Redefining Organizational Cultures:
An Interpretative Anthropological Approach to Corporate Narratives

Jasmin Mahadevan

Abstract: Hardly any management theory nowadays fails to take culture's influence on today's organizations into account. At the very foundation lies the belief that the intercultural boundary can be determined externally—by etic view. In my paper I show how much emic organizational reality differs from etic view. Hereby, I refer to two years of fieldwork that I conducted in a global high-tech company at sites in Germany, Austria and India. I choose this approach to trace culture as an open process of sense-making in practice. Through interpretative anthropological means, I identified several discourses of collective identity that were constructed narratively—often regardless of the presumed etic border of "Germans" vs. "Indians." In summary, this paper makes the following contributions: Firstly, it shows how emic and etic categorizations of the cultural other can differ in a complex environment. Secondly, it looks in depth into the emic categorizations of "the Other" and how they are constructed narratively. Thirdly, it draws conclusions for the field of intercultural communication.

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1. Introduction

Based on two years of fieldwork, this paper shows how a German high-tech workforce makes sense out of their world in times of organizational change and off-shoring to India. It shows that the emic categorizations of the cultural other might vary considerably from what might be expected from an etic point of view if one relies to quantitative intercultural theory. In this case, the main emic categories were engineers and management, and not Germans and Indians. Furthermore, it goes beyond simple emic categories and highlights the complexity of emic categories: Beyond and between the dominant emic discourse of conflict between management and engineers, the actors in the field possess alternative discourses to integrate dominant conflict and make the system function. Those integrating discourses are: Historical narratives and narratives of expertise. Historical narratives integrate both management and engineers; narratives of expertise integrate engineers across all nationalities and sites. These emic narratives go hand in hand with a highly symbolic usage of language. Those expressions that are *highly symbolic* and support the above mentioned narratives will be presented in *italic* script. In order to *emphasize* words, **bold** characters will be used. The representation of those narratives will be a narrative itself—drawing also from post-modern forms of ethnographic representation such as literary journalism (AGAR, 1995). [1]

My main argument is that it is of prime importance for the field of intercultural communication to fully understand sense-making in organizations before trying to influence unknown emic categorizations of the other through predefined etic categories of "We" and "the Other." I will elaborate this argument by an ethnographic case study of the company *ChipTech*.[1] In the case of *ChipTech*, for example, the main issue for German engineers was not the fact that Indian engineers are different from a national cultural point-of-view but the interpretation that outsourcing to India itself is an endangerment of German engineering identity that might thwart the construction of the Indian as engineers, too. [2]

The paper makes the following contributions: Firstly, it shows how emic and etic categorizations of the cultural other can differ in a complex environment. Secondly, it looks in depth into the emic categorizations of "the Other" and how they are constructed narratively. Thirdly, it draws conclusions for the field of intercultural communication. [3]

2. Theoretical Background

2.1 The importance of narratives in organizational sense-making

Through narratives, members of a community bind themselves to each other and create themselves again and again (BRUNER, 2002, pp.65-66). It is their changeability while maintaining a claim to truth that makes narrative such powerful instruments for construction knowledge in times of danger or change:

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1   The name is fictive and has been changed to secure confidentiality.

Narratives solve conflicts and give meaning to past, present and future (BRUNER, 2002, p.93). They leave room for re-interpretation and ensure social control at the same time (MUMBY, 1993; DENNING, 2005). Thus, narratives have the potential to make sense out of apparently senseless, contradicting or problematic situations, e.g. of organizational success or failure (VAARA, 2002). Following a prominent row of authors (CZARNIAWSKA-JOERGES, 1997; CZARNIAWSKA & GAGLIARDI, 2003; DENNING, 2005; GABRIEL, 2003, 2004) I thus see narratives as a main form of sense-making in organizations, especially in times of change. [4]

At *ChipTech*, change is tremendous: Globalization (SASSEN, 1998; INDA & ROSALDO, 2001) has reaped into this corporation, the most recent event being the ramp-up of a site in the Indian Silicon Valley in Bangalore. Like in every social setting, they give meaning to what they do and the boundary conditions that surround them. They ask themselves questions like: What is the value a German engineer has in this world? Ultimately, the members of *ChipTech Germany* have to make sense out of the ongoing process of globalization, re-organization and the transfer of knowledge to Asia. They thus tell each other stories about where they come from and where they are going to. In that sense, the narrative construction of knowledge is of paramount importance in their work practice. [5]

2.2 Approaching culture interpretatively

Recent anthropological theory since GEERTZ (1972) and ORTNER (1984) conceptualizes culture as an open process of sense-making in interaction with changing boundaries. This making of a collective "We" always takes place in interaction with the making of a group of "Other" (RICOEUR, 1992); it is performed discursively (FOUCAULT, 2001). Perception of collective "Self" and "Other," inside (emic) and outside (etic) view on cultural discourse as well as ascribed and felt collective identities usually differ from each other. For the given setting, two schools of thought are of major importance, i.e. post-colonial studies (McLEOD, 2000) and writing culture debate (CLIFFORD & MARCUS, 1986; CLIFFORD, 1988). [6]

Post-colonial studies stress the plurality of discourses when one system (e.g. a western one) is applied to another (e.g. an eastern one) and try to look back at the rulers from the perspective of those ruled that have the power to change the system (FOUCAULT, 1980). This idea of thought can be applied perfectly onto today's multinational companies that offshore knowledge but still try to maintain control in a quasi-colonial hierarchy between central site and offshore site (GOPAL, WILLIS & GOPAL, 2003). As the example of *Apple Corporation* shows (GARSTEN, 1994), the transfer of knowledge itself bears in itself the post-colonial opportunity to subvert the system for offshore-site employees (CHATURVEDI, 2000). Unfortunately, only a handful of researchers have brought post-colonial theory into organization studies (PRASAD, 2003; FRENCKEL, 2006), and even less have conducted long-term ethnographic study based on post-colonial theory in organizations (MAHADEVAN, 2007). [7]

Following the writing culture debate, one must be aware of the fact that any ethnographic account—and this is the outcome of in-depth anthropological study —in itself is merely a flawed and culturally biased interpretation, a mere "tale of the field" (VAN MAANEN, 1988). The goal of ethnography as a means of study and a means of writing can thus be not more than a contextual, individual interpretation and a narrative construction of knowledge (EWICK & SILBEY, 1995) within a entertaining tale that seems plausible (RICHARDSON, 1995). To establish academic quality, it is thus important in ethnographic research and writing to reflect the "multiple voices" of the field, to contextualize one's findings, to pay attention to questions of power and inequality, to emphasize both what people say and what they do, to not to restrict oneself to "front-stage performances," to look closely at how language is used, to be reflexively aware of the ethnographer's ambiguous position and to not simply seek confirmation of what is already known (BATE, 1997; GELLNER & HIRSCH, 2001). [8]

From a national cultural container culture now changes into multidimensional focus-points for and of collective interpretation. In order to be able to study this multidimensional ontological concept, I propose to view culture as a category of practice (BOURDIEU, 1976), thus to link it to the "turn to practice movement" in organization studies (JARZABKOWSKI, 2004) and to concentrate on those col-lective identities that actually influence behavioral strategies in organizations and study them through long-term participant observation (VAN MAANEN, 1998). [9]

In their view on culture, interpretative cultural anthropology and social constructivism in organization studies (WEICK, 1995) are similar to each other, for they both stress the importance of organizational claims (i.e. power and inequalities of power in the anthropological sense) and collective understandings (i.e. collective sense-making in the anthropological sense) for the formation of "culture" (RAVASI & SCHULTZ, 2006). Times of change are seen by both as transitional periods that demand for the re-negotiation of organizational culture and challenge old interpretations (ibid). Organizational structure is seen as the framework for collective interpretation that is influenced by the actors' interpretation and that in itself narrows the scope and width of interpretative possibilities (GIOIA, SCHULTZ & CORLEY, 2000). [10]

However, one can discern two main differences between social constructivism and cultural anthropology. Firstly, the latter stresses the polyphony, even cacophony, of the voices in the field when reality is constructed socially (BERGER & LUCKMANN, 1966), and considers it to be a "normal" phenomenon in any social setting rather than a negative exception to be prevented. In short: Organizational actors on grass-root level make their own sense on organizational strategy on top-management-level that usually differs from the intended interpretation; organizational actors display their interpretations in certain contexts in tune with their organizational role front-stage but contradict if back-stage (GOFFMAN, 1969). The inherent struggle for interpretative freedom on grass-root level and for work-practice control on higher level is thus central to organizational anthropology (KUNDA, 1992). Viewed from this standpoint, culture is thus not only "shared knowledge" (BARTH, 2002) but a discursive *process* of collective

sense-making that in itself can be polyphonic, contested and disharmonious, e.g. in the Post-colonial sense. [11]

Secondly, cultural anthropology stresses the ability of actors to influence the organizational framework and their power of interpretation—called "agency" (ABU-LUGHOD, 1991)—that might even lead to subversion and reformulation of dominant cultural discourse. A performance of such kind is not only bound to a singular locality (GUPTA & FERGUSON, 1997), always taking place in interaction with the global (FRIEDMAN, 1994) and sometimes translocal (HANNERZ, 2003). Established collective identities vary according to context; individuals in organizational contexts develop different collective identities (BAUMANN, G., 1996; BAUMANN, Z., 2001) and do so, indeed, through "cultural code-switching" (MAHADEVAN, 2008). It might even be possible for individuals to develop "hybrid" identities (BHABHA, 1994). [12]

2.3 Why bring fieldwork to the field?

Fieldwork, often called ethnography in the organizational context, essentially relies on the researcher to go into the field, to live with the actors (who themselves are the subjects and not the objects of research) and learn to live like them, to participate, but one the other hand view this exercise and the actors involved in it from a higher stance, thus to observe. Through constant participant observation and reflexive practice the researcher is drawn into a relationship between researcher and field which they keep track of through constant field notes, the researcher themselves being the main tool of research and analysis. It is this method *(*fieldwork*)* that lies at the heart of cultural anthropology. Fieldwork is always a subjective process, the field can only be viewed through the eyes of the researcher, and any third party can never glance beyond this bias. It is thus required from the researcher to write a plausible account of their experiences in the field called ethnography that puts the readers into the shoes of those studies. Recently, cultural anthropology has demanded from its apprentices to always make visible the limitations of fieldwork: During the so called "writing culture debate" in cultural anthropology, anthropologists all over the world scrutinized their accounts from the field for undue and overly reification of culture—the latter being a sworn enemy of cultural anthropology. For every culture, it is stated, is in itself merely a collective interpretation, a sense-making that in itself is contested and pluralistic. [13]

This approach, however, contradicts mainstream research in the field of intercultural communication that is dominated by comparative, mainly quantitative studies (YEGANEH & SU, 2006). To approach culture qualitatively thus means to reduce the scope of intercultural research, to retreat from large-scale comparison and to bring it back to the individual. This is precisely its strength for, as Geert HOFSTEDE (1993) himself has pointed out: Quantitative models of culture can neither predict nor explain *the individua*l; ethnography can at the least offer an approximation, if not even an explanation. However, in doing so, reflexive ethnography not only has to take the constraints of research into account but also to be aware of the researcher's limitations in doing and writing ethnography. This

approximation might be small-scale, but it is valid beyond and between quantitative models and overly confident qualitative approaches and should thus be the base for any intercultural action taken to improve intercultural cooperation. [14]

3. Researcher and the Field

Based on the stated theories, I intended to study intercultural cooperation in a company and find out how "culture" influenced work practice. My aim was not to conduct interviews but to actually observe intercultural cooperation, favorably Indo-German cooperation. Thus, I decided to do a long-term ethnographic study. From a student of international business and cultural studies and a subsequent marketing practitioner, I thus decided to become an ethnographer to be. The border between this Indo-German researcher who focused on Indo-German cooperation was shifting according to context and blurred (VERED, 2000) which made my categorization by the actors in the field difficult, sometimes impossible (MAHADEVAN, 2007). [15]

3.1 The world of "technical unit"

The setting of the story is a German high-tech company—named *ChipTech Corporation* for the sake of confidentiality—that is a global player on its relevant market. *ChipTech* can look back on more than 100 years of organizational history, a German history that is. The company has approximately 8,000 employees in Germany and 35,000 worldwide. During time of research, it ramped-up a site in Bangalore, India. [16]

My primary field was a corporate entity (to be called "technical unit" in this paper) that consisted of approximately 450 members at three major sites, i.e. the German central headquarter (approx. 250 members), a site in France (approx. 60 members) and a site in India (approx. 140 members at peak). Its purpose: Engineers from all three sites developed a complex and interdependent technological system together that was to be used by internal customers all over the globe for improvement of microchip design. Those engineers thus had to interact with each other constantly (mainly over distance). [17]

My secondary field was other central company departments such as Human Resources and external providers of intercultural training. Those so called *central functions* were part of the organization above technical unit level and thus considered outsiders by technical unit management. Flow of information between *technical units* and *central functions* in general was slow and scarce. However, as both primary and secondary field contest in shaping the organizations view on culture and the location of the cultural border, I studied them as being conjoint fields in the interpretative anthropological sense. [18]

From the actors' perspective, this ramp-up of the Indian site constituted a major organizational and cultural change. Uncertainty was aggravated by profound reorganization—called *the re-organization* by employees—that started shortly after ramp-up decision had been made and threatened the existence of all technical

unit groups and thus influenced cross-site work-practice tremendously. It was feared by virtually every employee that *the re-organization* in the end might make them superfluous—they would then loose their job. Parallel to these insecure boundary conditions, employees were required to transfer knowledge to India and build up expertise over there. In the end, *the re-organization* had exactly this effect: Nowadays, technical unit does not exist any more. [19]

The technical and administrative task of each employee was codified through a formal structure. What each employee was responsible for was called *ownership,* the person responsible to carrying out those tasks was called *owner.* Especially during times of re-organization, *ownership* fluctuated, and especially administrative and managerial staff was assigned new *ownership.* Those that could not manage to find alternative *ownership* when endangered by re-organization would be transferred to other corporate entities or be laid-off. During the times of research, *ownership* was thus a crucial part of corporate life: To possess *ownership* meant the strength and possibility to defend oneself against *re-organization* and the loss of employment. Not to have *ownership* meant to be weak and vulnerable. [20]

3.2 Data collection and analysis

Data in the primary field was collected through initial interviews with 15 keys actors and subsequent participant observation over two years (18 months at the German central site, 6 weeks at the Indian site), including approximately 250 formal and informal interviews with engineers from three sites; the subsequent field diary was interpreted through discourse analysis. After six months of research a core group of 31 key actors was identified and given a forum to distribute information across sites and to meet regularly. Interpretations where constantly mirrored back to the field and discussed with key actors in focus sessions until agreed upon to establish inter-subjectivity (CLIFFORD & MARCUS, 1986). It was in this process of interpretative sense-making in interaction with the field that the focus of my research shifted from an "intercultural research" in the sense of comparative analysis of national-cultural differences among employees to a research upon discourses of collective identity in the field. [21]

Data in the secondary field was collected through 34 days of participant observations of workshops, 36 qualitative semi-structured interviews and 50 informal interactions with intercultural trainers and participants of training activities. Additionally, I relied on cultural documents such as internal information distributed by corporate communications and corporate press releases and information spread by media. After the end of two years of fieldwork (October 2004 to October 2006), I followed the development of *ChipTech* for another year (until October 2007) through qualitative expert interviews which I analyzed through discourse analysis. The final ethnographic account was read by more than 50 company members and revised before publication. [22]

3.3 Engineering from social science perspective

ChipTech employees in general are mainly highly-skilled technical employees, so called "engineers." I use the term engineers in the sense the actors in the field use it: To describe those that are responsible for technical work as opposed to those managing people on a higher level. As several authors have shown, engineering communities can be viewed as a transnational (JACKSON, CRANK & DWYER 2004; WALSHAM, 2001) and de-localized (GUPTA & FERGUSON, 1997) community of experts with global, partly virtual practices (see STRAUSS, 2000; UIMONEN, 2003) that are considered to be universal. [23]

It is important to note that at *ChipTech* virtually every employee has a technical background, mainly a Master of Science in engineering or computer science (that is the German degree called "diplom"), sometimes physics or mathematics, depending on the task at hand: More hardware oriented (engineering) or more software oriented (computer science). Non-German employees who amount to approximately 15 percent at the company centre in Big-City might also have a Bachelor's degree (a degree that until recently did not exist in Germany). Some employees have completed an internal technical academy on polytechnic level, some might even have a PhD. The latter are not many in total numbers but amount to almost 1/3rd of the employees in the research and innovation departments like technical unit. Virtually everybody in management has a technical background. The expert language of this community is English. [24]

Most employees are men; higher management positions are almost always filled by men; and the ideal of both manager and engineer is male. Women are a minority, but this is true for most engineering companies across the globe. Engineers in Big-City can be categorized into two age-groups: Those above fifty and those in their thirties. Virtually every employee in Big-City has been with the company for years; many of the older generation have never seen another company. These conditions at the German sites contrast very much with those at the Asian sites, especially the one in India, where employees are young, virtually no manager is older than forty years and all of them are "freshers" from the German perspective. The idea at Big-City is that one has to be with the company for at least two years *in order to know how it functions* [German original: *um zu wissen, wie der Laden läuft*]. [25]

4. Narrative Construction of Culture in the Field

4.1 Constructing engineers

Foremost, *ChipTech* engineers use narrative means to construct themselves. [26]

At *ChipTech*, being an engineer is of paramount importance for one's self-esteem and the narrative construction of knowledge is influenced by this fact. Engineers are proud of their intellectual capabilities. For their task is to master complex, often interdependent and error-prone, and to be optimized technology that from their perspective gets more complex virtually every day. Many engineers in Big-

City engage in endurance sports such as long-distance running or riding a racing bicycle. Very often, they would then equate these activities with their work: In both, endurance, stamina and not surrendering to obstacles are most important. These findings correlate with those of other authors who have studied engineering communities (e.g. ORR, 1996; POTTHAST, 2001). [27]

Because thinking processes are so important to this community, formalities are not. The best thing that engineers can do to be considered alien by his peers is to give the impression that they care about their clothing. All company engineers speak of *the industry* when they refer to the field and the market they work in. *The industry*—as the common narrative will have it—is considered the work-environment that changes most rapidly in today's globalized world. The chip design that was cutting-edge yesterday will be obsolete tomorrow. Hence, the task engineers are facing from their perspective is: to improve every day. These features of engineering communities have also been analyzed by previous authors (e.g. VAUGHAN, 1996; ORR, 1996). [28]

However, the boundaries of this engineering community depend on perspective and are thus at least partially contested. As virtually everyone in *ChipTech* management has a technical background, they would thus classify themselves as "engineer," too. However, those engineers who were not managing people would refer to those managing people always as "management" and only to themselves as "engineers." "Engineer" is the predominant term for collective self-categorization in the field whereas "management" is only a term to collectively categorize others as "non-engineers." Especially middle-management would categorize themselves as being "engineers, too." These findings contradict the so far rather monolithic dichotomy between engineers and management that has been pointed out e.g. by KUNDA (1992). [29]

4.2 Blaming management: Dominant narratives and ironic claims to independence

ZABUSKY (1997), VAUGHAN (1996) and NELSON (1997) have made the observation that self-motivation and its moral grounds are constructed through despise of the other. Through this process, loyalty is constructed. At *ChipTech*, the above mentioned narratives recreate the ideal realm of engineers in times when management decides to outsource work to India—a decision that challenges the German engineer's expertise. Thus, engineers have to recreate themselves as experts—an endeavor they are engaged in constantly though frontstage display (GOFFMAN, 1969), ironic display (JOHANNSON & WOODILLA, 2005) or folk art (BRUNER, 2002). As KUNDA (1992, p.21) puts it: "… they [the engineers, J.M.] create themselves within the constraints that are imposed on them." At *ChipTech*, these constraints are the above mentioned boundary conditions of cost pressure, globalization and re-organization. A *ChipTech* employee comments on them:

"Nowadays, everyone is outsourcing to India, of course, we had to join in [ironic, J.M.]. Nobody asks, whether this makes sense or not, it is just like that in the industry today" (author's translation from German). [30]

The purpose of this dominant discourse from the engineers' perspective is to maintain the self-conception of engineers as *experts* even under the most difficult boundary conditions. The rules of the game from the engineers' perspective are fairly simple: Only those who are *non-managers* can be *engineers.* And: *Management* is to blame. The ideal concept of the *engineer* will be elaborated in the following. [31]

Synonyms for everything that constitutes a good engineer from engineers' perspective are: *experts* or: *people that work technically* [German original: *Experten* oder *Leute, die technisch arbeiten*]*.* The opposite of *engineers* are: *managers* or: *people that have no clue of technology* [German original: *Manager oder Leute, die von der Technik keine Ahnung haben*]. Surely, it is important in a company like *ChipTech* to *have a clue of technology*—the answer to the question which group has higher status is thus self-evident: It is *the engineers.* To be an *engineer* is a philosophy, a way of life—to be a *manager* is but dirty business, an act of a *mercenary. Engineers* that mutate into *managers* have betrayed their ideals. However, all that has been said, is only a narrative discourse from engineers' perspective. It is a collective interpretation of reality and a making difference meaningful—and "Imagination of the We in the mirror of the Other," as RICOEUR (1992) put it. [32]

Engineers (from the engineers' perspective) live within the technical system they conceive to be the real reality. Within their horizontal community of practice, they interact informally during lunch hours and coffee-breaks and through *looking at the screen together* [German original: *Mal gemeinsam auf den Bildschirm schauen*]. Only managers, without *a technical topic* and bound to hierarchy, move through the shadow reality of the organization in formal interaction. [33]

Good engineers, as the narrative has it, are thorough, they search for errors (so-called *bugs*)— until they have found them, get to the bottom of issues, never give up, are persistent and cannot be lead astray—not even by setbacks from the outside. The ideal *engineer* is self-motivated (not by external factors like management) and loves *technology. Engineers* would simply love to just work, to perform *l'art pour l'art* (knowledge-driven technologies), and to develop technically elegant and perfect things. But *customers* (seen negatively, too) and *management* thwart *engineering* goals by demanding *pragmatic solutions* (thus market-driven technologies that from the engineers' perspective are the opposite of knowledge-driven technologies. Furthermore, they put *time-pressure* on the *experts* and pour *non-technical* task on him that result in *overhead.* The final result is: The *expert* has to make so many compromises that he cannot deliver *good technical work* anymore. The *expert* thus loses his command on his area of knowledge, this being the major fear of every engineer. [34]

Engineers—as the narrative will have it—stay with the company even though it is a *dump* [German: *ein Saftladen*], badly managed and an unstable employer. They are staying because they want to deliver *good technical work.* When they were youngsters, the ideal *engineers* (being male) stripped down their own *Atari* because they wanted to *understand* how it worked. Or, they wrote computer programs himself. In their core, *ChipTech* engineers like to puzzle, to tinker and to work meticulously, besides that they view themselves as inventors and scientists. [35]

Hence, it is very important to be involved in *cutting edge technology* [German: *An der Speerspitze der Technologie sein*], thus always to develop the newest things, to learn and to try things out. The young tinkerer of old still wants to dig deep into technology, to understand technology and to find the optimum. *Managers*, however, sacrifice technology to the customer, conduct shady business in order to save cost and deprive engineers of the air to breathe with all their formal processes. [36]

Managers wear jackets, *engineers*, however, do not care about formalities, this being just another expression of their hierarchy-free ethos. Any style goes—as long as an *engineer* does not give the impression of actually caring about his clothing more than about his work: In contrast to *management,* being ruled by *formal processes,* the *engineering* world cares about *technical content.* [37]

It is this discourse of conflict that allows *engineers* to maintain a self-conception of the *knowing expert* even under the worst conditions. These boundary conditions are dominated mainly by negative change. One works in *the industry,* after all, *the field of work the technology of which changes most rapidly* [German original: *Die Branche, die sich technisch am schnellsten verändert*]. Demands are hard and getting even harder in times of outsourcing to *Asia,* the market demands for new products, new and faster microchips, *technology that is being bought today is obsolete in six months* [German original: *Die Technik, die man heute kauft, ist in sechs Monaten schon veraltet*]. It is in this process, *ChipTech* engineers say, that *good engineering work* is becoming more worthless every day. A fast-paced development threatens their own self-perception everyday—but the doubt whether one can (still) live and work up to this challenge in the future is not a topic for talk among *engineers. Experts* deliver *technically sound products.* If they don't sell, it must be *management's* fault. What else could be the reason for the *Golden Age* to end? [38]

ChipTech engineers complain about *bad management* a lot—this is what unites them and what also keeps them with the company. *Engineers* always favor the small-start-up over the big company, free-ware over corporate software, and the narrative *why my computer crashed due to issues with* [world-leading tools of big software-company] *again* is a common one among engineers. Nevertheless, they stay with the big *ChipTech* corporation. For blaming *management* also means: To re-establish the engineers' value and to overcome one's own powerlessness through statements like "they don't know a thing about technology" or: "they have no idea where this company [*der Laden*] is going to" or: "if I am not telling them

where *technology* ought to go to, this company [*der Laden*] would cease to exist. From someone driven by *management,* the *engineer* then changes *to the driver of the whole company* [German original: *Der Treiber des gesamten Ladens*]. The *expert engineer* thus becomes the only one who can truly steer the company. Thus, they have to stay. [39]

It is common understanding among engineers that *engineers* perform excellently as long as they are nor controlled too much by *management. Engineers* are on a technical mission; they rely on their intellectual abilities and critical thinking, on the dislike of hierarchy and formalities, on the despise of compromise for the customer's sake, and on persistence and self-motivation. From engineering perspective, all these factors add up to *a critical culture of* expertise. This is what *engineers* mean when they speak of *engineering culture*—and they do that a lot at *ChipTech*. Essential part of this identity is the antagonistic Other that endangers the technical mission, namely *management. Management* rules, *the processes,* are not only without sense but even condemnable from engineering perspective. Hence, a major element of *engineering* culture is the circumvention of *management processes*: Every engineer can tell dozens of war stories about how and when and why he circumvented yet another *process*. [40]

The above mentioned critique of the Other is being made visible in a number of contexts. It is common, for example, to adore desks and walls with comics and illustrations. The comic hero Dilbert—a technical guy, socially awkward but brilliant, whom management constantly gives a hard time—is a well-known guest within the engineering community.

Parallel worlds

For illustration purposes, let's assume the following scene which is following AGAR (1995) a literary condensation: A stranger has dared to enter *ChipTech* at Big-City. He wants to cross an aisle where members of *ChipTech* technical unit reside. It is about twenty meters long, doors to engineering offices open to both sides. What will his first impression be like?

First of all, the stranger sees newspaper clippings, pinned to virtually every door. One headline shouts: "*ChipTech* losses expected," a yellow press article asks: "Are *ChipTech* managers lousy liars?" The stranger moves on, deeper into the world of engineers.

A xeroxed sheet of paper has been pinned to another door. Meager birds flock horizontal twigs of a single tree, many twigs above each other. The lowest birds are the thinnest; the higher ones defecate on them. The headline reads: "The management tree in the large-scale enterprise."

The stranger moves on, those kind of jokes are everywhere. On another door he sees another comic: A shiny business-man wearing black-suit and tie passes a ragged homeless person in the gutter. "Alcohol?," he asks. "No, *ChipTech*," the homeless ex-engineer answers.

The stranger exits the aisle, the heavy door behind him closes with a bang. He takes a last look back. On the door he sees an official company poster in *ChipTech* colors and adorned with the slogan "*ChipTech* Corporation—Global Success For Us All." The

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> enthusiastic young man in business suit and tie below this slogan seems to almost die with happiness while working at his PC. He invites the reader: "To make our global company even better, please support the [CIP] and submit your suggestions for technical improvement to the CIP-team via e-mail." As all *ChipTech* employees know, CIP stands for Constant Improvement Program. [41]

What the stranger encounters in contrast to official communication, can be seen as an example of folk art that challenges the rulers. As (BRUNER, 2002, pp.89-90) says:

> "All cultures have as one of their most powerful constitutive instruments a folk psychology, a set of more or less connected, more or less normative descriptions about how human beings 'tick', what our own and other minds are like, what one can expect situated action to be like, what are possible modes of life, how one commits oneself to them, and so on." [42]

Folk art is thus an exercise in narrative and storytelling. Opinions are made visible for all—peer engineers and management alike—through jokes, comments and ironic statements that adore virtually all engineers' offices at *ChipTech* in Big-City. The comic-hero Dilbert is seen most frequently. In all his stories the punch line is: How Dilbert had a great technical idea and how management made his work impossible by forcing him to follow a stupid management process that is more about cost-saving or whatever than quality of work and good technical outcome. The evolvement of such ironic folk-art at the Indian site could be observed over time: After one year, similar adornments had been put up that strengthen the observation that there is such a thing as a global "engineering habitus." [43]

Jokes were another prime means of ironic claims to independence. A famous *ChipTech* joke (distributed via e-mail across all sites) goes as the following [my translation and italics]:

Why things are not at their best at *ChipTech*
This is how a potato is prepared at a small start-up:
One heats a new oven of high quality to 200 degrees. One places a big potato into the oven and turns to a productive task for the following 45 minutes. One checks whether the potato is well done. One removes the baked from the oven and serves it.
This is how a potato is prepared at *ChipTech*:   One founds a project-team and names an *owner* for the potato-task.   The *owner* recommends the preparation of a potato to *management. Management* declines for the company has never since foundation prepared a potato and demands a feasibility-study for potato-preparation and proof of a positive potato-benefit-ratio for the company.   The *owner* designs a PowerPoint-presentation that defines the details of the project most accurately. Passages that are easy to understand and facts that are easy to grasp have to be translated to *management-newspeech* in order to be understood by the target-audience.

The *owner* visits numerous meetings with this PowerPoint-presentation and thus *get's into management thinking* [inadequate translation, German original: *das Management in seiner Denke packen,* J.M.]. He may not forget to distribute the presentation via various e-mail-distribution lists to all those involved and not involved.

The project-team thus *aligns* themselves and searches for a TS 16949 verified potato-supplier for six months and does not find any. Thus, a ISO certified carrot-supplier is forced to deliver potatoes. Because he has no potatoes in his portfolio, he buys them from an uncertified carrot-supplier and adds 25 percent to the price.

The carrot-supplier is ordered to heat the oven to 200 degrees. It is demanded that the supplier demonstrates how he turned the switch to 200 degrees and expects him to supply information brochures from the oven-manufacturer that proves that the oven is calibrated correctly.

One checks the information material and orders the supplier to check oven temperature with a certified sensor and to turn the clock to 45 minutes.

One makes the supplier open the oven in order to show that the potato is placed correctly and requests a study that proves that 45 minutes is the ideal baking time for a potato of this size.

After 10 minutes, a checkup is demanded whether the potato might be done already.

After 11 minutes, a checkup is demanded whether the potato might be done already.

After 12 minutes, a checkup is demanded whether the potato might be done already.

One gets impatient and blames the supplier (why is it so difficult to bake a simple potato?) and demands for an up-to-date baking-status-report.

After 35 minutes it is determined that the potato is almost done.

One congratulates the supplier, afterwards one informs the *management board* of the excellent results that could have been accomplished even though the supplier was uncooperative. The project team members nominate each other for the company-internal *Good Cooperation Award.*

After 40 minutes, the controlling department demands that the potato is removed from the oven in order to realize cost-savings without loss of product quality and taste when compared to the 45-minute-potato.

One serves the potato and is amazed how the hell a small start-up manages to bake such a good, low-cost potato that people apparently like more than the *ChipTech* potato.

In the meantime, there are several management suggestions for improvement:

• One could use carrots the shape of potatoes in order to save costs.

• Via an image campaign, the lack of potato-taste could be presented as a new quality attribute to the customer.

• It is demanded that both oven temperature and cooking time be reduced by 20 percent.

• It is checked whether it is still possible to serve the potato still steaming after the oven has been outsourced to India

But before one of these suggestions can be put into reality, the whole department is being re-organized, re-named and re-structured, and the world is still waiting for the first *ChipTech* potato. [44]

It is in this manner, that *engineers* of all sites ironically claim their independence (JOHANNSON & WOODILLA, 2005) and let *management* know about it. For it lies in the heart of irony that it is the witty weapon of the weak (yet not) when forced to obey a more powerful ruler without giving in. It also lies in the nature of such ironic resistance that it takes place within the informal engineering world and not in the formal meeting. It is thus an example of back-stage employee resistance (GOFFMAN, 1969) and the shaping of a professional community. [45]

4.3 Corporate history and organizational saga

History is important for organizations. According to CLARK (1972, p.184) "such a belief comes from a credible story of uncommon effort, achievement and form." And VAN MAANEN (1998, p.194) points out: "Sagas are anything but corporate mission statements neatly printed on business cards. Rather, an organizational saga is a memorable and credible account of past events and achievements built up by many people over a lengthy period of time." [46]

Both authors establish the organizational saga as a myth build from below that binds employees positively to the organization. Additionally, HOBSBAWM and RANGER (1983) have coined the notion of Invented Traditions. These are narratives that build collective identity in the present through recursive references to the past, namely in periods of change when collective identity is in danger. These dangerous boundary conditions do exist in the case of *ChipTech*: It is the context of globalization and the transfer of knowledge to Asia, ordered by management that leaves the German engineer in a precarious position (from their perspective). Such a past is never "real" in the factual sense but is only used to create collective identity in the present and always projected back onto the present. According to HOBSBAWM and RANGER (1983) such a reference to the past has to be made constantly to maintain its interpretative power. Thus, new member learn the correct interpretation of collective history and—in this case the correct narrative that serves as vehicle for it—when they enter the community. Hence, it is of no importance whether they have ever experienced this past themselves. [47]

At *ChipTech* in Big-City, recent events have made history important, too. Employees have seen many re-organizations. About 15 years ago, they were spun-off as a different legal entity from a large, renowned German engineering-company which shall be called *Maybeck AG*. *Maybeck* was once *the* German engineering company, a name that was a synonym for quality and German engineering ("Deutsches Ingenieurstum"). *Maybeck* history goes back to the 19th century, those engineers that started their career at *Maybeck* in the 1960s and 1970s—and there are quite a lot of them at today's *ChipTech*—had made it from the perspective of their time. [48]

The industry, as has been said before, changes rapidly. To Big-City engineers, this process is a process of decline: It contrasts sharply with the mythic past, the Golden Age of German engineering, when *Maybeck* was *the* global engineering company. Coffee- and lunch-breaks are thus often instrumentalized for collective

mourning of the past. In this mythic past, *engineers* were still the rulers over their work and not yet subjects to senseless management processes. *ChipTech* Corporation was not born yet and *Maybeck AG* was unique in the world. Today still, these are the stories that the engineering heroes of old tell about this mythic past, and there are many stories of such kind being told in this organization. Like all creation myths, those small traditions exist to educate the young and to strengthen the community. Let's thus hear the saga of *Maybeck AG* as it has been recorded by an anthropologist.

The Golden Age of German engineering

Once upon a time, the elders tell the anthropologist, *Maybeck AG* was *the* German engineering company. From washing machine to personal computer: Maybeck would produce every item in perfect German quality. *Maybeck* was world market leader in many segments, even today the name *Maybeck* answers for quality and the benefits of German engineering even in the most remote corners of the world. "Who was engineer at *Maybeck* at that time, had made it," the elders say and tell the saga of the Golden Age of German engineering, when the experts where experts still and the rulers of the world. *The Maybeck* ("*Der Maybeck*" in German), was a secure work-environment—*ChipTech* is not anymore.

Globalization pressure, unemployment, a 40 hours working week, a cheap and thus threatening work force from former Eastern Germany and Asia, outsourcing—during the prosperous years of *Maybeck* all of this was non-existent. And what is to learn from the elders' narrative? Always—in this way or another—the essence of the story is: It used to be good, then change came from above, and it got worse, and it is worst today.

When the elders commemorate the past the different elements of the saga are interwoven to a history of negative change, an anti-saga of a kind. This anti-saga knows a clear culprit for the decline of the Golden Age: Management it is, bad management, to be precise, because it must have been be bad, otherwise this could not have happened. For the expert, the engineer, could not have been responsible, he is the hero of technology after all. [49]

The anthropologist hears this narrative again and again and realizes: This is the organizational saga (CLARK, 1972) of the company. In contrast to CLARK (1972) and VAN MAANEN (1998), however, the *ChipTech* organizational saga is a negative one, a story of decline, and not a positive myth. Yet it functions to bind employees to the company and to themselves. Not only the elders speak of this mythic past and blame management for the recent decline but also the younger members of the engineering community who have never experienced the Golden *Maybeck* Age themselves do so. Hence, the narrative of the Golden Age and its decline can be considered to be an invented tradition in times of external threat. *ChipTech* engineers narratively exchange it to experience themselves and their work as being valuable, even though official company figures do not always support this assumption and employees are being laid-off in Germany. They construct a "guilty other," namely their own management, that is responsible for whatever is more difficult nowadays then it used to be. As the following pages will

show, this assumption is the basis for the moral code that motivates *ChipTech* engineers. [50]

4.4 Technical narratives and knowledge workers: Constructing a habitus of expertise

Behind all narratives lies the demand to uphold the self-conception of the engineer as expert, as commander of technology. Like their counterparts in other companies, *ChipTech* engineers are so called knowledge-workers (BARLEY & ORR, 1997, p.2). They engage in technical thinking the outcome of which often remains invisible. Seen from a sociological perspective, technical employees of such kind interpret the symbolic representation of reality or even the symbolic representation of a symbolic representation of reality. An example for the latter one is the case of an engineer who designs a program that finds errors in another chip-designer's code. I will thus follow the definition of complex technical work by BARLEY and ORR (1997, p.12) as requiring:

> "(a) the centrality of complex technology to the work (b) the importance of contextual knowledge and skill, (c) the importance of theories or abstract representations of phenomena, and (d) the existence of a community of practice that serves as a distributed repository for knowledge of relevance to practitioners." [51]

The inherent dilemma in this kind of work is what BARLEY and ORR (1997, pp.17-18) have called the "disjunctures between autonomy and constraint and between expertise and servitude." At *ChipTech*, this conflict is displayed in an ironic and narrative way, as the previous pages have shown. The engineering community is thus constructed in opposite to management. At the heart of it lies the conception of the engineer as *expert.* [52]

But still: Technical work—especially innovation—can never be fully controlled, for it requires the individual to make assumptions about reality within a changing, often interdependent, technology that can as well be false (LATOUR & WOOLGAR, 1979; RAMMERT, 2000). At the same time, the self-conception of a good engineer, however, demands for the technological system to be error-free. As BARLEY and ORR (1997, p.13-14) put it: "They [technicians or engineers, J.M.] link as to technologies that are nearly transparent when they work and troublesome opaque when they do not." Every error, every technology that has become in-transparent in such a way demands for the reproduction, reinterpretation and reinvention of expertise to revive the community in times of crisis. [53]

Within technical service work—and the development of the product-help-system at *ChipTech* technical unit can be classified as such—another factor is important: Technical service work, as ORR (1996), POTTHAST (2001) and ZABUSKY (1997) have shown, is only noticed by its recipients in case it should *not* function —i.e.: in case it be problematic. Otherwise—i.e.: in case it be normal—it is simply taken for granted and used without second thinking. How the error is socially mediated is thus a crucial factor for the survival of the expert community of

practice (LUPTON, 1999; VAUGHAN, 1996). Crucial for the survival of the expert community is the single engineer's need to know. As POLKINGHORNE (1988, p.13) said:

> "(…) Science is about the search for understanding. I have suggested the following parable. A black box is delivered to the Meteorological Office with the instruction 'Feed in today's weather in slot A and out of slot B will come the prediction of the weather in a fortnight's time'. Lo and behold, it works! The pragmatic task of the meteorologist is perfectly (if mysteriously) accomplished. Do you think they would all go home? Not a bit of it! They would take that box to pieces to find out how it modeled the great heat engine of the Earth's seas and atmosphere so accurately. As scientists they know that prediction, however perfect, is not enough. They want to *understand* the nature of the weather system. Empirical adequacy—'saving the phenomena', in the old phrase—is not sufficient." [54]

It is this self-motivated expert engineer who wants to know and who aims at perfect understanding that makes the community function. A *ChipTech* engineer says: "The task is to solve issues before they become issues." It lies in the nature of things that no engineer can fully understand technology in a highly interdependent, diversified environment as product-help-system is. They thus have to interact with their peers whose technical work borders their own responsibility within the system on a personal level to understand the meaning of their work behind the code (DOWNEY, 1998). An engineer says:

> "There are many ways of writing code: Ingenious code, down-to-earth code, standard code, brilliant code and so on. But this I cannot see by simply seeing the code. To be able to judge what this code *means* I have to know the personality of the engineer who has written the code. Then I know how to interpret his code and what it *means* for my own work.*"* [55]

Being able to judge how somebody ticks [German original: *Einschätzen können, wie jemand tickt*] is thus a crucial social requirement at *ChipTech* technical unit. On the other hand, no engineer can actually *see* another engineer's code (for each of them works in sole interaction with their computer, within the depths of their own technical expertise). Yet, in times of crisis, when the system does *not* function, those lone fighters have to leave the secure depths of their technical topic and work together on unclear interfaces to work together as a team and find the bug together: They have to be sure that the other engineer will act as *experts* in times of crisis. [56]

As the works of ORR (1996), VAUGHAN (1996), POTTHAST (2001) and ZABUSKY (1997) show, collective identity in such a community becomes a category of (work)-practice (PICKERING, 1992): If someone belongs to the community or not can be seen by his doing the right thing in times of crisis and error. This "right thing" is not a technically clear-cut decision (which does not exist) but rather an interpretation of reality in combination with a performance that draws from existing repertoires. This habitus of expertise has to be collectively shared and re-shared. [57]

Because such expertise in an individual's human-machine interaction (SUCHMAN, 1987) can hardly be seen from the outside, engineers tell each other stories about their work. About the issues they solved, the *bugs* (errors) they found, the technologically brilliant solutions they came up with. It is mainly during coffee- and lunch-breaks that the engineering community shares their practice in such a way. Those technical narratives, as I would like to call them, are framed by the mentioned historical narratives. An engineer would refer to the organizational saga or blame management, simply as an introduction, and then proceed to telling stories about their technical work. In such a way, personal interpretative context knowledge is shared (BUCCIARELLI, 1994; POLKINGHORNE, 1988, p.15; POLANYI, 1958). [58]

However important expertise might be, knowledge always bears the risk of being or becoming false. The main reason for error is technological change that occurs most rapidly (MacKENZIE, 1996). A German *ChipTech* engineer once explained a procedure to a new Indian employee as the following: "The way to do it—or at least this is our understanding at this point-of-time—is ..." From the *ChipTech* engineer's perspective, *management* aggravates this volatile situation by introducing additional change like outsourcing and re-organization. Hence, it *does* make sense from the engineer's perspective to interpret change negatively for it bears the risk of failure. [59]

Narratives that construct the engineer as the "knowing expert" and management as the "stupid other" are the ideal vehicle for mediating the error and upholding collective self-conception in times of crisis. Thus, one sits together, *looks on the screen together*, asks each other for so-called stand-up meetings every time a brilliant technical solution has occurred, and talks and talks and despises *management*. As BRUNER (2002, p.100) says:

> "We are, as Claude Lévi-Strauss remarks, *bricoleurs*, improvisers. We improvise in how we tell about ourselves to ourselves (...). Just as our opposable forefingers and thumbs enable us to use many tools, our narrative gift gives us access to the culture's treasury of stories." [60]

The narratives among *ChipTech* technical unit engineers are numerous, be they technical or historical, ironic or humorous, about the We or about the Other: They all serve the common purpose of upholding the engineering community of practice in times of crisis. [61]

4.5 Integration beyond the dominant discourse or conflict

As the previous pages have shown, the categories of management and engineers are the dominant categorizations of culture at *ChipTech*. *Chip-Tech* engineers complain about managers that thwart technological excellence. On the other hand, *ChipTech* managers complain about those engineers who make their managing job so difficult and who constantly thwart organizational goals. This discourse of conflict between management control and technical freedom on engineering level is displayed frequently, especially in official on-stage meetings

where each participant has to play his role within a certain ensemble. This means: As soon as managers would suggest a new process, a change in technology, a cost reduction program et cetera, engineers would critically contradict them. As the previous pages have shown, this dominant discourse of conflict between management and engineers is essential for the construction of a collective self-concept as technical experts who can control technology. Through narratives, engineers maintain, recreate and reinterpret identity in times of crisis. In frontstage interactions with management—e.g. in formal meetings—an engineer thus cannot do anything but contradict management's suggestions and make visible their lack of sense from a technical perspective. It is a game of power that is being displayed here. But if conflict is omnipresent (as, for example, KUNDA 1992 has pointed out): Why, one has to ask oneself, does the system function? [62]

Engineers in the end—after having taken critical perspective, after letting management know that they are the masters of technology—*do* work within the organizational system that is cast upon them. They talk about not following management a lot and display their view ironically—but what they actually do is something else. As one engineer puts it: "Of course, every engineer would work for [world-leader in personal computer software] if the salary was alright." However, to utter such a view either in front of management or amongst ones peer engineers is not an option. Rather, it is essential to stage the dominant discourse of conflict frontstage and always prefer freeware communities. [63]

Behind the official scenes at *ChipTech* (where conflict is being enacted), however, one can discern numerous ways of integrating the dominant discourse of conflict. It is behind the scenes, in front of the coffee-machine and during lunch-breaks that managers would categorize themselves as engineers, too, and thus link to their employees. During management meetings, formally, while being on stage, managers play the role of managers and wear a suit—but behind the scenes, informally, they tell stories about bad management (higher management, of course) in the same way engineers do and refer to the same organizational saga while doing so. [64]

Naturally, those stories are only being told informally (backstage) and naturally, engineers only acknowledge them informally and backstage. Another condition that favors engineer-management integration besides the backstage self-categorization of managers as *engineers, too*, is the pressure from outside or above. In times of globalization, outsourcing to India and the ramp-up of new sites in Asia, *managers* and *engineers* of the old central-site in Big-City simply have to cooperate in order to secure technical topics (ownership) for themselves and thus secure themselves against yet another form of negative change that is imposed by (higher) management upon them. [65]

At the end of the day, both management and engineers narratively uphold engineering expert identity of a previous Golden Age in times of crisis and thus make sense out of globalization. In this practice, their emic discourses of "We"

and "the Other" vary considerably from etic constructions of "the German" and "the Indian." [66]

5. Summary and Outlook: Bringing Engineering Narratives to the Intercultural

As the previous pages have shown for the case of *ChipTech*, narratives are an important means of organizational sense-making. Through narratives, members of the engineering community bind themselves to each other and to the organization they work for. However, there is no simple explanation to how narratives function to provide collective sense under changing boundary conditions. For as the previous pages have shown, even negative organizational sagas can serve the end of binding members of an organization to the latter. [67]

Taking an interpretative approach to organizational complexity seems thus the only viable means to study discourses of "We" and "the Other." [68]

Herein lies the danger of organizational dynamics for the field of intercultural practitioners—so-called interculturalists. For the potential of narrative reinterpretation and sense-making within a complex organizational field means: Engineers might take whatever knowledge they acquire and use it. Hence, they might even use intercultural dimensions that are introduced to them in an intercultural training. If such a training is based on monolithic, static and nationalculturally comparative theories, like those of HOFSTEDE (1993) and TROMPENAARS and HAMPDEN-TURNER (1997), the outcome is unclear. It might even be used to justify the failure of projects. If Interculturalists in the field are not aware of this new sense that engineers might give their messages, they might thus even fuel potential conflict between sites. [69]

Questions still to be solved include the following: What about "the Indian"? Are they "the alien Indian" or just an engineer, too, from German engineering perspective? The answer to this question most likely is going to be an ambivalent one. As the previous pages have shown, there is potential for global integration: even engineers at the new site in India adorn their walls with Dilbert comic strips. In that sense, *ChipTech* engineers from all sides uphold the concept of being a global, transnational and translocal community of practice on a certain level, thus contradicting established national-cultural dimensions for India, e.g. the presumed higher respect for hierarchy and management authority (see e.g. HOFSTEDE 1993, TROMPENAARS & HAMPDEN-TURNER 1997). This idea could thus unite engineers from all sites in theory, regardless of their national-cultural background. [70]

But can this discourse that highly depends on informal and backstage interaction be put into practice across sites and over distance? Can the organizational saga—which is a very German one—overcome its localized meaning and be reinterpreted to integrate an Indian engineer? Can alternative cross-distance channels replace the informal coffee-machine at one site? And what about the potential fear related to globalization and knowledge-transfer to India? Will it lead

to Othering—making a person more alien than they actually are (RICOEUR, 1992)—in order to secure one's own position within the organization? [71]

Further research yet has to clarify these uncertainties in detail. What seems clear already, however, is the fact that members of an organization make their own sense of globalization, offshoring and the Other. This sense is deeply rooted within the organization's history and is consists of a complex agglomeration of both frontstage and backstage discourses. Narratives serve as a powerful vehicle to transport these categorizations of the Other. The meaning of this conclusion is thus doublefold: Firstly, one needs to unveil these emic discourses to apply them into intercultural practice. Secondly, one needs to be aware of the fact that there is more to emic discourses than mere frontstage display. Only then can one devise intercultural measures that do not aggravate conflict and work at the *real* intercultural border from actors' perspective. [72]

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Author

Jasmin MAHADEVAN received her Master's Degree in Languages, Business and Cultural Studies (Diplom-Kulturwirt) with focus on Southeast Asia from the University of Passau and her PhD in Cultural Anthropology and Intercultural Communication from the Ludwig-Maximilians-University in Munich. She is a professor for International and Intercultural Engineering at the Department of Mechanical Engineering of the University of Applied Sciences in Kiel. Jasmin Mahadevan also works as an intercultural trainer and consultant for technical companies.

Contact:

Prof. Dr. Jasmin Mahadevan

University of Applied Sciences Kiel
Department of Mechanical Engineering
Institute for International Sales and Purchasing
in Engineering
Grenzstr. 3, 24149 Kiel, Germany

Tel.: +49-176-66629029

E-mail: contact@jasmin-mahadevan.de
URL: http://www.jasmin-mahadevan.de/

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