2018; Schnugg, 2019).

It is fairly obvious that the arts, science and business are separate worlds (Smagina & Lindemanis, 2012) defined by social systems with different values, communication codes and logics of action (Becker, 2008 [1982]; Baecker, 2005; Schnugg, 2019). Beyond project descriptions and the presentation of resulting artworks, the nature of interdisciplinary encounters between artists and members of other professions is nevertheless widely unexplored. In addition, there is a wide gap in research regarding the benefits and intercultural challenges that residencies in non-artist environments offer to artists.

This paper presents part of the results of an empirical study on the effects of encounters between artists-in-residence and researchers at Robert Bosch GmbH, a global technology corporation based in Stuttgart, Germany. In this case, the residency is implemented in the context of the early stage of product innovation, the fuzzy front end. Given the lack of insight in the artists’ perspective, two questions are addressed:

1. How do artists deal with the situational framework of the residency?
2. What are the benefits and challenges they experience?

## **Methodology**

### *Research approach*

As outlined above, there are few empirical studies on embedded residencies in general and programs in corporate settings in particular. Furthermore, they focus on benefits for hosting organizations, leaving the artists' perspective aside. This imbalance represents a worthwhile research field per se. Given an increasing interest in art-science-residencies in policy and practice, there is a need for information on suitable frameworks to be deduced from experience in the field, considering all parties involved.

The study is based on a single case that is a recognized example for art-science collaboration in the form of a corporate residency program. The case offers rich and concise information (homogenous sampling) for the outlined research questions and a sufficient base for logical generalization (Patton, 1990). In addition, it represents an unusual framing, an extreme case, (Yin, 2014) as it is one of the very rare examples of corporate residencies in the context of product development.

As the theoretical and empirical state of knowledge about artists' attitudes and behavior in residencies is low, the present study pursues a descriptive-explorative objective, gaining a sufficiently accurate picture of the phenomenon of corporate residencies from an artist's point of view. Another reason for choosing an explorative approach is that the lack of paradigms and models for corporate residencies is opposite to a rich body of research on artistic interventions in business (Berthoin Antal & Strauß, 2013, 2016) that has not yet been related to this particular field of interest.

The research questions suggest the exploration of participant actions and processes as well as perceptions within the data. Therefore, the study follows a qualitative approach according to inductive theory formation, which allows propositions on the role of artists in a non-arts residency program to be developed (Eisenhardt, 1989).

### *Research context*

The case under scrutiny is the artist-in-residence program at Robert Bosch GmbH, a global technology company based in Stuttgart, Germany. In 2015, Bosch opened a newly constructed campus for research and advance engineering in nearby Renningen with approximately 1,900 employees on-site. The complete top floor of the central building was designed as a creative area for critical reflection, inspiration and idea generation. The centerpiece of Platform 12 is the "Base": approximately 450 square meter area conceptualized by artist duo Wimmelforschung, Maren Geers and Thomas Drescher. The two stage designers combined functional co-creation space equipment and historic Bosch workshop furniture with bewildering objects, such as an undiscovered planet, a tennis umpire chair and a misset clock (Geers & Drescher, 2017; see figures 1 and 2).<sup>1</sup>

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<sup>1</sup> The "Base" is featured in a short promotional film, which is available under <https://vimeo.com/267572475> with the insight view starting at 2 min 38 sec (retrieved June 20, 2020).



**Figure 1: View of the "Base" on Platform 12 (Photo: Bosch)**



**Figure 2: Objects in the "Base" on Platform 12 (Photo: Wimmelforschung)**

Right from the start, Bosch's Corporate Sector Research and Advance Engineering division has invited artists on campus. The residency program is a collaboration with renowned Akademie Schloss Solitude, a nearby international artist-in-residence center, and Wimmelforschung. Until April 2020, 19 fellows from the visual and performance arts along with an architect and a designer have been working at Bosch for three or four-month stints each. As the artists are not expected to provide an artwork in return, the residency is officially labeled as a "fellowship" ("*Wimmelforschungs-Stipendium*"), although it has characteristic features of a residency. Applicants are expected to stay on Platform 12 for five days a week during typical working hours and get in touch with researchers for an interdisciplinary exchange—an endeavor that is facilitated by Bosch's innovation management team. "The aim ... is to establish a new form of innovation culture through the exchange of thoughts and ideas between the worlds of research and art" (Akademie Schloss Solitude, 2017).

### *Data collection and generation*

Data were collected through interviews with 11 artists who were willing to take part in the study. All but one of these seven men and four women are of European origin. All interview partners completed artistic studies in their field and represent different art forms from painting, sculpture, performance and media art over theater directing and choreography to music. However, most of them follow an interdisciplinary approach, and their works reflect a more or less pronounced interest in technology and digital art. Born between 1973 and 1985, the artists took part in the program at an advanced stage in their career.

The interviews were semi-structured. Hybrid interviews are well suited for under-explored areas, as they provide rich data and support hypothesizing. Considering the interviews with artists is part of a larger study on effects of the encounter between scientists or engineers and artists-in-residence at Bosch, the questions posed to the artists basically mirrored those for Bosch employees. Essentially, they addressed the artists' motivation to take part in the program, their experiences with the residency, its effects on artistic development, and opinions on the residency's framework (see table 1). As a preparation for the interviews available video documentation of the respective residencies and background information on the interview partners was considered.

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| <ul style="list-style-type: none"> <li>▪ When you think of your residency at Bosch, what do you think of in the first place?</li> <li>▪ What was your motivation to apply for the program?</li> <li>▪ Please recall your encounters or collaboration with researchers. What was striking in meeting them?</li> <li>▪ How would you describe your role as an artist-in-residence at Bosch?</li> <li>▪ At Bosch, visiting artists are called "strange agents". How do you feel about this term?</li> <li>▪ How did the residency affect your artistic process?</li> <li>▪ What did you like about your stay at Bosch? What would you have wanted differently?</li> </ul> |
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**Table 1: Sample questions from the interview guide**

Informed consent was given from all participants. In this connection, the interview partners were assured that the data would be treated confidentially and not be made accessible to Bosch in particular. The 11 interviews, which took approximately 90 minutes on average without introductory remarks on the study itself, were conducted via video calls between March 30 and April 22, 2020.

The digital voice recordings were anonymized and submitted to a semantic transcription according to scientific rules; the interviews were transcribed literally, but linguistic peculiarities such as dialect, affirmative utterances and shortcut articulation were left out, to smooth the text (Dresing et al., 2015).

### *Data analysis*

Given that the analysis aimed at attaining a condensed and broad description of the phenomenon and followed prescriptive research questions, conventional content analysis was performed. As thematic content analysis is supposed to condense and structure information in the provided data, it is well suitable to learn about descriptions of social circumstances (Mayring, 2014).

According to the inductive approach, the analysis was data-driven with coding and thematic analysis performed through the software program MAXQDA. A first-cycle coding (Saldaña, 2013) was applied by following guidelines for emergent coding as suggested by Haney et al.

(1998). The materials were reviewed by reading the transcripts thoroughly and crosschecking with the audio recordings. The preliminary examinations of the data resulted in a set of working codes that were applied and refined during initial coding. Coding was originally undertaken by one person and subsequently reviewed by a second. The reliability of coding was checked on the basis of three-out-of-eleven interviews that were coded independently. Given that an agreement of 95.5 % had been achieved—indicating the robustness of the coding system and procedure—the coding was applied to the rest of the data.

	# of respondents	# of comments
<i>Liminal Position</i>		
Personal development		
Interdisciplinary interest	11	32
Learning experience	11	75
Corporate culture		
Quixotic environment	6	9
Hierarchical organizational structure	10	38
Implicit codes of conduct	9	22
Working conditions		
Artistic freedom granted	6	20
Explicit rules and limitations	7	22
Artificial working area	9	48
Being exposed	8	36
Status		
Exchange with researchers	11	96
Coming from a different world	7	22
Feeling excluded	7	27
Stereotypes on art or artists	7	20
Situational role expectations	9	54
Legitimacy pressure	9	47
Potential for confusion	6	11
<i>Coping strategies</i>		
Adapting to operational requirements		
Engaging oneself in the situation	10	44
Change of scene and expansion of operating range	7	21
Maintaining identity		
Self-concept and artistic practice	11	67
Explaining essence and value of artistic practice	9	28
Refusing role expectations		
Non-conformism	6	16
Active identity work	6	17
	9	41

**Table 2: Coding summary**

Through second-cycle coding, logical relations in the data and related themes were identified (Saldaña, 2013). Categories were interpreted and grouped into basic, organizing and global themes cohering around key issues addressed by participants. Following the procedure introduced by Attride-Stirling (2001) a thematic network was constructed with “liminal position” and “coping strategies” as global themes (see table 2). Thus, the inductive coding process resulted in a thematic network that relates to phenomena captured in the established concept of liminality and its refinements in organizational theory. Consequently, the themes were linked



into liminality as a framework of explanation in presenting and discussing the findings (Becker, 1993; Vaismoradi et al., 2016).

Without exception, the depiction of the findings summarizes and reflects the artists' voices with sample quotes illustrating both the essence of the themes and the underlying categories (Elo et al., 2014).

## Findings

### *Personal development in an alien world*

The main reason for the artists to participate in the residency program at Bosch was a strong interest in interdisciplinary confrontation. The artists were curious to know the researchers at Bosch and gain insights into how the company functions. Having access to high-tech equipment for artistic production was as appealing to them as dealing with research topics from a different point of view.

The residency placed them in an unfamiliar working environment they were hardly prepared for. With this in mind, they took the residency as a learning environment aiming at enhancing their artistic practice.

I felt that there is ... this kind of incredible opportunity. Something really constructive; a creative laboratory I never had before. So, I can talk with people about subjects that I don't know anything about. I can learn a lot. I can explore. ... This will be so valuable. This is something amazing.<sup>2</sup> (A4)

The artists tapped the environment by exploring the campus, visiting different departments, and attending meetings and presentation events. For collecting data and knowledge generation informal talks with various actors were essential.

It was important to me to get myself into this like a sponge and to absorb all that. (A9)

During the initial phase of the residency the artists were looking for points of reference and collaboration opportunities with researchers. The majority of graphics, sculptures, performances, installations and video pieces that emerged in the residencies were a reaction to the environment and encounters with staff; some used employees as participants. Most artists reflected research topics, applications of technology, operating processes and corporate culture.

The artists felt that staff approached them very friendly, open-minded and curious. Researchers supported research work and artmaking with time, technical facilities and expertise. With regards to the residencies fostering interdisciplinary dialogue, close bilateral collaborations with a common objective were an exception. In general, lack of time was an obstacle for recurrent encounters.

For all questioned artists the residency was a rewarding experience that entailed inspiration and enriched their knowledge base without having a direct impact on their artistic practice. Regarding the interdisciplinary nature of the residency, some artists refer to it as an encouraging experience. They matured from the situation while learning how to operate in corporate and art-science settings respectively. As a result, some turned to intersections

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<sup>2</sup> Exact quotes from interviews conducted in German language were translated by the author.

between arts and science and related residency programs even stronger after their stay with Bosch.

In any case it was an important experience, I would say, which adds to my thought and action somehow. (A6)

It made an impression; also, some kind of inspiration. (A5)

None of the artists wanted to miss the experience, although the residency was a challenge for all of them. Some felt extremely relieved when the period was over, since oftentimes it was an exhausting and also emotionally demanding situation. The artists perceived "the Bosch System" (A2) as an alien world. Usually it took them several weeks to at least partly capture the complexity of the company, navigate within the unfamiliar environment and become productive therein.

During this time, you are in these different worlds. ... You are molded in a completely different way and actually you speak a completely different language, too. (A3)

In general, the artists did not have any problems to start a conversation with researchers because there were common general topics and, depending on the artists' technical background, a shared vocabulary. However, there were communication problems when they interpreted terms differently or a common level of communication was missing. When it came to the arts, the biggest "language barrier" emerged.

In the eyes of the artists, Bosch's on-site corporate culture is strongly reflected in the clean-cut campus architecture. They attest the place has "a somewhat hermetic aura" (A9) and describe the location as a "walled off" (A11) and "impermeable" (A11) as well as a "sterile" (A6) and "quixotic" (A11) world. Regarding its use, the space is clearly defined by a guidance system. Abodes and movement patterns on campus as well as working time and procedures are highly structured. Accordingly, the artists view the company as a clearly structured system, as "an apparatus" (A9) or "a big machine" (A1).

The artists found themselves in the midst of a strange corporate culture where work is rule-based and a clear code of conduct concerning meetings and administrative procedures exists. They noticed cultural codes in language rules, communication structures and clothing style.

At Bosch it seemed as if you immersed into an inherent microcosm with its own rules, which did not appear to be fully clear to start with. (A7)

To the artists, it is an atmosphere of conformism and adaptation that affects thinking and communicating; not inducing people to question the status quo or even break free from it. In this conformist climate they noticed little space for ambiguity and contradiction.

Well, I liked it a lot, even though it was difficult to be on this campus. To be in a certain way forced on this campus and somehow hack this environment so that something forms that suits me one way or another was a challenge. (A1)

Above all, the artists had to cope with their existence as "outsiders" (A1) and "aliens" (A9) respectively. Their observations illuminate several areas of tension—from misconceptions about the scope of the program to latent contradictions between its philosophy and the way the artists are handled—that made the residency "a survival training" (A11) and will be presented in the following.

*Autonomy vs. corporate standards*

The artists appreciated the high level of freedom, given that the residency program at Bosch does not aim at artistic production and has no obvious conditions attached as far as creation is concerned. They felt they had nothing to lose; there was no pressure to deliver any artwork. Concerns about requirements or exploitation of their creative practice were dispelled. The artists were free to develop projects and could implement their intentions without interference. They were expected to follow corporate standards and some basic residency rules but did not perceive these as limiting artistic freedom.

I felt incredibly free. (A9)

I liked that my artistic freedom was secured. ... That my freedom of artistic expression was never questioned. (A10)

The artists were asked to spend the usual working hours on campus. Some liked to introduce some structure into their working habits whereas others silently opposed the time regime imposed on them because it thwarted a self-determined and intrinsically motivated attitude typical of artists.

This is not a bit the way I would work. I wouldn't go anywhere from Monday to Thursday being there my time. ... This is because something that has to come from within, and freely. Something I didn't know how to deal with it, for sure. Above all, that maybe you don't have any more ideas and wouldn't want to be there somehow, to a certain extent. (A1)

Bosch's organizational structure is characterized with hierarchy and a pronounced status thinking whose wide acceptance appeared strange to some artists, as in their professional realm people are considered peers. They ignored any difference in status and approached researchers as well as other staff as potentially interesting human beings.

The so-called Base was the place that was provided as a working space. Due to security restrictions the artists were only allowed to move freely in other quasi-public spaces such as lounge areas, passing zones and the cafeteria. Likewise, filming and photography for artistic purposes were subject to approval because of confidentiality rules. Safety precautions prevented the artists from casually bringing in utensils and major changes in the setting had to be negotiated in advance. The artists respected the requirements of the high-security environment, all the more so given that the permissible limits were not always obvious and became blurred by informal conduct.

Somehow it is like an odd game. Which limits do you want to cross, which ones do you have to cross? Do you recognize the limits? ... And how can I conduct myself, how do I want to conduct myself? What is my wiggle room? That is why this was somehow positive and negative, difficult and rewarding. In any case a challenge! (A6)

Overall, the artists were constantly fathoming the limits of corporate rules of conduct: sometimes they thwarted and at other times deliberately ignored them. Occasionally, they provoked strong reactions in doing so. Beyond their assigned habitat, the Base, they were generally restrained quite promptly. If the artists left small marks on campus like posters in the elevators or chalk drawings on the pavement, they would find them removed soon afterwards. Some activities startled employees who were unable to categorize their counterpart

or behavior. On several occasions, managers called site security for action as unheralded performances caused disruption.

Art reveals something that is present. And this accumulates in a high level of irritation. (A11)

The artists ultimately reveal a latent contradiction between the residency concept and a corporate culture that falls short of an envisaged ideal. On the one hand, there is a need for disruption. With the artists present, researchers shall be nudged towards creativity and innovation. On the other hand, there is a prevailing compulsion to control, which limits the artists' autonomy.

Well, they treat the artist like a strange pet. When the going gets tough, site security comes. Thus, the artist then doesn't have the sovereignty he actually ought to have there. ... Then it is kind of a double-edged sword because on the one hand they want people to be shaken up, so to speak, but within limits, sure. And even so they need to be able to control it, yeah. And this doesn't work. (A1)

#### *Authenticity vs. mise en scène*

The Base on Platform 12 is designed as a space for exchange and experimentation. As such, it is often used for work-related meetings. Other than that, Bosch employees take it as an informal niche for private moments and as a break room, too. For the artists, the Base was their assigned working space. However, it proved to be problematic because of the hybrid functionality as well as its equipment.

For me, the Platform 12, this Base, was not a workspace. It never became one. That was absolutely clear to me right from the start. (A11)

The Base is a co-working space that in principle is accessible anytime for all staff. It is not the secluded studio space most of the artists are used to and would have preferred. The artists felt disturbed by the unrest that went on in the Base every so often and prevented them from focused work. All of them had a strong need for a retreat.

The place is too bustling for me. As an artist, I'm not able to work there. (A9)

In principle, the artists were under constant scrutiny. To be in the position of an observer and at the same time being observed was strange. It distracted and sometimes irritated them. To be quasi on display dampened the usual lightness associated with impartially trying things out. The artists were not always able to cope with this unprotected situation—particularly as they were latently exposed to disturbances. According to the spirit of the residency, they were positioned as persons who were ready for dialogue and approachable for any kind of talk.

Yet there is some kind of latent abuse set up in this. ... As an artist you are confronted with the notion ... that artists are even more outlawed than others. (A11)

Another function of the Base is to be a representative place. Its unusual interior design makes it a site that serves the self-presentation of the company within public relations as well as within internal communication. On the occasion of guided tours, the artists are showcased likewise. In situations like these, they become part of the room and thereby an object.

This was the most uncomfortable situation—if I may say so—because very clearly you were inventory in the room. And also the saying went: 'And now this is the artist'. (A5)

The Base is designed in a way that invites permanent change through rearranging furniture and objects. In principle, nothing is safe from unauthorized access. It is not a protected situation as everybody is allowed to take any place and resume work abandoned by others. As people interfered with the artists' space and their emerging works, they marked their territory and posted signs when they did not want to be disturbed.

I didn't get it that people could do what they wanted. ... In fact, it was driving me nuts. ... And then I started closing my area off. (A1)

The Base is neither a neutral, blank area that an individual artist's studio could be arranged from nor is it appropriately equipped as such. In part, the equipment has workshop character, but for lack of functionality of small devices the place is no serious workshop; it is only representing the idea of one. Given this pretense, the Base promotes activities that have little in common with artistic practice. Placing the artists in these surroundings fuels a misconception of artistic labor.

This discrepancy between tinkering and 'I miss my fucking work' was something I sensed very strongly there and hard for me to pin down, yeah. Because an artist, a visual artist does not tinker. (A1)

Something is making an appearance there and claims to be something, but it doesn't make any practical sense. Yes, it is just meant to be a requisite or a dummy. (A5)

The artists took the setting as a challenge, tried to adapt to the situation and persist therein. They succumbed to the limitations in material and equipment, but it took a while until they were able to accept the space and react to it. Some found a solution by creating a space-within-a-space; others expanded their radius of action to other places on campus.

And the challenge, okay, 'How do you do it?' ,How do I have to deal with the situation now?', so on and so forth. That was super!' (A2)

Aside from artists with a background in theater that bestowed the Base with some aesthetic quality, the space design holds a conceptual problem as it conveys a delusive idea about the emergence of creativity. Creativity is displayed as if onstage. The artists consider the design, which is supposed to confuse and stimulate staff, as compliant and full of stilted objects. The environment suggests a substance that decays on closer inspection, because it is out of touch with reality. The Base projects a notion of creativity and innovation the artists found empty.

It is a brainchild. And energetically ... this room doesn't work at all. Including the objects created for it because they are not charged. They are weak and generate an atmosphere of pseudo-creativity so to speak. It cannot work. (A11)

Creativity: That is only decoration. There is no substance. (A2)

### *Artistic practice vs. raison d'être*

The artists left their familiar work situation for a setting they found artificial and restrictive in the beginning. This perception was contrasted by noticeably high expectations in their power

according to productivity and potential for inspiration. This was assessed by tangible results—such as objects—whereas phases of research and contemplation—a necessary part of the artistic process—were observed with skepticism.

Of course, there was the expectation that maybe we are not sitting in front of the computer and are writing something a certain way, but that we are making something in the room. That somehow we are tinkering with something or that they can watch us craft something in some fashion... more formal than intellectual work. (A3)

The artists had to explain themselves, their profession and their activities at Bosch. From the artists' perspective there were knowledge gaps concerning both artistic self-conception and working practice.

The notion of what an artist is, what an artist is like, how an artist approaches his work—this was very difficult there. (A1)

Accordingly, communication needs arose regarding the arts altogether. As Bosch abstained from conveying the subject to staff, the artists repeatedly had to debate with employees about a limited understanding of art (art as painting, graphics and sculpture) and discussed what contemporary art is about. By elucidating their own position, they performed mediation work and dismantled fearful attitudes.

For the artists, this confrontation offered an impulse for reflection on the relevancy of the arts. Nevertheless, they found it difficult to explain their own behavior and a current working process respectively in more or less spontaneous talks. They were forced to justify single steps of an open-ended process although they are usually reluctant to present an unfinished work. Each explanation is an interpretation that inhibits an unfettered approach.

Aside from conveying basics of artistic attitude and practice, the artists noticed some peer pressure regarding activities and tangible results, which they were reluctant to produce as they are used to a self-determined working style. They felt they had to defend their presence in the company.

I constantly had this feeling of: 'What obligation must I fulfill? What is my assignment?' Of course, this is not a good atmosphere to give an artist, yeah. ... They build up pressure, they build up expectation. (A1)

Bosch's innovation management explicitly renounced measuring the impact of Platform 12 and the residency program. They justified this unconventional business approach with the argument that high degrees of freedom favor creativity. However, the artists perceived that in daily corporate life, this philosophy is undermined.

So, we have some sort of materialized idea that is really weird, and you cannot trace it, but since now you have it in real life, let's see how it could be traced in a way, how it could benefit the company immediately. ... There is something in the atmosphere that is like: 'Can we immediately see some effects? Could you find some sort of a justification?' (A4)

In addition, the artists felt urged to deliver something visible that would be suitable for use in internal and external communications and would contribute to the company's envisaged image. Therefore, the artists ran the risk of becoming suppliers for public relations. In fact, there was a preference for projects that are easy to communicate. At Bosch, there was a need for the

benefits of the program to manifest in any way. The impact should not be measured, but at least be named. The artists were expected to contribute to the program's legitimation. These, however, point out that the benefit of artistic perspectives on Bosch issues and the residency's added value were not apparent all along.

We are always going to have this challenge. They're always going to expect tools. They're always going to expect results, something that is easily quantifiable. (A10)

The artists opposed to the expectations and retained their independence. However, they applied different strategies in order to gain respect and acceptance in the demanding Bosch environment. They anticipated the expectations and sometimes resisted first impulses for not being trapped. Those who felt an initial urge to transform the unloved Base, create a completely different setting therein or break up the sterile campus by radical performances, decided not to do so. They thought it was not their task and did not want to serve any expectations or artist cliché. Ultimately, some artists consciously limited themselves in their artistic potential.

It must not occur that I think along their perspective or claims. (A9)

It was not important if they respected me or not because otherwise you are in a trap. (A2)

Some artists ignored implicit expectations over output altogether. Others, who were more receptive to the company's policies, found an appealing compromise between the expected manifestation of artistic value added and personal integrity.

As an artist, I need to be independent, otherwise I can't serve any company. ... I knew that I had to make it obvious, so I can find the common ground. And then again, I said, this was my strategy. (A10)

#### *Artistic identity vs. role expectations*

The residency's concept is kept alive by the de-limitation between artists and staff and the researchers in particular. In favor of food for thought, innovation management established a notion of otherness by attempting to visualize differences even when they did not exist, such as in clothing style. For instance, since they looked like Bosch employees, there was a desire (unrealized) to make the artists distinguishable, such as by certain external characteristics. However, the artists were fellows of the program and basically not associated with any particular department or group of staff. Despite occasional and more or less intense work relationships with individual researchers, they did not fit in.

This being observed and observing always was a bit like: 'He doesn't work here. He is actually...' It was 'us' versus 'him', with an aura of suspicion. 'It's a little weird that he is here'. You can't escape from this extraterrestrial label. (A1)

Although the artists were recognized and introduced as associated—"our artist" (A5)—they were not ultimately integrated. For the artists, their status as "outsiders" (A1), "aliens" (A9) and misfits was clearly felt and made the environment "sometimes a very lonely place". (A4) Furthermore, their connection to Bosch alienated them from their peers at Akademie Schloss Solitude where they were accommodated. The other artists called them "Bosch artists" (A6) and criticized their relationship with the company.

At Bosch, the otherness culminated in the term "strange agent" (Geers & Drescher, 2017) the artists are labeled with. The term implicitly assigns the artists certain functions that correspond

to the objectives that innovation management pursues with the residency program. The persons concerned did not like the term, finding it misleading and superficial. It insinuated alterity as well as some weirdness that did not fit with the artists' self-image. "Strange agent" suggests a certain distance to the environment and to employees the artists did not want to identify with.

Effectively, you are no strange agent because you are only a construction within this program. (A1)

The assignment of functions was overlapped by images of the artist without dissolving them. The artists were confronted with clichés about what an artist is and how they work, rooted in the romanticized 19th century image of the artist as a social Bohemian, and do not comply to the self-image and social reality of contemporary artists. Points of contact between the Bosch researchers' scientific practice and artistic enquiry and research are overlooked.

It was difficult time and again to see how you are seen as an artist and also put in pigeonholes. (A1)

Moreover, the aesthetics of the Base, which is the artists' major area, conveys a certain role model: exotic, colorful, crazy and not quite to be taken seriously. The artists describe this notion with terms like "bird of paradise" (A1/A3), "clown" (A1/A6), "jester" (A2) and "harlequin" (A9). As this has nothing to do with their artist's life, they could not relate to it.

I feel I am pigeonholed a bit only through the aesthetics of the Platform. ... You were kind of a bird of paradise within this somehow crazy Platform. (A3)

Within the Bosch context, the artists are expected to be facilitators who provide for creativity and inspiration through their mere presence. It is their explicit task to start up a dialogue with researchers. As a result, the artists become a projection surface for a conceptual idea of creativity and innovation. The idea of the "artist as a concept" (A8) seemed to be more important than their individual personality. However, the artists disagreed to be assigned a role. It was a challenge for them to deal with the expectations involved and to conduct themselves accordingly.

There is some sort of relationship like, 'I'm there with my art, but I'm also there somehow to serve the idea of a platform which is not really clear for everyone.' And then it becomes misinterpreted from very different sides. And then you become almost like a metaphor of something that people can project on you. 'Give me something as you are there to kind of inspire us to think differently.' (A4)

None of the artists took on the role the company assigned to them and none interpreted it as an artistic stint to play with this role or with the artist clichés in a performance-like manner, which would have been difficult to keep up for the whole period. Instead, they refused any role expectations.

My notion of my role certainly was that I ought to be the creative disruptor. And of course, I certainly want to refuse this role, too. (A6)

The artists tried to find themselves a role beyond the one assigned as an inspirational alien. They acquired a behavioral repertoire they were able to cope with the situation and yet remain authentic.



At the very beginning, I had the feeling like I need to dig through at the end to be only what I would like to be. (A4)

It was really exciting to me to go into this structure and then establish and find a role for me somehow. (A3)

One of the artists related this process of role definition to her artistic practice as follows:

I have got strategies to go into the unknown and to get out again. ... The biggest problem for me was in this whole system, so to say, to really reconnect to my existence as an artist. ... My understanding of art is strongly characterized by the fact that I am somebody who is interested in the unknown. So really this, well, I just call it the black hole or this unknown chamber, this dark chamber, about which you do not know at all how big it is when you enter it. Neither do you know if you will ever get out again. Nor do you know how to get out. But as an artist, I am experienced in this process. That is to overcome this fear. If I may say so, this is the core for me as an artist. ... I have developed techniques how to move in it so as not to get lost completely and also to give myself a chance to get out of it again. And this is why I was convinced right from the beginning that of course I wanted to work with the people there and not bring anything there and remain in my capsule, so to speak. ... What totally enriched me, what I liked very much is that, in the end, I could also introduce my artistic craft to this adverse context somehow ... and ... on a personal realm accomplish to return to myself as an artist somehow in these adverse contexts. Somehow, it was an important experience to accomplish this. It was not easy though. Sometimes it pushed me to limits once again, to personal limits. (A11)

This quote summarizes the artists' status during the residency and illuminates an ability to cope with it based on artistic experience. It directly refers to a possible analytical level: the concept of liminality.

## Discussion

### *The concept of liminality*

The term 'liminal' stems from the Latin *limen* for 'threshold'. Liminality is a byword for an in-between or limbo that is a condition between two states in persons, things or places—between a past state and a coming one. Groundbreaking anthropological studies of liminality by van Gennep (1960 [1909]) and Turner (1995 [1969]) examined rites of passage and related rituals that symbolize the transition of an individual or a group from one state to another, which occur in three characteristic stages. In the pre-liminal phase (separation) individuals are separated from their usual environment and enter a space beyond everyday life thus disengaging from social categories or status. During the following liminal or marginal phase, the individuals' social status and role behavior is ambiguous and possibly mutable. In the final post-liminal phase (reaggregation or incorporation) they return to their initial environment after they may have acquired a different status or adapted a new role for themselves. Above all, rites are considered as procedures that are apt to existentially change the participating individuals (van Gennep, 1960 [1909]; Turner, 1995 [1969]; Schouten, 1991).

Liminality is a temporary condition between a beforehand and an afterwards (Beech, 2011). In this respect, a liminal state is usually "transitional, spatio-temporally limited, and transformatory" (Bamber et al., 2017, p. 1519). "Liminal personae ('threshold people') ... are betwixt and between the original positions arrayed by law, custom, convention and ceremony"

(Turner, 1995 [1969], p. 95). As individual doctrines and societal norms may be questioned or even inverted within the liminal state (van Genneep, 1960 [1909]) transition will arise from anti-structure, which offers potential alternatives to prior existence and therefore a space for novelty to emerge (Turner, 1995 [1969]).

Since limits are suspended and predictable patterns get lost (Stenner, 2019), liminality is a period of ambiguity, uncertainty, indeterminacy and confusion (van Genneep, 1960 [1909]; Turner, 1995 [1969]; Beech, 2011). Individuals experience the threshold as "painful, unsettling and disruptive" (Bamber et al., 2017, p. 1515) because it is "a period of personal ambiguity, of non-status, and of unanchored identity" (Schouten, 1991, p. 49). With its inherent potential, liminality can also be considered a lively space for personal development and learning (Ibarra & Obodaru, 2020).

In organizational theory, the concept of liminality is discussed along three dimensions: process, position and space. The process view of liminality refers to career paths and transitions in professional identities (Ibarra, 2005; Ibarra & Obodaru, 2016) as well as to organizational change and collective identity building (Corley & Gioia, 2004; Clark et al., 2010; Howard-Grenville et al., 2011). The concept of liminality as a position relates to people who are temporarily part of an organization, such as project staff or freelancers (Garsten, 1999; Sturdy et al., 2006; Borg, 2014; Borg & Söderlund, 2015; Söderlund & Borg, 2018). These people switch between different organizational settings, keeping a dynamic position between insider and outsider (Sturdy et al., 2009). When liminality is interpreted as space, transitory zones in architecture are considered (Shortt, 2015; Lucas & Wright, 2015). Spatial liminality may also manifest in a particular place or space in which conventional organizational norms and routines are suspended, such as "third places" (Oldenburg, 1989), off-site workshops (Howard-Grenville et al., 2011) or studio spaces (Meisiek & Barry, 2016). Bosch's Base is a good example for a liminal space dedicated to interests of innovation management.

As liminality can foster both individual creativity and organizational capacity for innovation (Bamber et al., 2017; Ibarra & Obodaru, 2020), it provides a valuable framework for arts-based interventions.

#### *The artist residency as a liminal state*

Artistic interventions create so-called "interspaces ... [that is] temporary social spaces", (Berthoin Antal & Strauß, 2016, p. 39) which serve as experimental fields with norms and work routines set aside (Berthoin Antal & Strauß, 2016; Schnugg, 2018; Schnugg, 2019). Artistic interventions set the scene for a temporary "intercultural venture" (Berthoin Antal, 2012, p. 61) letting different value systems and conventions collide. As artists are able to mirror the organization, they initiate reflections on organizational reality and possible collective identities (Berthoin Antal & Debucquet, 2019). As a "constructive disturbance" (Darsø, 2016, p. 22), artistic interventions allow for non-routine sensemaking and give impetus for change and innovation (Schnugg, 2018).

Being a special kind of artistic intervention, these considerations similarly apply to artist residencies in non-art environments. However, residencies in general are liminal states in their own right. They are steppingstones for art school graduates, or retreats and mid-career breaks for established artists (EU, 2014). Although residency programs serve a variety of purposes that range from artistic development over exchange and communication to community engagement (AIR, 2015), they can be considered "as learning environments, ... a catalyst for processes of collective and personal (self-) development ... [and] as a learning situation that entails processes of transformation" (Serino, 2015, p. 8–9).

Entering a liminal space is a leap into the unknown, and its unpredictability makes it appealing to artists (Serino, 2015; Henchoz et al., 2019). For the artists-in-residence at Bosch, the residency period was a deliberate time for transition that eventually enhanced their wealth of experience. For some, it was the starting point for a new series of works; others deepened their interest in art science collaborations thus entering a new area of work. However, discussing the residency experience as a form of processual liminality seems less fruitful for the aim of this research than reflecting upon their liminal position as artists-in-residence.

#### *The artist-in-residence as a liminal person*

Positional liminality refers to being betwixt and between particular functions, roles or identities. When considering the characteristics "transience" and "structural ambiguity", the position of the artists-in-residence at Bosch is objectively liminal. As the residency is temporary and they do not formally belong to the company, the artists are in a particular condition beyond their original sphere and organizational boundaries (Borg, 2014; Söderlund & Borg, 2018; Ibarra & Obodaru, 2020). Neither do they belong to staff nor are they integrated into organizational structure or associated with a particular team from the outset. As fellows of Akademie Schloss Solitude, they keep their status as freelance artists. They are formal members of a small onsite community, albeit slightly estranged from it due to their linkage to the company. This effect is reminiscent of the rejection artists who abandon their artistic career experience from their former community (Hennekam-Bennet, 2014). From the Bosch perspective, each artist is an "individual in-between, neither clearly an insider nor an outsider" (Borg & Söderlund, 2015, p. 262).

This liminal position implies that rules of conduct that count for an artistic environment are abolished and replaced by a socially controlled residency setting (Gielen, 2019). Instead, the artists are confronted with corporate norms, structures and routines but are not formally bound to them except for explicit regulations on privacy. The artists do not necessarily need to comply with the rules although this may be implicitly expected. This offers some scope for testing, bending and even breaking corporate rules (Garsten, 1999; Borg, 2014).

To the artists as liminalists, their own rules apply. There is an informal script that is meant to channel their behavior in favor of innovation management objectives. The residents enjoy artistic freedom and—at least claimed for in the run-up—are void of expectation. They are not obliged to deliver any work if they are just present at a given time and place. Such a lack of rules is typical of liminal positions (Bamber et al., 2017). However, the situation at Bosch is more complex, given that obligations are ill-defined and sometimes foiled. The artists find themselves in an extremely structured environment with little tolerance of ambiguity, which is diametrically opposed to a work situation that they view as stimulating.

In the classical sense, artist residencies are meant to be spaces for experimentation and reflection devoid of production pressure (Elfving & Kokko, 2019). As a partner, Akademie Schloss Solitude stands for the Bosch residency's claim to let the artists gather experience and implicit knowledge. The concept picks up on artistic production as immaterial labor and an understanding of the artist residency as a "relationship founder". "Its results are not primarily products or objects but in fact relations between people" (Steyerl & Buden, 2006). However, the relationship between Bosch as a company and the artists as residents therein is not the usual one of host and guests who during the residency become friends. It is not based on ideas of hospitality and friendship (Budhyarto, 2015), but on ideas of mutual benefit and diversity. The artists are supposed to enter a dialogue with corporate staff and explore their status as sponsored "creative roommates" as an impulse for innovation.

The artists' otherness is well cultivated via innovation management. Therefore, their structurally liminal position is amplified by two effects. First, they are stigmatized by being

placed in the Base as their main area of work. From a Bosch perspective this makes sense because the Base is designed as a liminal space; from the artists perspective it is an artificial setting that is not suitable for artistic production offhand. Within a corporate environment, a separated studio instead of some standard office space may stigmatize the artist-in-resident (Harrison, 1999). As the residency program is designed around the artist as a concept, the artists are rather perceived as objects in a co-creation space than as individuals. They are incarnations of an idea of creativity. Since creativity has turned into a production ethos covering the rationality of organizational structures and processes with aesthetics, the creativity dispositif (Reckwitz, 2017) turns the artists into an object of projection for expectations on creativity and innovation.

The second amplifier of liminality is role expectations. The artists at Bosch are ostracized and labeled, as their position does not comply with established organizational schemes (Söderlund & Borg, 2018). On the one hand, the residency concept is based on otherness and the artists are invited as driving forces for innovation. On the other, their strangeness and the ambiguity inevitably affiliated with intercultural tension is mitigated by stereotypes, these being simplifications that ease interaction with unknown persons (Lippmann, 1922; Allport, 1954). This dilemma goes hand-in-hand with preconceptions towards artists. The image the artists perceived at Bosch is an outdated view originating in the 19th century (Bain, 2005) that does not coincide with their self-concept.

In the context of artistic interventions, artists are usually positioned as moderators or facilitators. They are constructive disturbers who then make the interspace an inspiring playground, help people establish trust in an open-ended process and navigate them through a sequence of self-recognition, sensemaking, experimentation and change (Küpers, 2011; Johansson Sköldberg & Woodilla, 2013; Sandberg, 2019). In artistic interventions artists are potential "guiding figures who help people endure the ambiguity of the in-between period" (Ibarra & Obodaru, 2020, p. 480). Within the framework of the Bosch residency, the artists have another position because contact with staff is usually bilateral and cursory: they become shapers of their own liminal space and position.

People in liminal states often develop transitional relationships either with guiding figures or with other people in the same situation who share their experience as members of the same 'communitas', comrades and kindred spirits. Reference persons like these provide social support and serve as points of reference for self-reflection (Turner, 1995 [1969]; Ibarra & Obodaru, 2020). There are no guiding figures from the artistic realm for the artists-in-residence at Bosch, and the responsible innovation manager is not suitable as a role model in this particular situation. Nor is there a 'communitas' of fellow participants, since usually there is only one artist on campus at a time and a formal or even informal network of artistic Bosch fellows does not exist. In this sense, the artists find themselves on their own.

### *Coping strategies and liminal competence*

During their residency at Bosch, the artists experienced typical characteristics and potentially contradictory effects of liminality. Although or maybe because they felt out of place and faced the challenge of vague rules and annoying role expectations, they went through a liberating and fertile period. They withstood conditions that were "both exhilarating and frustrating" (Küpers, 2011, p. 51), mainly because they resorted to their authentic artistic identity.

Similar to employees in between organizations (Borg, 2014; Borg & Söderlund, 2015), the artists developed coping strategies. As their liminal position had an operational and a social dimension, their techniques referred to their workspace and social identity, respectively. On an operational level, the artists adapted themselves by working with restrained material as well

as by using technical equipment that is usually inaccessible for them. They protected their workspace and tapped spatial alternatives. In doing so, they bended or even broke some rules and replaced them with their own as a kind of controlled rule breaking. As an explanation for this behavior, the artists claim for themselves a capacity to adapt to various tasks and contexts.

In the social dimension, they had to find themselves a role, as their identities were being challenged. Contrary to the anthropological or organizational view of transition and reconstruction (Beech, 2011; Söderlund & Borg, 2018) and in contrast to observations of "occupational limbo ... and permanent liminality" at the workplace (Bamber et al., 2017), the artists did not adopt any new identity. Neither did they perform a permanent reconstruction of their selves nor a momentary one. Although there are signs of identity conflicts between self-perception, social role offers and competing value systems, the artists did not even take multiple identities (Hennekam-Bennett, 2016) during their residency. Instead of adopting or creating a new role, they emphasized and vindicated their authentic selves as artists (Schouten, 1991).

Artists who perform interventions allegedly define themselves by the effects their activities create within an organization (Berthoin Antal & Debucquet, 2019). With the residency at Bosch, this is not at all the case, as the assignment is different and does not necessarily require any purposeful collaboration. Bosch's artists-in-residence perceived expectations and projections that were pinned on them but resisted any compromise that would have run counter to their self-conception. Rather they ignored or actively rejected any role expectations on principle in order to maintain their integrity. However, some restrained their artistic power to avoid presumed clichés.

Obviously, this was not an easy process for them as they faced unwonted role requirements and attempted integrity violations. Usually, artists strongly identify with their profession and highly cherish occupational authenticity. Maintaining and communicating an artistic identity that is strongly supported by a high degree of work autonomy regarding topics, working hours, pace and intensity of the artistic process is a solid base of their professional status (Bain, 2005). Therefore, the artists at Bosch must have performed identity work in the sense of maintaining authenticity and integrity (Borg, 2014; Ibarra & Obodaru, 2016; Ibarra & Obodaru, 2020).

As a side effect of their role refusal, the artists consciously or subconsciously served "myths of marginality, alienation, 'outsider' status and creative freedom" (Bain, 2005, p. 29) that empirically grounded literature presents as individualism, nonconformism and asocial tendencies (Feist, 1998; Botella et al., 2013). Rebellion against explicit and implicit norms, fathoming limits and redefining them is a vital part of artistic identity (Bain, 2005). The view that in interdisciplinary contexts, artists "are able to move fluidly from one space to the next, crossing thresholds, while building their identity on the go, moving back and forth" (Jochum, 2015, p. 118) holds true for the artists' ability to cope with liminal situations but may be doubted with respect to identity-making.

Some professionals in liminal positions are able to "develop a distinct 'liminality competence'" (Söderlund & Borg, 2018, p. 888) that makes their status productive and rewarding. Based on the above-mentioned coping strategies, it is proposed that artists have a high degree of liminality competence that they do not quite develop during the residency as a liminal situation, but that they bring along as a prerequisite of their artistic repertoire. Artists are said to be "seekers of liminal experience" (Malpas, 2007, quoted in Elliott, 2015, p. 2) who are thriving in uncertain and ambiguous spaces thus tapping into liminality's creative potential. Starting an artistic process whose procedure and outcome are not preconceived is like entering a liminal space (Coessens, 2014; Elliott, 2015). Artistic creation needs formative capacity, irrationality and individual responsibility for the process. Artists have techniques that enable them to

question reality—including themselves— and pass through the creative limbo. From this perspective, the artists' motivations to enter the interdisciplinary Bosch residency appears as a self-confident and deliberate act of liminality-seeking.

## Conclusions

The paper presents the artist-in-residence program at Robert Bosch GmbH and its effects on the participating artists. The artists enjoyed the interdisciplinary nature of a residency free from delivery obligations and characterized by artistic freedom and made a rewarding experience in terms of implicit knowledge and personal development. At the same time, they faced the challenge of rule-based corporate culture, inappropriate working conditions, unpleasant role expectations and subtle peer pressure, since they were representing a concept of the artist as creative facilitator and stimulus of innovation.

The findings are reflected along the concept of liminality, regarding the residency as a particular form of artistic intervention and the artist-in-residence as a liminal person betwixt and between the artistic realm and corporate environment. Whereas liminal positions in other working environments are starting points for blueprints of identity to be explored and adopted, the artists actively maintained their original artistic identity, characterized by high operational adaptability as well as profound individual autonomy. Therefore, they actively performed various coping strategies in terms of working conditions and social role behavior. In sum their attitude allows the hypothesis that they relied on an inherent liminality competence that is firmly established in their artistic existence.

Other than previous research on artistic interventions that explore the benefit to organizations and their employees (e. g., Berthoin Antal & Strauß, 2013), this study highlights the artists' perspective. It adds to organizational theory by integrating positional liminality (Borg, 2014) to the idea of artistic interventions as liminal spaces with liminality as a process both artists and organizational members pass through (Schnugg, 2018). As for the artist residency at Bosch, the artists' identity is challenged, but they do not perform any change in identity. What might count for artistic interventions does not necessarily seem to count for artistic residencies.

The reflections on the artists' identity are consciously formulated as propositions as this study was not designed as a psychological survey. The research on artistic identity (Feist, 1998; Bain, 2005) is comparably manageable and narrowed on visual artists. Likewise, to date, the artist's role in artistic interventions has hardly been subject to empirical research (Johansson Sköldberg & Woodilla, 2013; Sandberg, 2019). Adding to the fact that residency programs in non-art settings are anything but well explored (Lehman, 2017), this offers an interesting field of research that might offer further insights in successful frameworks for an interdisciplinary interface that gains in importance (Schnugg, 2019).

As this research is qualitative in nature and based on a single case with salient features, the findings cannot necessarily be generalized. Due to the inductive approach of this substudy, findings on coping strategies and evidence on artistic identity are a first approach that could be enhanced by applying grounded theory (Glaser & Strauss, 1967). However, the research context did not allow for a more extensive concept. Aside from that, not every artist who was a resident at Bosch was willing to take part in this study. As motifs for denial are unknown, it cannot be ruled out that the artists who did not participate judge the residency differently or performed other strategies.

However, the findings provide practical implications that go beyond available literature on how interdisciplinary residency programs should be framed and managed by intermediaries (Schnugg, 2019; Schnugg & Song, 2020). Aside from clearly and consistently communicating

goals and expectations, hosting companies should provide for appropriate working conditions and protect artists-in-residence from unnecessary spatial and social distractions—unless interaction with staff is framed as true collaboration.

In residencies with a high degree of freedom, explicit or implicit role expectations in favor of corporate goals seem counterproductive. The energy the artists at Bosch spent on orientation and identity maintenance might have been used more productively. If the encounter of artists and researchers was buffered from “readymade identities and roles” (Styhre & Eriksson, 2008, p. 52) as well as from benefit expectations, innovative impulses were more likely to emerge. When art science residencies are consciously conceived as liminal spaces that allow for cultural ambiguity and genuine irregularity, they are more likely to trigger novelty (Henchoz et al., 2019).

Artists may be taken as sensitive seismographs for any contradiction in corporate culture and innovation activities as they may reflect their surroundings in their work or are potential commentators on obstructive control mechanisms. With this meta-effect in mind, companies should trust in the process and allow artists to make the fuzzy front end of innovation even fuzzier.

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Berit Sandberg – professor of Business Administration at the University of Applied Sciences Berlin, HTW Berlin Business School. She has a degree in Business Administration from the University of Göttingen, where she completed her doctorate and was awarded her habilitation as well. During the last decade, intersections between business administration and the arts have been Berit's main research interest. She managed extensive research projects on artistic work attitudes and arts-business collaborations, developed concepts for arts-based learning and founded the label Art Hacking® for an arts-based innovation method. Her track record includes papers on the artistic mindset, functions of intermediaries in arts-based interventions, and the transfer of artistic strategies to business innovation.