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Artefact Analysis in Organisational Research

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Abstract

Man-made objects are an expression of both the social organisation in which they were produced and the communicative context in which they appear and are used. In this respect, they represent easily accessible material, which is highly suitable for and useful in reconstructing the social structures in organisations and opening up latent structures of meaning for analysis. Nevertheless the analysis of physical materials has tended to live a shadow existence.

This paper presents a hermeneutic method of analysing artefacts in organisations. The basic concept centres on the reconstructing of the processes of meaning and organising in social systems. After providing a brief introduction to the methodological principles, the paper goes on to discuss this method in greater detail. Concrete examples of the study of specific materials in an organisational analysis context are used to ground the interpretation of artefacts in the overall organisational analysis context. The paper closes with a discussion of the possibilities and limitations of this kind of analysis.

Keywords: artefact analysis, hermeneutics, visual sociology, organisational studies, qualitative methods

1. Introduction

Qualitative social research avails itself of a number of different organisational analysis methods (cf. van Maanen, 1998; Brewerton & Millward, 2004; Symon & Cassell, 2012). While many of these (in particular interview or text analysis based methods) have long been the subject of intense debate, the analysis of man-made materials (as a distinct form

of artefacts) has tended to live a shadow existence, particularly in an organisational analysis context – despite all the talk of an “iconic” (Boehm, 1995) or “visualistic” (Sachs-Hombach, 2006) turn, and despite the fact that these materials can serve as an important and sizeable source of data. Yet many disciplines, in particular ethnic studies, ethnology and cultural anthropology, do make use of visual materials (e.g. Lipp, 1995; Kreide-Damani, 1992; Ruby, 2000; Pink, 2006; Hockings, 1995; Collier & Collier, 1986). Many social science disciplines work extensively with visual media (Müller, 2003; Keppler, 2006; Lueger & Froschauer, 2007), photo or film (and video) analysis (e.g. Goffman, 1979; Bourdieu et al., 1990; Knowles & Sweetman, 2004; Raab, 2008; Kuchenbuch, 2005) or visual research (e.g. Emmison & Smith, 2004; Rose, 2006; Mitchell, 2011).

When visual methods are applied in organisational research, they tend to be used primarily either as auxiliary research tools in observation activities or centre on the analysis of authentic video material relating to the setting (Heath & Luff, 2006; von Lehn & Heath, 2006). They are only rarely used in a broader context (Davison, McLean and Warren, 2012). Notable exceptions here are Gagliardi (1990), whose work centres on the relevance of symbols, or Strati (1999) and Carr and Hancock (2003), who focus on aesthetics in an organisational context. While the latter explicitly analyse artefacts in an organisational research context, they do not elaborate on the actual method and process. Warren (2009) finds the lack of prevalence of visual data in organisational research surprising, since it implies an insufficient use of the available repertoire of social science methods. After all, symbolism in organisations is a rich source of information, and visual materials have strong cultural relevance both within an organisation and for its external image, particularly in those societies where mass media play a defining role (cf. Schroeder, 2002).

It is also strange that photos and video materials are the preferred sources of visual data (Knoblauch et al., 2008). After all, these only represent two specific forms artefacts defined as man-made products. Artefacts are physical expressions of the contexts and social organisations in which they were produced. Consequently, they are also important research materials. Likewise, the analysis of artefacts offers a number of additional benefits to social science based organisational research: (a) artefacts are omnipresent in organisations and span the complete visible spectrum of organisational life (from architecture and work equipment to the clothes worn by staff); (b) their physical presence (or documentability in photos or videos) assures they receive repeated consideration in the interpretation process; (c) they provide an image of organisational processes that is not influenced or biased by any research activities; and (d) their inherent context, form and purpose represent organisational and social orientations.

Accordingly, they lend themselves superbly to the reconstruction of social processes and structures in organisations and facilitate the analysis of structures of meaning through their objectified character and symbolic expressiveness.

This article discusses and examines the use of artefact analysis in a social science organisational research setting. It begins with a look at the functions of artefact analysis and

follows this with a description of the related methodological approach and empirical procedures, illustrated in a case study of an example artefact analysis. It then concludes with a brief summary of the scope and limitations of this type of analysis in empirical organisational research.

2. Artefact Analysis in Organisational Research

As indicated above, artefacts assume a central role in the analysis of organisational phenomena for a number of reasons: (a) the human activity involved in creating such artefacts embodies the physical and cognitive practices in social and organisational life (e.g. the production process, signs of use); (b) they are generally pre-interpreted as meaningful expressions of the organisation's actual historical and cultural milieu (e.g. furnishings, documentation) and are thus subject to quasi fixed interpretations of organisational shared meanings; and (c) they can be used in a social context and are thus embedded in specific practices (e.g. furnishings as social dividers, tools used to produce objects, brochures as communication media).

Analysing such artefacts can contribute to the research process in a variety of ways:

- By helping to systematically increase knowledge of the research phase during the exploratory study (*orientation phase*), particularly if access can be gained to authentic materials.
- As an independent and central element in investigative *research cycles*, where artefact analysis can be used for various purposes: (1) To explore the social significance of the associated organisational environment. Specific approaches to logging materials (e.g. the photographic mapping process; cf. Downs & Stea, 2005), which indicate the relationship between an organisation's social milieu and its physical environment are also useful here. (2) To examine the physical context. This plays a central role in observation activities, and the opportunities for visual analysis extend here from the detailed analysis of identity markers (e.g. clothing, objects in organisational life, etc.) to the analysis of the physical setting (e.g. office layouts). (3) To at least partly overcome the frequently encountered limitations of oral methods, e.g. by analysing the structure of spatial layouts or the underlying structures reflected in visual evidence (regardless of its subjective intentions). (4) Artefacts (e.g. photos) can be used to facilitate the production of verbal data (e.g. photoelicitation, projective photo-interviews) to bridge the social distance between researchers and research subjects and deliver interpretations and insights through the lens of the participants (Collier & Collier, 1986; Slutskaya, Simpson & Hughes, 2012). (5) To support and triangulate other parallel methods of organisational analysis (cf. Denzin, 1989; Flick, 2007).

Man-made objects can serve as the central data of study in construing the web of meaning of organisational and social reality, as demonstrated, for example, in the analysis of

panoptic monitoring and control (Foucault, 1995) or the study of human relationships to everyday objects (Baudrillard, 2005).

Essentially, researchers can themselves generate such materials in the course of their research (e.g. their documentation of the organisation) and use them to define their own role or initiate subsequent discussions with the target organisation. To build up such relationships to the organisational setting, the researchers must assume a specific role in the evaluation process (e.g. be visibly associated with taking photos or collecting materials) or extend their analyses to include discussions of the artefacts (e.g. by photographing and interviewing people at the same time). In such situations, the artefacts serve as the reason for the meeting and can also be a good means of steering the direction it takes. While this analysis form has been mentioned here for completeness, it will not be considered further in the remainder of this article.

3. Method for Interpreting Artefacts

Our senses not only passively recognize objects in their “objective” state, they also serve as a recognition system in our active processing of these objects (cf. Piaget, 1971). Objects do not in themselves divulge their nature, but are made identifiable and given meaning by conditions in our cognitive system. Thus, human experience establishes the orientation system that enables people to act in their social environment. This order is acquired in the socialisation process through communication and creates observation and differentiation criteria which influence our perception of the world. As patterns of interpretation, these criteria permit us to meaningfully construct the world (cf. Schutz, 1972; Weick, 1995). This construction has to stand the test of time and continues to develop through everyday use (Blumer, 1969). Thus, the relevance of physical materials lies in the fact that they incorporate the structures of meaning of their producers, but only unfurl their impact on their audience when they can be linked to the latter’s structures of meaning. Accordingly, perception centres not on an independent external world, but on the reality and shared symbols people use to relate themselves to this world.

In this respect, the construction of reality in organisations is neither a passive process nor a purely individual act of perception. Instead, it is a product of communicative negotiation that incorporates social relationships, timing, context and the physical setting. This joint creation of organisational reality (cf. Froschauer, 2006) is the requirement for and result of an orientation system which collectively aligns or differentiates observations, interpretations and actions in the organisation and its environment (cf. also the ideas behind the structuration theory; Giddens, 2008; Ortmann, 1997). Thus, the actors in organisations not only produce and reproduce social reality, their actions also create the reality (e.g. artefacts) which confronts them as an external world (cf. Lueger, 2001). Reality in organisations is, in principal, therefore a social construction and consolidates itself through the experiences created via communication into typical strategies for interpreting events and accomplishing tasks.

Interpretative artefact analysis reconstructs the organisational setting which gives the specific occurrence of the artefact a clear and plausible context of meaning and, thus, contributes to the understanding of the organisation's logic and dynamics. Artefacts are seen here as “artificially” created symbols which presuppose social production and as objectifications of social relationships and circumstances which represent complex processes and structures of meaning. As products of communicative decisions, artefacts embody an organisation's communication and decision-making processes both on a symbolic level (as carriers of meaning) and through their practical relevance, since – by their very existence and use – they facilitate further communication. Consequently, they are by no means simply products of prior activities, but direct the attention of their potential audience towards future action. Thus, the handling of artefacts in an organisation serves as a key point of reference in the quest to understand organisational action.

The variety of different potential materials (such as video tracks, pictures or objects) introduces a great deal of choice into the selection of suitable artefacts for analysis. The skill in artefact analysis lies in identifying those artefacts that have become a natural part of everyday life in the organisation and thus assume an important expressive and communicative function.

Hermeneutic interpretation procedures must also make provisions to safeguard the validity of their insights. The following measures are recommended for the method described in this article (cf. Lueger, 2010):

- *Team-based interpretation*: This should help to avoid impulsive conclusions, simplistic interpretations or indiscriminating transfer of prior knowledge (Reichertz, 2013). Since multifaceted knowledge is important in hermeneutic interpretations, a heterogeneous team can expand the available background of experience and knowledge. To avoid prematurely harmonised interpretations, it can be useful to have one member of the team assume the (temporary) role of challenging preliminary interim results (interpretation control).
- *Extensive interpretation of meaning*: A critical appraisal of the spread of alternative interpretations is crucial for the quality of the interpretation(s). Whenever possible, the interpretation process should not be subject to time pressures or contextual force.
- *Reflection loops*: A regular critical contextual and methodological analysis of the status/shortcomings of the insights is an important means of safeguarding the discourse and identifying any gaps in knowledge.

The descriptions below are based on Lueger (2000, 2010) and Froschauer (2009) and present a hermeneutic interpretation method for the visual analysis of artefacts in an organisational research context. This analysis generally begins with a precise, descriptive exploration of the available material. This is followed by a second stage of analysis in which everyday knowledge and associations are activated to include typical knowledge of cultural contexts and social associations of meaning in the interpretation. The third stage distances itself to a large extent from the immediate form and appearance

of the cultural asset and addresses the potential structure of the artefact's relevant organisational context. A supplementary comparative analysis serves to identify typical idiosyncrasies, milieu-specific associations and the organisational context in more depth. It should also be noted that it is generally more practical to analyse any larger text components using corresponding, specialised interpretation methods. The individual analysis stages are outlined in Figure 1 and are described below with reference to the key issues involved in interpretations of this kind.

Artefact Analysis Stages	
Descriptive analysis of the artefact	<i>Materiality</i> <i>Inner structure</i> <i>Conditions for existence</i>
Analysis of embedded meaning in the organisation	<i>Social relevance</i> <i>Contextual analysis</i>
Reconstruction of underlying organisational structures	<i>Production</i> <i>Effects and functions</i> <i>Use</i>
Supplementary comparative analysis	<i>Comparable artefacts</i>

Fig. 1: Stages of Artefact Analysis

3.1. Descriptive Analysis of the Artefact

To establish a basis for constructing an artefact's structure of meaning, the first step in the analysis involves the systematic description of the individual elements which constitute the artefact with regard to the following central aspects:

- *Materiality*: What is the artefact made of and what characteristics does this material exhibit? (Visual and sensory impressions.)
- *Inner structure*: What different elements does the artefact contain (e.g. major and minor, foreground and background elements)? As a rule, visually accessible materials are by no means homogenous entities, but are constructed from the various elements described in this step.
- *Conditions for existence*: In which context is the artefact encountered and what is the history behind it? This step examines why this artefact exists in the given organisational context and the organisational and social context surrounding it.

This somewhat formal initial description generates a preliminary assumption regarding the potential relevance of the described material aspects in the context of the overall organisational analysis. It is therefore a good idea to carry out initial comparisons with typical comparable artefacts familiar from everyday use (particularly with regard to similarities or differences) or draw initial conclusions regarding its use in the organisational context. This final step also establishes a bridge to the next stage of interpretation, where the artefact's embedded meaning in everyday organisational life will be examined in greater detail.

3.2. *Analysis of Embedded Meaning in the Organisation*

The second stage places the material elements in an everyday context by building on the deliberations in stage one and considering the artefact in its entirety. In this sense, the initial rather vague description becomes increasingly focussed (Geertz, 1993). The following questions can be helpful here:

- *Social relevance*: What general relevance is attached to the artefact by the people who use/interpret it on a daily basis? What relevance does it have in/for the organisation? The associations triggered by the artefact and the things it distinguishes itself from play an important role here.
- *Contextual analysis*: What can be said about the organisational context in which the artefact is embedded? What relevance does this organisational context play? The focus here lies on the relevance attached to the artefact, the context in which it appears and the role played by this context in the way the artefact is handled in the organisation.

In this stage of interpretation, the team assumes the role of experienced, everyday observers who try to understand the organisation in question and begin to reconstruct the meaning and organisational context from this perspective.

3.3. *Reconstruction of Underlying Organisational Structures*

In this step, the interpretation moves even further away from the actual artefact and addresses the organisational context which provides a horizon of meaning to the appearance of this artefact in its particular form. At this stage, the interpretation examines the social structures behind its production and use which (still) lend it expression in day-to-day organisational life. This can be examined in three steps:

- *Production*: Why and in what context was the artefact produced? The focus here lies on the timeframe, social and practical conditions behind the production, i.e. the timing and length of the production process, as well as the work, people and resources involved.
- *Effects and functions*: What effects do the production and use of the artefact have on the organisation? What relevance does it have for social relationships in the organisation? The key aspects here are the social/functional contexts, i.e. for whom, why

and in which context(s) is the artefact important? Which conditions must be met to ensure it fulfils its relevant organisational function(s) and/or has its desired effect(s)?

- *Use:* How and in which context is the artefact used and changed? This final step focuses on the use of the artefact in the organisation as a whole (e.g. reasons for use, position in communication processes, reception by the target audience) and the resulting consequences for the organisation.

Behind these questions lies the interest in the structures of meaning which ultimately form the basis for decisions and, thus, contribute to establishing and changing organisational order.

3.4. Comparative Analysis

At the end of the analysis, it is useful to contrast an individual artefact with other materials, and use the identified similarities and differences to determine its characteristics. This can be achieved by contrasting the artefact with comparable internal or external artefacts or by linking it to other data material (such as meeting protocols or observations).

4. Case Study: Organisational Analysis using Artefacts

The case study below describes an artefact analysis conducted in the course of a qualitative study in Germany. The goal of this study was to systematically analyse a corporate “cultural change” project managed by a team of internal and external consultants. Originally planned as a qualitative accompaniment to a consulting project, it was later extended to a longitudinal study. A total of three analyses were carried out: the first prior to the consulting project in 1997, the second in 1999 to evaluate the consulting process and the third in 2005 to assess the corporate development status. Artefact analyses were used for triangulation purposes in all three cases.

The case study describes the analysis of one specific artefact: a new set of corporate guidelines developed and distributed to all company employees in 1998 as part of the consulting project. The analysis concentrates primarily on the external appearance of the cover of the brochure (the city in the company name has been changed to ensure anonymity) and does not consider the actual content of the individual guidelines (this would be the task of a text interpretation analysis). This approach emphasises the capability of visual analysis more effectively. To keep the case study as brief and clear as possible, the structural elements and illustrations of the individual guidelines contained in the brochure (such as the calendar and the exact layout of the pages) have also been predominantly excluded.

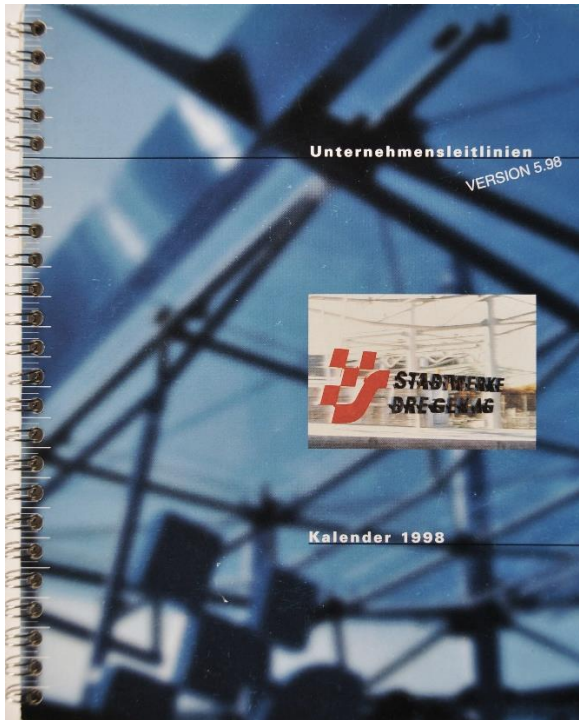


Fig. 2: The Material – Corporate Guidelines in Calendar Form (1997; company name altered)

The descriptions below offer a practical example of the kind of work carried out in each of the individual stages in the interpretation method (as outlined in Section 2).

4.1. *Descriptive Analysis of the Artefact*

- *Materiality:* The artefact is a 42-page DIN A5 brochure with a cardboard cover. Its pages are printed on heavy quality paper. Cardboard is heavier, harder wearing and more expensive than paper. It communicates durability, but also bulkiness. The brochure has a metal spiral binding, which makes the pages easy to turn, but gives the impression that the brochure is a collection of individual pages.
- *Inner structure:* The artefact contains image, symbol and text elements. The background of the cover page is a shaded blue colour, shows a blurred technical construction and is structured using three elements. (1) A rectangular image to the right centre of the page contains an abstract red symbol and the company name in black capital letters. The company name is slightly fuzzy, making it difficult to read against the blurred grey background image (of a technical construction). (2) A relatively small, right-aligned text element towards the top of the page contains the word “*Unternehmensleitlinien*” (“Corporate Guidelines”). Under this is a version number printed diagonally in capital letters (“VERSION 5.98”). (3) A second text element in the bottom third of the cover page contains the text “*Kalender 1998*” (“Calendar 1998”).
- *Conditions for existence:* The artefact clearly has a dual function. (1) The top text element suggests that it contains certain guidelines pertaining to the company (the

function of the brochure). (2) The lower text element and design indicate that it is also a calendar (the actual proportions and limited flexibility imply a desk calendar).

Linking these descriptions in a subsequent step to their potential day-to-day relevance provides some initial insights into the organisation. The dominance of the symbol (red colour on a grey background; size) and the blurred company name are the most prominent characteristics. As a rule, names also reflect identity. Blurring symbolises a lack of clarity, obscurity (e.g. fading into the background) or transition. These elements could signalise that the company is suffering an identity crisis and has doubts about its name. This impression is reinforced by the fact that the company name almost disappears into the restless, darker grey, fuzzy background image.

The position and size of the text elements indicates that they are secondary to the image box. The symbol and company name are framed by these text elements, albeit relatively weakly (due to the dominance of the small, clearly delimited image). The fuzzy blue background dominates the artefact as a whole and crowds the image box. Only the clear borders around this box and its light colour (in comparison to the dark blue background) prevent it from totally merging into the background. This corresponds to one consistent characteristic of the artefact, namely a tendency towards ambivalence (e.g. clarity versus ambiguity, transparency versus intransparency, preservation versus change). Indeed, a closer look at the actual positioning and use of clear and fuzzy elements reveals a sense of clarity in the company logo and three text elements. The company logo is a very abstract symbol and can be regarded as stable (it is also the most eye-catching element). The word “*Unternehmensleitlinien*” (“Corporate Guidelines”) conveys a sense of preservation, while the two other text elements indicate change: the version number and designation of the artefact as a calendar for a specific year are details with inherent end dates. In contrast, the company name and two background images are fuzzy. If fuzziness is linked to change, and these motives were not chosen at random, they suggest and emphasise the importance of the technical organisational context (the motif is simply varied in the two images), yet also indicate diffuseness. In this sense, they also hint at a possible identity issue.

4.2. *Analysis of Embedded Meaning in the Organisation*

- *Social relevance:* In this step, it is worth devoting some time to examining the two obvious meanings of the artefact identified in the initial description – i.e. its relevance as corporate guidelines and as a calendar – in greater detail. As a rule, corporate guidelines provide orientation for internal and external communication. The word “guidelines” is made up of the components “guidance” and “lines”. Consequently, the corporate guidelines provide directions to guide decisions in the company. However, there is evidently not one, but there are several guidelines. This could signal two things: uncertainty regarding the actual direction set by these guidelines or the complexity attached to formulating generally applicable guidelines. Both cases would require the members of the organisation to deal with uncertainty. (A

closer examination of this issue would require a detailed examination of the text of the guidelines in the brochure, which exceeds the scope of this analysis). The inclusion of a version number next to the “*Unternehmensleitlinien*” text element leads to the conclusion that these guidelines differ from previous or possible future guidelines. This signals a limited period of validity for the guidelines in this actual brochure and indicates uncertainty regarding their content. Despite its potential everyday use as a calendar, the specific format chosen also limits the brochure’s usefulness as a desk calendar (a landscape format would have been more practical).

- *Contextual analysis:* Corporate guidelines are a common way of providing staff and other relevant external groups with information about a company’s principles, attitudes, goals, behavioural maxims or procedures. In this regard, they communicate a sense of identity within the company and present its profile and position to the outside world. The example artefact is evidently intended primarily for internal use: its semi-calendar function makes it largely unsuitable for external use. Its design indicates that a lot of effort was invested in its production (based on the graphic design and thoughtful illustrations accompanying the individual guidelines it contains). This, in turn, suggests a highly symbolic relevance. However, the limited functionality and end date demonstrate uncertainty (or possible dissent).

When considered as a whole, these aspects lead to a number of conclusions. The information that this is “Version 5.98” of the corporate guidelines signals a process and brings the calendar aspect back into play. A calendar represents timing and structure. It also limits the artefact to a specific timeframe (in this case, the year 1998). A brief look inside the brochure reveals that it is a very unconventional “1998 calendar” and actually covers the period from 1 May to 31 December 1998 (the version number presumably refers to the month of May). This is fairly unusual: the majority of calendars on the market cover either a calendar or an academic year, neither of which contain only eight months. So it is also unlikely that the members of the organisation will use such a calendar. If alternative interpretations are disregarded (and a closer study of the company reveals nothing that would sustain any other interpretations), the specific calendar format signifies that the company is flexible and views this version of its corporate guidelines as an interim solution with a limited period of validity.

So why didn’t the company simply produce a dedicated corporate guidelines brochure? It would appear the company was fully aware of the efforts this would entail, yet also understood there was a strong risk none of the staff would read it. So the calendar was a meaningful attempt at incorporating the guidelines into day-to-day business needs. The calendar serves as a transport medium which attracts attention and encourages use. However, it (and with it the guidelines) will also be thrown away or filed at the end of the year and is unlikely to be re-used the following year. Naturally, all this also presumes that the calendar is actually suitable for daily use, which evidently applies in this case only to a limited extent. If the calendar loses its purpose as carrier medium, it also loses its function as communication medium for the corporate guidelines.

4.3. *Reconstruction of Underlying Organisational Structures*

- *Production*: According to the back cover, the artefact was produced by a team of 11 members of staff from different divisions in the company (suggesting a complex project structure) with additional external support. This leads to the conclusion that the company wanted to include as many different perspectives as possible to ensure the brochure gained a high level of acceptance. This indicates a corporate culture which requires the involvement of different divisions in the development process, but also signals potential conflict. This backs up the assumption that the company is aware of the efforts required to produce the brochure. The high relevance assigned to producing the artefact signals that the company places a great deal of importance on harmonising internal viewpoints. In this sense, it probably reflects an identity formation process, which, in turn, helps to explain its end date and strange ambivalence. The production team is still not sure if their colleagues in the company will accept what they have decided. This would explain why the production team took the precaution of protecting itself by supporting the physical distribution of the guidelines (the calendar was distributed to all employees in the company), yet at the same time latently sabotaging its reception (lack of practical relevance). The intricate production process would serve to conceal this subtle form of sabotage by exaggerating the efforts made to promote acceptance. This turns the artefact into a trial balloon in the organisational development process, with nobody knowing exactly where it will lead to.
- *Effects and functions*: Basically, the choice of a calendar as transport medium should ensure that the corporate guidelines are always in view, corporate values are constantly communicated and social standardisation is driven forward. This would correspond to its tangible, practical product design. However, as the analysis has shown, this function is not translated into practice. This, in turn, places more relevance on other functions. Firstly, the artefact validates the performance of the production team and justifies its existence. Secondly, the efforts put into the production of the guidelines demonstrate the endeavours (also of the management team) to establish a common view. Thirdly, the fact that the guidelines were formulated in a team legitimises their claims to validity and applicability. Fourthly, because they were put together by company employees and not imposed directly by management, they are also associated with a democratic process. Acceptance of the guidelines is no longer a matter of hierarchy, but a test of how well staff can organise themselves. This places the production team under enormous pressure to deliver something that will be acceptable to staff. An approach that satisfies the ulterior motive (the guidelines are produced in the company with great care and effort), but is subtly undermined by this very intention, reduces this pressure. Nonetheless, it does serve its purpose – using the guidelines as a tentative test run and backing this up with the inclusion of a version number. The artefact therefore sends two contradictory messages. It confirms the inevitability of the changes and fuels the accompanying uncertainty, yet at the

same time promotes a sense of tradition and stability (after all, the corporate guidelines could simply have been posted on the intranet).

- *Use:* In the end, the team delivers a product that people can pick up and read, but which is of little use in their everyday work. This sends a contradictory message. A great deal of effort has gone into the design of the guidelines and determining how to integrate them into an everyday work situation (the only possible explanation for the calendar combination), but, at the same time, the artefact has been designed (limited calendar, end date for the guidelines) to undermine this intent. Assuming that the artefact is being used to hint at decisions, this procedure represents an attempt to emphasise the importance of the company guidelines, yet prevent them from being taken seriously.

At this stage in the interpretation, the efforts involved in producing the artefact and the conclusion that it did not serve its apparently intended purpose lead to the question of why the guidelines were combined with an unusable calendar. The analysis shows that the obvious function of the calendar was undermined by a plausible ulterior motive. The artefact was thus able to fulfil hidden functions, such as promoting (and testing) the acceptance of new corporate guidelines or legitimising teamwork. If they did not gain sufficient acceptance, this would also avoid the risk of them remaining present in the long term and perpetuating the problem. At the same time, it emphasises the company's flexibility regarding the guidelines and indicates that management has not yet reached a final decision.

The fact that the organisation feels the corporate guidelines have to be put into writing as a matter of urgency is indicative of a need to clarify mandatory values. Since the guidelines themselves are evidently intended for internal use, social aspects take precedence here, i.e. they serve as a form of self-insurance in a "mission statement" sense. This could have been triggered by a problem with commitment to organisational norms or a social upheaval that necessitated the dissemination of the new agenda. Both of these are signs that heterogeneity is perceived to be a problem in the company. The production of the artefact splits the employees into three groups: one with ultimate say over the corporate guidelines, a second which has to accept and implement them, and the management team which technically makes the decisions, but delegated it in this case to the workgroup. This system ensures that everyone can do their best, yet still distance themselves from potential failure (lack of acceptance): the workgroup did everything in its power to produce the artefact, the employees were not even involved and the management team did everything it could to win acceptance. Likewise, each of the groups involved could also lay claim to any possible success.

4.4. *Comparative Analysis*

For the purposes of this case study, the comparative analysis takes only a cursory look at two similar internal company artefacts and does not compare the example artefact with any external artefacts or other materials. However, the two artefacts used for this

comparison (see figure 3) are particularly interesting because they represent the earlier and later versions of the corporate guidelines.



Fig. 3: Comparison Material – Earlier and Later Versions of the Management Guidelines (company name altered)

- In 1987, an earlier version of the corporate guidelines was produced with the title “*Leitlinie für Zusammenarbeit und Führung*” (“Guideline for Cooperation and Leadership”). Even at first glance, it exhibits some striking differences. In contrast to the artefact described above, its predecessor is characterised by its clarity. The logo is emphasised and incorporates the different divisions in the company (each represented by a red square in the logo colour) linked together by a wavy line. The brochure is bound in book form (not as individual pages with a spiral binding), accentuating the notion of integration. Furthermore, the content has clearly been adapted into one single guideline – hence the use of the singular noun. In this sense, the title alludes to one unified guideline, not a collection of different guidelines. On a symbolic level, this is represented by the two red lines coming together, indicating an ongoing, but incomplete, quest for unity (hence the convergence of the two lines). The lines also signal that this unity is not fully achievable (hence their close parallel convergence). Furthermore, the guideline focuses on one specific topic (cooperation and leadership), which, in turn, points to the hierarchical structure in the company: cooperation among the workforce and leadership from the higher levels. On the whole, the artefact signals clarity, stability and a clear order, leaving no doubt as to the validity of the guideline, even if convergence will never fully be achieved.

- The later brochure with the title “*Vision – Strategie – Leitbild – Führungsleitlinien*” (“Vision – Strategy – Mission – Leadership Guidelines”), which was produced in 2002, also differs completely from the version analysed above, although it has more similarities to the 1987 version than the 1998 version. This later version also has a very clear structure. However, an element which was present in both previous versions has now completely disappeared: the original company logo, which still showed the different company divisions in the 1987 version and was also included in the 1998 version, albeit with the company name in abbreviated form and without the divisions (quasi as a new logo). On a symbolic level, the 2002 version indicates a sense of motion: the graphic structure is very clear, but still indicates movement through the wave-like structure of the lines and squares. This movement is delimited on both sides by dotted lines, which suggests the permeability of the organisation’s core, but keeps this largely in check. In this respect, the structure expresses both unity and difference, an element continued in the description of the contents. These begin with a unified vision, strategy and mission statement. In contrast, there is a return to the plural form in the leadership guidelines. Taken as a whole, this signals the presence of a general line adopted in different ways in a management context. Like its predecessor, the 2002 version also uses a spiral binding, which insinuates a looser link between the pages. However, the cardboard cover and inside pages are noticeably thinner and more flexible. Like the first version, the colour theme is based on the red and black, whereby red is also the colour of the company logo and a recurring colour in the company.

Overall, the changes in the basic form of the artefact evidently reflect far-reaching changes in the company, which peaked at the time of the analysed artefact (i.e. the 1998 version). At the same time, it becomes obvious that the company went from a very stable position through an extremely unstable period into a new phase of stability, albeit in a new form: unity is greatly reduced and the “new” company is characterised by greater diversity, yet stricter borders. It could be said that the company went through an uncertain period of turbulent change to migrate from a rigid to a dynamic order. Consequently, the calendar – which not only drastically restricted its period of use, but also signalled the end of its validity – was only needed as a transport medium in the interim phase. Paradoxically, this artefact is the one made of the most stable material (rigid cardboard with thick pages), giving the impression of a desperate search for security.

5. Scope of this Method

The case study described above draws on the more detailed interpretation of a specific artefact carried out in the course of an actual organisational analysis project. For the purposes of this article, the analysis has been shortened and the comparison restricted to two chronological artefacts. Artefact analysis is one of several methods (usually interview analyses and observation activities) which, as a rule, are applied in combination in

an organisational research project. To determine the explanatory power of such an analysis (particularly when used as an example), it is wise to contrast the results with information from other sources relating to developments in the company. Consequently, before moving on to a discussion of the scope and limitations of this methods, the following offers a brief summary of the key points that are of particular relevance to the artefact analysis. The information is taken from the results of a longitudinal study carried out in the company between 1997 and 2005.

- Liberalisation of the energy sector: Directive 96/92/EC of the European Parliament and of the Council concerning common rules for the internal market in electricity, which was passed in 1996 and entered into force in 1997, drastically changed the company's market situation. The liberalisation changed the former market order in Germany by promoting competition and providing consumers with a choice of suppliers. It also forced the existing suppliers to accept the withdrawal of geographical monopolies and adapt to the resulting competitive landscape. The main artefact analysed in the case study was produced in this period of massive change, while the comparison artefacts date from the periods before liberalisation (1987) or after stabilisation of the new order (2002).
- This situation was characterised by several structural changes. These included a change in corporate structure which replaced the original divisions in the company shown in the logo in the 1987 artefact (Electricity, Gas, Heating, Water) with a variety of new companies (handling areas such as power networks, service, waste incineration) or through various investments in other companies, as well as a strategic reorientation and major changes in management.
- These changes were accompanied by a significant reduction in staff levels, extreme uncertainty on the part of the workforce, some clear resistance to the changes, as well as several changes in approach brought about by two transformation processes. All these elements indicate that the process was by no means without friction, but was in fact characterised by numerous, contradictory interests and much conflict.

It is not difficult to see that the analysis clearly elaborates the difficult period of change the company was facing. The chronological comparison with similar artefacts indicates the relevance of the change processes, which in this case led to a far-reaching company reorientation. Likewise, the conflicts linked to these changes are reflected in the legitimisation strategies and caution regarding the introduction of this artefact.

At the same time, the artefact analysis reveals a number of aspects which could not have been identified so quickly using other methods. These include in particular:

- The hidden problems involved in introducing guidelines in a period of change: The approach chosen, namely to deliver the guidelines in the form of a calendar that would probably not be used on an everyday basis, demonstrates an extremely sensitive attitude to internal values and the potential conflicts associated with corporate guidelines. In this respect, the artefact analysis clearly shows the management team's

uncertainty and illustrates its attempts to protect itself against possible acceptance problems.

- The protective mechanisms in workgroups: The analysis of the artefact reveals the protective mechanisms used by its producers and plainly demonstrates the problems associated with the acceptance of corporate guidelines in a change situation. As a rule, these issues are not addressed openly in the company, but still emerge clearly in this case in the analysis. This protective mechanism is expressed in the ambiguity incorporated into the material through its simultaneous signalling of standards and limited practical use.
- Management legitimisation strategies: Management strategies regarding the establishment of standards in the company are also discernable. By delegating the production and distribution of the guidelines, management signals its solidarity with the workforce, but, at the same time, insures itself against any possible problems that might ensue (in this case by transferring responsibility to the production team).
- The regulation of corporate development in a period of massive change: The use of a transport medium that is both meaningful for corporate guidelines yet, at the same time, of limited practical use proved very effective in such times of change. This allows the company to test the acceptance of such guidelines, yet withdraw them again in the event that this should prove difficult. The potential impracticality of the medium is an extremely useful characteristic here, even if the people involved would not admit it.

The analysis of artefacts focuses on interpreting the object-related or visually represented world in place in the organisational context. As products of communicated decisions, artefacts of this kind are expressions of the structuring processes which not only attach meaning to the social elements of life in organisations, but also steer them in an orderly direction. Consequently, they are the products of meaningful activities and, at the same time, serve as meaning-creating media, which assume the role of a social memory and transport company decisions in a materialised form.

In this sense, the analysis of artefacts as visible indications of organisational culture offers a number of advantages:

- Artefacts are *ubiquitous, readily accessible* and, in most cases, *not a product of the research*. Consequently, they provide authentic evidence of organisational phenomena.
- Artefacts serve as forms of *social memories* which communicate a message without actually saying it in so many words. Furniture, for example, can establish social barriers or mark territories (thereby signalling social differentiation or exclusion mechanisms), while photos can reveal things about social relationships or the occasion in which they were taken.
- People approach objects from *different (even conflicting) perspectives*, which they are not even aware of or rarely reveal in surveys or interviews.

- Artefacts are *relatively stable objects* and often outlive their time, even if people are no longer able to provide any information about them. In this regard, they are indispensable for historical analyses and comparative reviews of organisations. In contrast to reports of prior events, which are always interpreted and described from a current perspective, the appearance of objects remains unaffected by the passing of time, even if their relevance vis-à-vis their contemporaries has changed.

However, the relevance of artefacts is by no means linked to a strong social science based recognition of their material form. There are several reasons for this: (1) Artefacts have to be interpreted and translated to an extent that is, for example, not required in text analysis methods. Objects have to be *transformed into interpretation texts*. Artefacts share this fate with other materials such as sounds, tactile characteristics, smells or tastes – all of which are difficult to describe. (2) Artefacts are interesting not just as objects, but also in their relevance for organisational structuring processes. Artefacts speak *a symbolic language* which has to be interpreted. But in contrast to languages, the interpretation of artefacts is disproportionately difficult, because there is no lexical basis available. (3) If the analysis of artefacts is to be of relevance in organisational analysis and extend beyond a merely superficial level, it has to draw on arts-based *interpretive and hermeneutic methods*, which focus on systematically identifying and selecting possible meanings. This means that artefact analyses are then backed by genuine interpretive methods, which set many prerequisites for this approach. These methods demand *experience in interpretation* and, as a rule, call for *elaborate safeguard strategies* (like team-based interpretation), which can at times require significant efforts.

Artefacts evidently also assume a shadow existence because it takes a relatively high amount of effort to analyse them and there are only a few appropriate methods available to do so. This is why artefact analysis is found predominantly in fields where such materials are indispensable (e.g. in archaeology as traces of bygone eras, in ethnology as proof of material cultures, in criminology as evidence of crime and perpetrator). In organisational research, artefacts have advantages which make them an indispensable source of material in many areas. They are easily accessible and, thus, serve at the start of a research project as an important aid to orientation in the planning of future steps and preparing of other data collection methods (such as interviews). They are a good source of reference material for organisations which are difficult to access. Artefacts are also important in reconstructing the history of a company. They are good control materials for verifying and augmenting insights obtained through other methods (triangulation as quality assurance strategy). But their most important field of application is and remains the interpretive analysis of hidden structures of meaning.

6. References

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