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CONFLICT AS MECHANISM FOR IGNITING ORGANIZATIONAL RENEWAL: A CASE STUDY

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Abstract
Through an inductive study, we explore how a company leverage conflicts in product development to initiate organizational renewal activities. We identify multilevel mechanisms that show how conflicts in new product development projects become the trigger for organization-wide renewal, thus contrasting with the assumption

that conflicts are detrimental to the renewal process. We develop a process model in which we track how reinforcement and regeneration of organizational attributes through a conflict at the project level can lead to renewal at the organizational level. We inform managers of innovation-driven organizations on how their agency is key to influence such two mechanisms of change and to identify conflicts as signals for the need of organizational renewal.

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INTRODUCTION

To sustain competitiveness and secure foothold in an industry, established firms face the ever-increasing challenge to continue to innovate. However, several prominent industry firms have recently found themselves in situations where traditional means of innovating, for example through products or processes, are no longer sufficient for remaining competitive or even relevant in the market. Consider companies like Polaroid, which were not able to successfully transition to a digital technology (Tripsas and Gavetti 2000) or more recently, Nokia, which did not succeed in innovating their product offering in the wake of smartphones (Vuori and Huy 2015). One emerging mechanisms of organizational renewal may be found in conflict which represents a regularly occurring 'asset' in organizations (Song, Dyer et al. 2006, De Clercq, Thongpapanl et al. 2009). While conflicts are normally recognised as problems (De Dreu 2008), they also bear a remarkable potential for learning and renewal. Indeed, it is well-established that a conflict-free organizational environment is not only unrealistic, but also unadvisable (Pondy 1992). For example, the underlying process of change in organizations is constructed over the tension between exploration and exploitation necessary to create windows of learning (Crossan and Berdrow 2003). These windows of learning are, in turn, created through a destabilization of the system (Plowman, Baker et al. 2007).

While the conflict management literature has recognised this ambivalence in the effect of conflict, the general debate is not settled (De Dreu 2008, Tjosvold 2008). Specifically, the prevailing view is that value is in the "good ideas" immediately emerging from destabilization in the system (Burgelman 1983, Salvato 2009), instead of further capitalizing on the conflict per se. Indeed, as argued by De Dreu (2008), to understand the relationship between conflicts and their beneficial consequences, it is necessary to move beyond the short-term and study the effects in the long term.

Against this background, we unpack the relationship between conflicts and organizational renewal to shed light on the mechanisms operating behind. To do so, we use a process study of an organization that experimented conflicts during product development projects. We

explore the micro-level processes that spawn from conflicts and resulted in organizational change. We collected data from the Danish company Bang & Olufsen following their innovation activities related to three of their most strategically relevant product development projects. By adopting an extended focus to the multilevel mechanisms that conflicts generated from such projects, we develop a process model that shows how conflict characteristics, (task, jurisdiction and relationship arguments), influence how the company is able to use project-level conflicts as a learning opportunity for organization-wide.

THEORY

Renewal, as a process of change, has been one of the core interests of scholars interested in understanding how companies achieve a better strategic fit and different models about the nature of the change have been proposed (see e.g. Greenwood and Hinings 1996, Plowman, Baker et al. 2007, Albert, Kreutzer et al. 2015). The first view sees the renewal process as a periodic, punctuated and system-wide change that elevates the company to a better fit (Tushman, Newman et al. 1986, Huff, Huff et al. 1992), in which self-reinforcing dynamics of inertial stability, comparable to the core rigidities proposed by Leonard-Barton (1992), are disrupted by the burst of stress driven by an accumulated dissatisfaction with how the company's status quo is failing to hold up with a dynamic environment. A second model is of renewal being a continuous process in which companies follow an ongoing "journey" of incremental and evolutionary change triggered by a constant instability (Brown and Eisenhardt 1997, Volberda, Baden-Fuller et al. 2001). This can get chaotic and complex because of simultaneous sub-processes of competence exploitation and redefinition (Floyd and Lane 2000). In this conceptualization Plowman, Baker et al. (2007) offer an insightful account on how even small and destabilizing changes, when amplified through positive or negative feedback loops, can lead to radical change in the system. As an organization-wide type of change, there is acknowledgment about contributions to the process from multiple managerial levels (Glaser, Fourné et al. 2015) supporting an "evolutionary process associated with promoting, accommodating, and utilizing new knowledge and innovative behaviour" to achieve an improved strategic fit (Floyd and Lane 2000, p.155). Floyd and Lane (2000)

addressed contributions from multiple organizational levels, and showed how middle managers' roles revolve around championing, facilitating, synthesizing and implementing activities, while top managers rather focus on ratifying, directing and recognizing ones.

The underlying tension that drives the process of renewal is between the exploitation of the current competences and the exploration of new ones to achieve or maintain the strategic fit (Floyd and Lane 2000, Crossan and Berdrow 2003, Flier, Van Den Bosch et al. 2003). Such tension causes conflicts among individuals and groups across departments and organizational levels, as people hold different interpretations and expectations with regard to the deployment of existing competences and the experimentation of new ones (Floyd and Lane 2000, Glaser, Fourné et al. 2015). In the following we explore the role of these conflicts in change.

Conflicts in innovation and their role for change

As pointed out by De Dreu (2008) "conflict and organizations belong together" (p. 13). Given the various disciplines addressing conflict from micro to macro levels of organization (Bar-Tal 2011), many definitions are proposed – for this study we apply the one provided by Rahim (2002) who defines organizational conflict as: "an interactive process manifested in incompatibility, disagreement, or dissonance within or between social entities (i.e. individual, group, organization, etc.)" (p. 207). That conflicts are a normal occurrence in organizational life is now assumed at large, with scholars going as far as claiming that conflicts are "the very essence of what an organization is" (Pondy 1992, p.259). Conflicts are generally considered adversely because of the related negative behaviours and emotions (Eisenhardt and Zbaracki 1992), but recent claims have been made about how extant conflict research has itself contributed to the view that conflict is "negative, a nuisance to be rid of" (Song, Dyer et al. 2006, p.341, Tjosvold 2008). The opposite might be true: a conflict-free environment is not only unrealistic, but has been pointed out as also undesirable (Pondy 1992, Tjosvold 2008). This is especially the case for innovation, a domain of activities that thrives because of competing perspectives and contributions from different organizational actors (Kahn 1996) in a high-pressure environment (Song, Xie et al. 2000). Their diverse "thought worlds", emerging from different trainings and professional backgrounds, are the seed for conflicts - constructive and destructive - because of diverging goals and interpretive schemas, struggling to be

synthesized into a shared solution (Dougherty 1992, Griffin and Hauser 1996, Luca and Atuahene-Gima 2007).

Most studies address the issue at the intragroup level of conflict and how it influences team-level measures of performance like creativity and innovation output (e.g. Jehn 1995, Chen 2006). Only a few studies do so at the intergroup level, looking for example at how social capital and trust (De Clercq, Thongpapanl et al. 2009) or conflict-handling strategies (Song, Dyer et al. 2006) affect organizational-level measures of innovation performance. Irrespective of the level of analysis, scholars have converged on distinct, yet interrelated, categories of conflict, such as, task, relationship and process (Jehn 1995, Amason 1996, Jehn and Mannix 2001). Task conflict is driven by different viewpoints on the content of the task being performed, thus revolving around fact-centered discussions without the generation of strong negative emotions, characteristic of the relationship conflict emerging because of interpersonal incompatibilities, manifested through tensions and animosity (Amason and Sapienza 1997, Jehn and Mannix 2001). Studies claim such strict compartmentalization ought to be fuzzier, as genuine task conflict is "often misattributed as being personal in nature or motive, and thus leads to relationship conflict" (Simons and Peterson 2000, p.108). Jehn (1997) introduced a third type, process conflict, emerging because of disagreements about assignments of duties and resources. This conflict type, too often neglected from studies that favour a pure cognitive versus emotive analysis (Behfar, Mannix et al. 2011), is concerned with the coordination – the "how to" – of the tasks at hand (Jehn and Bendersky 2003). What is agreed upon, is that they might occur simultaneously or at different phases of the same episode, thus providing a dynamic view of the conflict nature (Jehn and Mannix 2001).

So far a question that has driven the discussion on conflict management research is the existence of a "positive" conflict, a tension and disagreement between parties that is mostly functional to the achievement of the desired outcome (Menon, Bharadwaj et al. 1996). Studies explicitly answering the question propose ambivalent results, with Tjosvold (2008) supporting the idea that overall, "conflict can be highly constructive, indeed, essential to team work and organizational effectiveness" (p. 19), while De Dreu (2008) claiming that "on the whole" (p. 15), it is detrimental. The latter view says that studies that propose the existence of positive

conflicts are limited by their consideration of a narrow set of circumstances like high-level of trust as found in innovation teams (De Dreu 2008). The former view points out how it is the management of the conflict that determines how functional it can be, rather than its characteristics, as the majority of the extant research implies, thus critiquing how it has so far failed to address the real drivers of performance (Behfar, Peterson et al. 2008, Tjosvold 2008). Indeed, a bulk of studies including Jehn (1995), Amason (1996), Pelled, Eisenhardt et al. (1999), Jehn and Mannix (2001), De Dreu (2006) and Chen (2006) have all collectively demonstrated how moderate task conflict plays a positive role in team innovation and creativity by stimulating original and divergent perspectives. On the other hand, a relationship conflict would negatively affect it because of its unconstructive emotions and distraction from high-grade knowledge exchanges and decision-making. Nevertheless, as pointed out, few studies address the role of conflict beyond performance measures at team level, and addressed it instead as a trigger for change. Walton and Dutton (1969) assume that such is the case, showing the necessity of top management to adapt responsively to the emergence of conflicts and thus consequently change the organizational context. Indeed, already Strauss (1964) showed how the competitive orientation of conflicts could contribute to the availability of new ideas and challenging established ones, echoed by Leonard-Barton (1995), in which content-driven disagreements of task conflict could be an antidote to core rigidities, forcing the continuous re-assessment of the existing dominant perspectives.

DATA AND METHODS

We entered the Danish company Bang & Olufsen (B&O), a high-end consumer electronics producer, with the aim to inductively investigate a single case (Siggelkow 2007) regarding the relationship between strategy and innovation in situations of major industry shifts with a disruption potential. The messy and complex nature of a strategic renewal process (Floyd and Lane 2000), and the fact that it occurs in a context of social interactions between organizational actors and integrates different levels of analysis (Crossan and Berdrow 2003), make a study following qualitative methods of data collection and analysis ideal to answer our research

question (Kozlowski, Chao et al. 2013, Miles, Huberman et al. 2014). We align with Kaplan (2008) in attempting to understand the company bottom-up starting from the day-to-day activities.

Research Setting

B&O, a Danish manufacturer of high-end consumer electronics based in Struer, is a company that has grown through the continuous creation of iconic products that paired quality design with advanced technology. Yet, internal strategy documents at B&O recognize how the last decade of digital dynamics has led both consumer and employees to question its position and competences. Top-down processes of organizational change to answer such challenges occurred at every strategic turn under the guidance of a new CEO (Cattaneo, Fredericksen et al. 2015). In 2011, the arrival of the new CEO Tue Mantoni and a new top management team triggered another series of organizational and strategic changes aimed at moving a too product-centric B&O towards an international lifestyle brand, supported by a stronger customer orientation and focus on the core capabilities of sound, design and craftsmanship.

The company is geared towards product creation, with three departments that interact on a daily basis throughout the process: R&D, Product management and the Creative department, the latter in charge of design and concept development. They are located in buildings close to each other in the 90-years-old factory premises, yet separated by a walkway. Despite a flat hierarchical structure, the "over the fence" model has permeated the company for decades (Austin and Beyersdorfer 2007), in which a project is passed on sequentially between concept and product developers without much integration. In 2012, to resolve such division of labour, a new "NPD team" was introduced as the cornerstone of the new innovation framework, where senior managers converge as "Leads" from the technology, business and creative departments into a temporary project unit and are held responsible for its development (Cattaneo, Fredericksen et al. 2015).

The projects

Using projects as our unit of analysis simplifies identifying the people involved in such activities rather than relying on our prejudgment of who could be central (Czarniawska 2004). We chose three projects that in the annual report were called "boulder" - the biggest in terms

of investment, potential revenue and brand relevance. These projects had different reasons for initiation, and followed distinct processes of development while still being comparable as they occurred almost concurrently under the supervision of the same management team and strategic incentives. They also all had to conform, for the most part, to the newly restructured innovation process. The "TV" project has been the largest in terms of initial investment, the "Speaker" project the most advanced technologically and the "Audio" project the most explorative. In Figure (1) we show their process timeline with the key time of approval for the gates, where after a first idealization phase (I), Gate 0 (G0) is the time an idea becomes a formal project with budget number, Gate 3 (G3) is the time where concept development ends, and the specifications are frozen so to enter a production phase leading up to market launch (L). We also provide a brief summary of their overall process, that we believe is necessary so to contextualize the rest of our data on conflict and provide background on why they emerged.
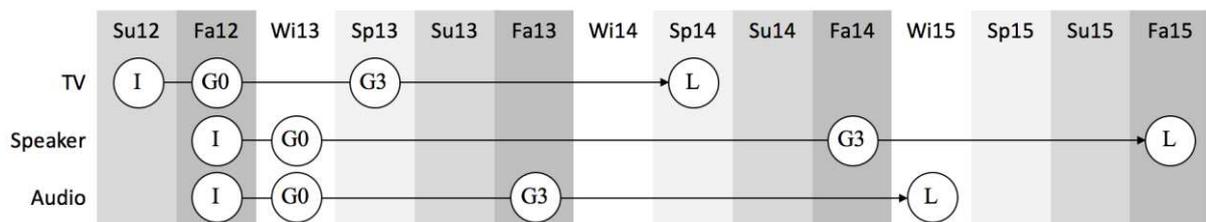

Figure 1 - Projects timelines (I - Initiation, G - Gate, L - Launch)

The TV project. The NPD process followed a standard way of operating at B&O. Its NPD team was very experienced so it initially progressed smoothly. Also, because the degree of innovation for TV was only incremental, they did not have to deal with major uncertainties in terms of market, technology or design. As such there occurred no major disruption until it got to Gate 3, and the product specifications had to be frozen for production. The size of the project proved to be the biggest hurdle, which expressed itself as a gap in the maturity between multiple screens sizes and the stand program, which could not develop at the same pace. Prototypes showed more red flags than expected calling for an emergency "employment" of extra resources (from other projects) to deal with ramp up complexities at the manufacturing plant. The product got launched under pressure so to fit within the fiscal year and to live up to the many events being set up for it in advance, but with the partial knowledge that the product was still partially flawed. It would take a month after its launch to achieve a stable version.

The Speaker project. The need for a speaker converged from many directions, some external to the company like the need to re-establish the brand value with consumers and partners, some internal such as living up to the strategy "acoustics as hero" or the desire of acoustics engineers to prove their value. Despite having turned the normal process upside down – i.e. the engineers having priority in defining the specifications of the speaker, as opposed to the designers – the initial phases ran smoothly. The drive to achieve an amazing speaker got most of the company behind it, also in terms of resources and budget. Nevertheless, some tough questions remained unanswered, like the real "role" of the speaker in a room and the concepts behind the technologies. The first challenge emerged by underestimating how multiple technologies – so far only applied at the lab level - could be integrated into a single workable product. Multiple iterations with prototypes were necessary, raising doubts in top management about its viability. At a later stage, troubles emerged when TV was incurring in an emergency production issue, so it drew many resources away considerably slowing Speaker's development. System integration issues created the highest tensions, and showed how too focused on the stand-alone product the process had progressed, partially neglecting its integration into the wider portfolio of B&O. As production was started in Struer, the implementation phase went fairly as planned, and the product was launched for the company's 90th birthday in November 2015.

The Audio project. The project was started with a skunk work-like set-up in which the CEO mandated an ambitious concept developer and a fresh product manager to initiate a "top secret" audio product with a strict and ambitious deadline. The initial opportunity to connect to their desired selection of external partners was exploited and led the concept development phase to run at fast pace with great promise. However, the need to substantiate the concept with B&O technology led the project to be slowly re-introduced in the company. Part of the R&D organization rejected to commit to the project, mainly because of being asked so late in the process to contribute to a product geared for a new generation of customers, and thus disconnected from what they had been used to developing so far. Clashes were triggered, the most critical related to the choice of the software developer: while the NPD team aimed at collaborating with a young and agile UK-based company, R&D (and thus the one with the

mandate over technology procurement) selected a long-standing partner of B&O based in India based on high-capacity for good value. Prototypes were returned from the Indian software developer with more flaws than expected, triggering a domino effect on the other process steps, now stuck frozen. The product started incurring a "technological debt" as it was never reformatted to fully address the root of this issue and allocated enough time and resources. As projected sales numbers were low (as with every B&O product, being a niche player), it led the supplier of tablet screens to enforce a bulk-sale. As net working capital was being tied up by a large inventory of products not ready for the market because of software shortcomings, it was either launch or risk going bankrupt. Audio was launched with enough confidence, but both dealers and customers criticized it because of the faulty software as soon as it hits the market, despite great appreciation for the concept behind the product.

Data Collection

When starting our fieldwork, we set out to follow the standards for data collection and analysis as pointed out by Gibbert and Ruigrok (2010) and ethnographic techniques (Van Maanen 1988). The principal observer lived close to the factory in Struer, for a total of 40 days in a flat provided by the company, and was allocated an office in the patent office within the R&D department. The days were spent wandering around the company from department to department, engaging in both formal interviews and informally talking with employees through the hallways or by having lunch in the canteen. The feeling of "being in the field" (Van Maanen, 1988) was without any doubt achieved. The researcher was welcomed by any employee to be interviewed about any topic, could observe meetings about innovation activities and NPD projects, and was allowed to walk around the premises unrestricted. Daily field notes were recorded in reporting templates compiled every evening, and analysed throughout the process to keep track of emerging themes and opportunities to extend our inquiry. Besides formal and informal interviews, we collected secondary documents like stage-gate reports for each projects, minutes of management board's gate decisions, plus several presentations and mail exchanges.

Interviews started in June 2014 to get a grasp of the major dynamics in the company, its structure and processes, and to create a network of informants throughout the company through

a snowballing effect. Through 9 first interviews arranged by our internal champion (Senior manager in System Engineering, heavily involved in innovation activities), we secured a solid foothold in the company and reflected for the first time on our initial assumptions. In this first round we inquired generally about the recent market developments, the challenges they posed, what were B&O's role and reactions, what other activities related to innovation would be significant to observe, as well as the interviewee's role in the company and in the informal knowledge flows. A second phase of interviewing started in September 2014 through December 2014, in which more semi-structured interview guidelines were followed. We covered people across functions and organizational levels through internal referral and by proactively approaching the person. Through these 31 interviews we asked about the mechanisms related to B&O's innovation activities and formal NPD processes, became informed with the running NPD projects and their different complexities. We also learned about conflicts and their role for renewal, which emerged especially from questions linked to the tension between different department's logics. The tensions, often described as a "friendly fighting" between the Creative department and R&D, had shaped the most iconic products of the company, but was now creating more challenges as the speed to market did not grant enough time for a synergistic work between the departments. During this time, we could attend meetings about specific NPD projects to highlight and experience some of these inter-group dynamics, albeit not of the projects we later on focused our study on. An additional data collection in Spring 2015 through June 2015 consisted of additional 15 interviews with all members of the NPD teams and top management. These provided detailed information about the process timelines and specific turning points, bottlenecks and major conflicting events. We interviewed some people for the second time with more emphasis on tracing challenges and turning points and to deepen our understanding on topics that emerged in our first interactions. Overall, a total of 55 interviews have been conducted with 35 informants across NPD departments, spanning from operative management, senior management and including the whole top management involved with NPD as shown in Table (1).

Insert Table 1 here

Data analysis

We initiated data analysis throughout the data collection by reviewing daily templates to identify emerging dynamics related to the renewal-innovation relationship. After our second round of interviews, a brief iteration with literature on renewal and innovation showed how extant research was not clear enough to make sense of the observations at B&O. The analysis of data made key role of conflicts in NPD projects explicit, so that we could subsequently inquire more specifically on these inter-group tensions when approaching the last rounds of data collection and thus confirm our initial insights. When data collection concluded we initiated an inductive process of understanding, starting by creating NPD projects' chronologies on an ideation - development - implementation process timeline (Garud, Tuertscher et al. 2013). We used Gate 0 to separate ideation and development, when a project number and a budget are assigned and the initial concept ideation enters its development. Between development and implementation is Gate 3, which correspond to the selection of design and the closing of specifics. The product enters its production phase, make-or-buy decisions are taken, suppliers are contracted, and the investment budget is used to its full extent. We reviewed the chronologies looking for conflicting activities within the project-space, while at the same time scanning interview transcripts from people outside the three NPD teams for additional mention of the same conflict or for hinting at organizational renewal. Through an iterative process, we moved forward in time from events of conflict, as well as backward from those of organizational renewal, and by triangulating between accounts we aimed to generate the basic dynamics that connected the two types of events. Overall we documented 10 cases of conflict. Each conflict was specified in a short case study, in which the roles of the different agents, their motivations and their activities were interpreted through triangulation across interviews, personal field notes and secondary data. We then performed two types of analysis: first we aimed to inductively code the characteristics of conflicts themselves by identifying the reasons for the conflict to emerge as well as how it got resolved at the project level and drawn upon at the organizational level. Through several iterations among the cases, and only eventually with what the literature on conflict proposed, we converged on three characteristics we found could explain the characteristics of each case. Second, we used a process of case

comparison between the 10 cases to identify the components of a process model spanning a project and organizational level. We focused broadly on the consequences and antecedents of each event, so to create clear steps of what became a model of renewal from conflict. We then re-applied our model to the two most dynamic accounts of conflicts – one about system integration in Speaker, one about software development in Audio – to reconfirm the soundness of our model, which we also propose in this study.

FINDINGS

Below we present our results in two sections: first, we introduce our results about the types of conflict that emerged throughout the innovation process, and how these conflicts had consequences beyond their resolution. We then present our process model of conflict leading to organizational renewal.

Conflicts in NPD

We discovered quickly that the cross-functional nature of NPD, as well as the involvement of multiple levels of authority, easily generate different interpretations of past events, present concerns, and future direction. Moreover, financial struggles and the necessity to re-establish the brand for the long-term through the short-term launch of a new generation of innovative products increased the pressure on a process that by nature deals with high uncertainties. This heightened tension leads the NPD process to be a locus of change for the company, where the initial spark for a successful future may ignite, if it finds its way among multiple conflicting dynamics. In Table (2) we present 10 conflicts that emerged from our analysis of the three core projects and their consequences. We first explore the nature of the conflicts and hereafter track the mechanisms that were triggered, generating renewal or failing to do so.

→ Insert Table 2 here

With conflict context we understand a specific relationship between two parties that can be identified as the root of disagreement or incompatibility, and that disrupted the normal flow of operations and decision-making. We find that each of these conflicts has a different degree of

severity to the underlying reasons why it emerges in the first place. While the literature has presented different typologies of conflicts as different events, we find how each conflict displays a different composition of three conflict components – task, jurisdiction, and relationship – that we inductively redefine below in such a perspective. With conflict resolution, we understand the means through which a situation of conflict is brought back to stability in which all the parties have accepted one alternative, yet not necessarily the one diverging from the status quo. We find in this case two drivers for the resolution, which we call "levers", intended as the arguments used to achieve such resolved stability. Furthermore, we investigate the subsequent consequences at two levels, namely project and organizational.

Typologies of conflict components

Task-based conflicts. Different experiences in a particular knowledge domain and professional backgrounds lead to different interpretations of framing the problem and envisioning solutions that might be in conflict with each other. Simply put, people will debate on *what* is to be done. This is the often-described "clash of ideas" that is functional to a synthesis of perspectives, and thus celebrated for its contribution to innovation. In the case of #3 acoustics engineers are granted active participation in the development of Speaker's "brief 0", the document created by the NPD Business Lead and ratified by the Innovation Management Board for the allocation of a project number and budget. This was the first time in a decade that they had done so, but their enthusiasm still has to fit into NPD Business Lead's framing:

> I had already some ideas about [Speaker], what it should be - some of the acoustic guys had some different ideas. The ideas were not completely consolidated between us [...] so when someone said something, it was very much challenged. There was a very hectic debate in the beginning (...) about what exactly the speaker is like.

Another example between hierarchical levels is case #5, when Speaker's NPD Technology Lead points out how Struer, B&O's headquarters in Denmark, would be the ideal production location as opposed to the current plants in Czech Republic. Suppliers for many components are less than 100km away from Struer, and the project's complexity calls for frequent interactions between R&D and the production facility, making Struer the better candidate.

However, his boss never doubts the company strategy that envisioned the relocation of all production activities to the Czech plant:

> *"I made a proposal saying okay, this is the cost in Denmark, this is the cost in Cz*ech Republic [...] I sent it and then they thought it was a kind of provocative e-mail to send. I was called by my boss and he said, "Why did you do it? Can we agree it was just a joke?"

Eventually, financial and production arguments showed that the production in Struer made sense for the development of Speaker. Contrary to the relocation strategy, a new production facility was then re-opened in Struer only for Speaker.

Jurisdiction-based conflict. Different roles in the organizational structure mean different authority levels and group affiliations, characterized by an agenda and a mandate. As these spans of influence end up overlapping with someone else's, conflict will emerge. Simply put, people disagree on who should and can decide on the matter. In #8, System engineers were concerned that the product Brief, the basic document to be approved at Gate 0 and to be passed on to R&D's development teams, was not crafted with this transition in mind. The product elements defined in early phases of the process were fine in terms of conceptualization, but not in terms of maturity for development's feasibility. System engineers thus created a tool to assess such maturity, and point out what was not ideal, to enable a smoother transition. Yet, NPD teams saw this as an intrusion in their domain of influence and thus resisted, as explained by Technology Specialist #2:

> The maturity matrix is, in my view, a reaction to a disabled process. Concept and Business, they have to mandate to accommodate what they want. [They think] there is a Brief, *[R&D]'ll execute. Okay, put that Brief into a [R&D]'s development team and everybody* gets confused, right? A lot of energy is being used for nothing. Because the development team is very good at development, they are highly professional, and they can do that, but they can't do concept development. Things are divergent, so the maturity assessment is a *reaction to that. (...) People were reluctant to let us* do that, because they thought that some of their responsibilities were taken away from them.

Relationship-based conflict. Emotive responses cause conflicts in which two parties disagree or challenge each other to escalate beyond those of jurisdiction or task. A clear example is case #6, where the re-introduction of a skunk work project into the company's processes causes the emotional rejection of a larger group. They mistrust a concept they believed has been developed outside the regular process because of lack of trust in the company's capabilities, as "they even changed the locks for some rooms in Lyngby because it should be kept very secret" as Audio's

NPD Technology Lead remembers right before he joined the NPD team himself. The company becomes aware of the product partly because Technology Specialist #1 is asked by the NPD team to support the project with his knowledge of product architecture. As one of the most qualified and connected people in the company, he prioritizes involving people within B&O. The result is a project being developed through an increasingly more standard NPD set-up, rather than through many new external partnerships as originally intended by NPD Creative Lead. Audio's NPD Technology Lead remembers some of the strongest reactions:

> *"One very strong guy in the hardware's team, he was very negative. He came to me several* times saying he wanted to get off this crazy project, he cannot back it up. For that guy, I have even received complaints from creative managers that he has been insulting them - it's just a lot of personal distrust and lack of motivation basically. Even if it's good B&O *guys who have been willing to fight for B&O, this was just too much."*

Conflict resolution

Resolution occurred when the parties involved in a conflict settled on a solution, may it be a compromise or the choice of one of the alternatives. Resolution does not necessarily occur however, and a conflict can extend itself throughout the end of the project to the launch of the project onto the market. Where the resolution occurred, we found two drivers that players used to settle the conflict, which we call levers, and are characterized by a stronger task or jurisdiction component. With levers we define a set of arguments, negotiations and key decisions that manage to bring the parties to a settlement. With a task-lever, it is arguments about the superior value of a proposed product feature (i.e. the promise of UHD technology for TV in #1, the synergistic value of multiple insights in the development of Speaker's first Brief in #3) or process alternative (i.e. the effectiveness potential of relocating Speaker production to Denmark in #5 or its underlying promise after it was stopped out of a disappointing progress in #4) that prove more convincing to the other course of action. On the other hand, a jurisdiction-lever focuses on who has the right to decide because of an official mandate or is able to convince the other party it ought to be so (i.e. the overconfidence in the role of Speaker NPD's Tech Leader when refusing the pressure of his boss and system engineers in #8 or the threat of removing all resources from the Audio project by the Head of R&D if Audio's NPD Creative Lead questioned his mandate in #10).

Project-level consequences

The conflict resolution resonates throughout the project, leading to consequences that are perceived as either positive or negative. We emphasize the perception of such performance as such consequences have influence before and beyond any measurable performance of product success after the market launch, even though it might contribute to it. When negative, process delays as extensions of stage-gate approval, rising costs of development, misuse of resources, disappointing quality or simply the feeling of having missed out on an opportunity, are all part of such perception. On the other hand, a positive performance sees the commitment to work rise after the resolution of the conflict, as energized through a successful resolution that has left the parties satisfied. Improved product quality, increased engagement and the meeting of deadlines and budgets all contribute to the perception of being on the correct path of action, despite no clear measurable performance from an upcoming market launch.

Organizational-level consequences

We found that the consequences of the conflict resolution, combined with the subsequent performance, led in certain cases to changes at the organizational level. Such changes have an influence on all the upcoming projects by affecting the system and processes. Moreover, they represent an underlying strategic vision of the company that is more or less incremental with respect to the current one, depending on the magnitude of the change. We have examples of changes that represent a shift towards a more dynamic and agile software strategy, while at the same time also sustaining a shift in regaining recognition for a system offering of products. Following the definition by Agarwal and Helfat (2009), a type of change that restore strength and vigour by replacing decayed elements, we consider such changes at the organizational level as instances of organizational renewal. Not all conflicts led to organizational renewal though, and we found that the majority of the conflict resolutions had consequences that remained at the project level. We found three key reasons for why this is the case. The first is the emphasis on one conflict component, be it task, jurisdiction, or relationship, that had however few implications for the others. An example is the case in which the whole R&D organization opposed emotionally the re-introduction of Audio into the normal innovation process (#6), thus driving the conflict mainly on relationship-based arguments. Another example is the "clash of ideas" in the development of the first Audio Brief, in which acoustics engineers convened with

NPD's Business Lead to synthesize their insights into the document ready for approval (#3), thus primarily driving the conflict via functional task-based arguments as the jurisdictional roles within the parties were accepted. This example is also valid for our second point, namely the fact that some conflict and related resolution are idiosyncratic with the project itself, and would thus not re-emerge if not for its unique context. The involvement of the acoustic engineers was functional to a technology-driven speaker, of which the core feature was the advanced technology developed by them over multiple years for the new hero product. The third cause for a project not to develop into a potential organizational-level change is the lack of awareness of said detrimental dynamic. As with case #7, no party was clearly aware of the causes leading to such tension and the recurring "technical debt", so that it could not be resolved in the first place. Lack of openness, passing on doubtful information, and over-confidence, masks the dysfunctional dynamic and hinder its resolution. However, when certain characteristics on the other end of the spectrum to the ones described so far are in place, the conflict can generate organizational renewal, and these are the dynamics on which, we base our theoretical model.

A model of organizational renewal through conflicts in NPD

We present a model of organizational renewal triggered by instances of conflicts in NPD projects, as shown in Figure (1). We find conflict characteristics that are necessary for such multi-level process to happen, as well as two mechanisms through which an initial conflict can lead to such renewal. These two we explore in detail in the following section of this paper.
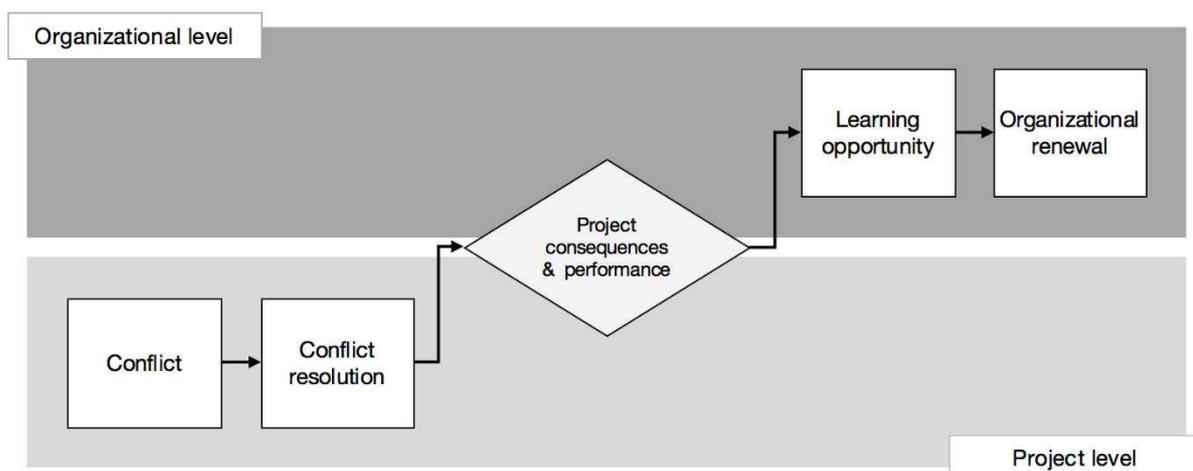

Figure 2 - A model of organizational renewal triggered by conflicts in innovation

We found that the key characteristic for conflict which leads to organizational renewal is a misalignment between demands voiced with task and jurisdiction arguments. In our cases both conflict components had severe implications, and the proposed task-driven solution was at odds with that in the name of jurisdiction, leading therefore to a tension that escalated often in the most acute conflicts we could observe. Simply put it is a situation that, with hindsight, could be described as "those who knew better had no power to take the decision". Despite involving both task and jurisdiction arguments, the conflict is resolved only through either a task lever or jurisdiction lever. The conflict resolution has consequences at the project level, which are associated with either a positive or negative perceived performance. This outcome opens a window for learning about a systemic or procedural malfunctioning that would have implications for future projects if left unrepaired. Also, the parties first involved in the conflict dynamics become vocal and bold in their request to reconsider what happened in light of the perceived performance, so that top management becomes aware of the dynamics that led to such (un)satisfying performance and can take action in that regard. The learning from this process creates the basis for an organization-wide type of renewal, in which what the conflict exposed at the project level is resolved at a higher level and with future implications that go beyond the scope of the project in which it originated. The changes that we observed were in the form of re-aligned task and jurisdiction demands, so that those who had the functional knowledge and better insights in the conflict, proven by the subsequent performance, received jurisdictional power to influence upcoming and comparable decisions. Such incremental changes were part of a sustained and broader strategic agenda of renewal that gained momentum as a bottom-up process. Such changes at the organizational level gained broad support as they emerged from objective fallacies or best practices that people in the organization had themselves experienced. Through the analysis of our cases, we identified two different mechanisms of organizational renewal triggered by conflicts in innovation, which we explore through a detailed account of cases #2 and #10.

The Reinforcing Mechanism

The reinforcing mechanism is based on the elevation of a best practice that occurred at the project level to the organizational level. First, the misalignment between task and jurisdiction's

arguments is resolved through a task-lever and through the intervention of top management to override the jurisdiction of one of the parties. Because such paths of action led to a positive perceived performance, the learning process indicates the benefits in reinforcing the project-level solution to the system's malfunctioning that led to the conflict in the first place. The renewal of processes and systems occurs then in allocating official jurisdiction to the parties that first provided the task-driven arguments that led to the positive performance. The model with the reinforcing mechanism is presented in Figure (2). We use the case of #2 to illustrate such process through all the different phases.
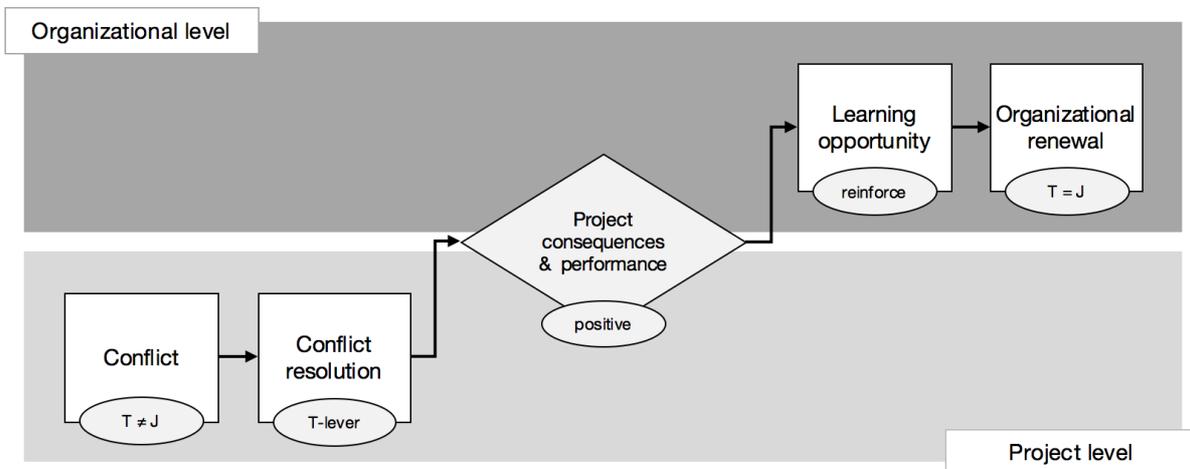
Figure 3 - Reinforcing mechanism of renewal.
Circles represent mechanism's unique features.

DISCUSSION AND CONCLUSION

In our study we address the problem of conflicts emerging throughout the innovation process, further heightened by a context of dynamic environment and pressure for the company to remain relevant in the industry by striving for an improved strategic fit. We found that these conflicts, despite known short-term negative consequences related to damaging emotions and inefficiencies, have the potential, under certain circumstances, to become the trigger for organizational renewal towards fit, either by making explicit processes or identifying parts of the system that need to be altered. We discuss our contribution to theory by addressing the distinct literature of conflict management and organizational renewal, as well as their overlapping arguments. We discuss the implications for the respective literature of conflict management and strategic renewal, and then discuss our result for a joint domain of inquiry.

Implications for conflict management

We align with studies in conflict management literature that advocate an approach to conflict driven by the potential of learning, aiming to minimize its destructive consequences while benefitting from the constructive ones (Rahim 2002, Tjosvold 2008). In our study this potential became apparent by considering consequences that go beyond the immediate conflict resolution, and tracked its influence for months beyond the point at which we considered there to be a settlement between parties, thus providing a more longitudinal perspective as called for by De Dreu (2008). We noted that the benefits were not always directly apparent at the project level where the conflict originated, but occurred rather indirectly once the organization renewed to improve the structure and processes around such project level. We believe that the context of innovation proved to be crucial for the exploration of such dynamic. First, activities in innovation have a natural occurrence of conflicting events because of its inter-departmental nature. Second, the high pressure individuals are exposed to deliver novel solutions to the market often leads to escalations in the individual reactions. Third, individuals close to innovation are the first to be aware of evolving dynamics in the market and in technology, yet are still embedded in a rigid organizational system, creating a permeating sense of ambiguity. This ambiguity triggers a high degree of variation in interpretation about how such uncertainty should be dealt with, leading to tensions across innovation players. Also, we confirmed the importance of the process conflict, defined by Jehn (1997) as "how task accomplishment should proceed in the work unit, who's responsible for what, and how things should be delegated" (p. 540), albeit as a specific facet focusing on its jurisdictional component. While the original definition generally identifies dynamics related to the how to of accomplishing a task (Behfar, Mannix et al. 2011), what emerged to be crucial in our case was who decides, as this could be contraposed to who knows best in terms of task-related knowledge. This relationship, when skewed, became the key event that started the process of renewal. Behfar, Peterson et al. (2008), even though addressing intragroup dynamics, pointed out how the management of conflict is more critical than identifying the type of conflict, and that assigning work to members with the relevant task expertise rather than by default for affiliation or

convenience is a valuable way to think about it. We believe that the context of inter-group dynamics, rather than intra-group, is even more revelatory to why this relationship is as relevant as we found it. Studies involving people with multiple affiliations and professions have hinted at similar tensions questioning the status quo, for example the one created by the introduction of a new technology that altered the authority of institutionalized roles (Barley 1986) or the daily use of shared artefacts by different groups challenging the formal jurisdiction of engineers (Bechky 2003). As a counter-example, the case of Zbaracki and Bergen (2010) shows how the conflicting dynamic threatened the stability of the routine, yet it did not eventually renew it as the major component of conflict was about the content of the decision, rather than how the decision was made.

Implications for organizational renewal process

The change we identified with organizational renewal is for the organization to gradually shift towards becoming more system-driven and more software-driven. Both directions justified by the recent industry dynamics as an improved strategic fit. We do not claim B&O is now fully driven by such values and competences, or that these patterns would grant a complete transition to other companies, but the processes we have identified point to them as first clear steps in such a direction. The changes we observed at the organizational level (e.g. the creation of a NPD System Lead, or the regeneration of the whole software development competence) are steps on the incremental "journey" described by Baden-Fuller and Volberda (1997), and emerging from a situation of permanent instability at the organizational level. At the same time, such changes emerged from episodic events – conflicts – that were triggered by an accumulated amount of stress in the organization struggling with an inertial system of core rigidities (Huff, Huff et al. 1992, Leonard-Barton 1992). Considering the categorization of renewal's different perspectives by Albert, Kreutzer et al. (2015) (inertial versus adaptive) and Plowman, Baker et al. (2007) (continuous versus episodic, converging versus radical), we find no conclusive answer to such a paradox. Indeed, such a paradox between views including periods of necessary stability or the other claiming continuous instability is not only at the theoretical level, but also pragmatic, as Baden-Fuller and Volberda (1997) point out: "stability is necessary for internal cohesion and to prevent self-destruction. Renewal is necessary because

most organizations cannot innovate as fast as the market requires" (p. 115). We suggest that the multiple levels represented in our model might indeed create an overlap of different renewal natures where episodic renewal processes at lowers levels (i.e. projects) sustain a continuous one at the organizational level. The organizational level is connected to the project level through a perception of performance that reaches out beyond the project scope to other organizational actors, among which are the top management, who are presented thus with a learning opportunity, as expressed by Crossan and Berdrow (2003). Top management uses the antecedent dynamics as both a signal and a justification for agency at the organizational level, a phenomena that is aligned with the "mindful interventions" to elevate successful experiments into new capabilities by Salvato (2009), the competence definition process by Floyd and Lane (2000), making a specific routine more widespread in its use (Baden-Fuller and Volberda 1997) and the original autonomous strategic process by Burgelman (1983, 1991). Similar dynamics have been observed in the routine change literature as well, as with the retention of performative aspects into the ostensive aspects of a routine (Feldman and Pentland 2003), albeit not in terms of a process that spans multiple levels. To explain the general process of renewal from "small changes", we find the work by Plowman, Baker et al. (2007) insightful: the authors present an account of how a small activity triggered the unintentional escalation to radical organizational change through the amplification effect of feedback actions. They define positive feedback activities that amplify deviations, while negative feedback ones highlight the need for replacement and act as a force to re-stabilize the system. While producing a different type of change and having been triggered by different activities, we find alignment between these findings and our mechanisms of reinforcing and regenerating, and are confident in the mutual reinforcement.

Implications for understanding conflicts as triggers for renewal

The role of conflict as a trigger for renewal is different from the "successful experiments" by Salvato (2009). This is a highly complementary perspective on the antecedents to strategic renewal, which have so far centred around how to elevate good ideas to the organizational level (Burgelman 1983, Salvato 2009). The dynamics we have identified have the purpose of not

only fixing a problem at the project level, but of preventing it from happening again for upcoming projects. Thus, it is less about adding new capabilities; rather it is about reinforcing what is good already within the company and regenerating what is malfunctioning. We do not claim that the traditional sort of corporate entrepreneurship and autonomous strategic processes were not occurring at B&O, in fact we did encounter them in multiple forms. Yet the current identity threat and overall uncertainty about the company's direction perceived by B&O's employees made a renewal through conflicts more relevant by heightening the underlying tensions and transforming conflicts in the innovation domain into strong signals for change. Similarly, Kaplan and Orlikowski (2013) showed how "breakdowns" – caused by conflicting interpretations due to uncertainties related to business, market and environment – can on one hand impede progress, but at the same time trigger the different creative interpretations necessary for change. Also Plowman, Baker et al. (2007) indicated how conflicts between interacting activities could lead to the necessary destabilization of the system, and thus encourage a mutual exploration of alternatives and compromises to resolve the disrupted information and resource flows. In our case, the necessary condition for conflict to become a trigger was, besides for the object of the conflict to have implications for future projects, a clear misalignment between the demands voiced with task and jurisdiction arguments by two opposing parties. We found that conflicts that were as acute as others but lacked this tension did not lead to a change at the organizational level. The reason is that through this misalignment, confirmed by the following performance, a sign of a structural problem emerges that does not allow the best problem-solving and decision-making, and can thus be changed through managerial action. Conflicts like the one mentioned by Zbaracki and Bergen (2010), when resolved, led to a major price adjustment, yet "to look at the organization before and after, nothing would seem different" (p. 967). Task-related issues are also easier to resolve within the existing system, and thus within the project-space, by negotiating and reaching a compromise. Jurisdiction-related issues imply a confrontation on the power level that could easily escalate beyond a fact-based negotiation like the idea-clash between acoustic engineers and Speaker's NPD Business lead was. In summary, the combination of a misalignment

between task and jurisdiction-based arguments and specific consequences at the project-level are necessary to trigger the mechanism of renewal.

Implications for practice

With our study, we do not advocate for a process of change through conflicts. Rather, as they are omnipresent in the organizations, managers should use them as an opportunity to drive and justify organizational renewal. Even though we know of the benefits of constructive conflicts, like increased intragroup performance as the result of moderate task conflict, we showed how even more acute and fairly destructive ones can become powerful signals for change. Top managers should provide an environment where conflicts can emerge, but then also monitor them as signals of a rising stress because of an organizational system that is not exploiting the shifts in the industry. Indeed, we have confirmed that the innovation process is a key domain for such dynamic as people that are forced to take changes in the environment as an input for the development of a new product, will also be the ones that more likely will clash with a system that has not yet adapted to such new landscape.

CONCLUSION

Understanding organizational renewal means understanding the practices that produce it (Dougherty 1992). As "the need for renewal is never ending" (Huff, Huff et al. 1992, p.55), being able to achieve and maintain a strategic fit with a changing environment is a matter of survival for the majority of established companies. We showed how inter-group conflicts, common to the practice of innovation, can become the trigger for a renewal process if the misalignment between task and jurisdictional demands is properly managed through a learning process. Because of its multilevel nature, an episodic bottom-up process of renewal became part of, and sustained, the continuous process at the organizational level. We propose two mechanisms of renewal that occur with both a positive and negative perception of project performance, in a way that best practices are reinforced at the organizational level or a malfunctioning system is regenerated.

REFERENCES

Agarwal, R. and C. E. Helfat (2009). "Strategic Renewal of Organizations." Organization Science **20**(2): 281-293.

Albert, D., M. Kreutzer and C. Lechner (2015). "Resolving the paradox of interdependency and strategic renewal in activity systems." Academy of Management Review **40**(2): 210-234.

Amason, A. C. (1996). "Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams." Academy of management journal **39**(1): 123-148.

Amason, A. C. and H. J. Sapienza (1997). "The effects of top management team size and interaction norms on cognitive and affective conflict." Journal of management **23**(4): 495-516.

Austin, R. D. and D. Beyersdorfer (2007). "Bang & Olufsen: Design Driven Innovation." Harvard Business School Case Study **9-607-016**.

Baden-Fuller, C. and H. W. Volberda (1997). "Strategic Renewal." International Studies of Management & Organization **27**(2): 95-120.

Bar-Tal, D. (2011). Intergroup conflicts and their resolution: A social psychological perspective, Psychology Press.

Barley, S. R. (1986). "Technology As An Occasion For Structuring - Evidence From Observations Of Ct Scanners And The Social-Order Of Radiology Departments." Administrative Science Quarterly **31**(1): 78-108.

Bechky, B. A. (2003). "Object Lessons: Workplace Artifacts as Representations of Occupational Jurisdiction1." American Journal of Sociology **109**(3): 720-752.

Behfar, K. J., E. A. Mannix, R. S. Peterson and W. M. Trochim (2011). "Conflict in Small Groups: The Meaning and Consequences of Process Conflict." Small Group Research **42**(2): 127-176.

Behfar, K. J., R. S. Peterson, E. A. Mannix and W. M. K. Trochim (2008). "The critical role of conflict resolution in teams: A close look at the links between conflict type, conflict management strategies, and team outcomes." Journal of Applied Psychology **93**(1): 170-188.

Birkinshaw, J. and K. Gupta (2013). "Clarifying the distinctive contribution of ambidexterity to the field of organization studies." The Academy of Management Perspectives **27**(4): 287-298.

Brown, S. L. and K. M. Eisenhardt (1997). "The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations." Administrative Science Quarterly **42**(1): 1-34.

Burgelman, R. A. (1983). "A model of the interaction of strategic behavior, corporate context, and the concept of strategy." Academy of management Review **8**(1): 61-70.

Burgelman, R. A. (1983). "A Process Model of Internal Corporate Venturing in the Diversified Major Firm." Administrative Science Quarterly **28**(2): 223-244.

Burgelman, R. A. (1991). "Intraorganizational Ecology of Strategy Making and Organizational Adaptation: Theory and Field Research." Organization Science **2**(3): 239-262.

Burgelman, R. A. (1994). "Fading Memories - a Process Theory of Strategic Business Exit in Dynamic Environments." Administrative Science Quarterly **39**(1): 24-56.

Cattaneo, G., L. Fredericksen and A. Carugati (2015). Modulating Strategic Renewal Through Innovation and Organizational Design. Strategic Innovation, The Definitive Guide to Outlier Strategies. V. L., G. M., B. N. L., P. M. and P. I., Pearson / Financial Times Press**:** 223-237.

Chen, M. H. (2006). "Understanding the benefits and detriments of conflict on team creativity process." Creativity and innovation management **15**(1): 105-116.

Crossan, M. M. and I. Berdrow (2003). "Organizational learning and strategic renewal." Strategic Management Journal **24**(11): 1087-1105.

Czarniawska, B. (2004). "On time, space, and action nets." Organization **11**(6): 773-791.

De Clercq, D., N. Thongpapanl and D. Dimov (2009). "When good conflict gets better and bad conflict becomes worse: the role of social capital in the conflict–innovation relationship." Journal of the Academy of Marketing Science **37**(3): 283-297.

De Dreu, C. K. (2006). "When too little or too much hurts: Evidence for a curvilinear relationship between task conflict and innovation in teams." Journal of Management **32**(1): 83-107.

De Dreu, C. K. (2008). "The virtue and vice of workplace conflict: Food for (pessimistic) thought." Journal of Organizational Behavior **29**(1): 5.

Dougherty, D. (1992). "Interpretive Barriers to Successful Product Innovation in Large Firms." Organization Science **3**(2): 179-202.

Dougherty, D. (1992). "A Practice-Centered Model of Organizational Renewal through Product Innovation." Strategic Management Journal **13**: 77-92.

Eisenhardt, K. M. and M. J. Zbaracki (1992). "Strategic decision making." Strategic management journal **13**(S2): 17-37.

Feldman, M. S. and B. T. Pentland (2003). "Reconceptualizing organizational routines as a source of flexibility and change." Administrative science quarterly **48**(1): 94-118.

Flier, B., F. A. Van Den Bosch and H. W. Volberda (2003). "Co- evolution in Strategic Renewal Behaviour of British, Dutch and French Financial Incumbents: Interaction of Environmental Selection, Institutional Effects and Managerial Intentionality." Journal of Management Studies **40**(8): 2163-2187.

Garud, R., P. Tuertscher and A. H. Van De Ven (2013). "Perspectives on Innovation Processes." Academy of Management Annals **7**(1): 775-819.

Greenwood, R. and C. R. Hinings (1996). "Understanding radical organizational change: Bringing together the old and the new institutionalism." Academy of Management Review **21**(4): 1022-1054.

Griffin, A. and J. R. Hauser (1996). "Integrating R&D and marketing: a review and analysis of the literature." Journal of product innovation management **13**(3): 191-215.

Huff, J. O., A. S. Huff and H. Thomas (1992). "Strategic Renewal and the Interaction of Cumulative Stress and Inertia." Strategic Management Journal **13**: 55-75.

Jehn, K. A. (1995). "A multimethod examination of the benefits and detriments of intragroup conflict." Administrative science quarterly: 256-282.

Jehn, K. A. (1997). "A qualitative analysis of conflict types and dimensions in organizational groups." Administrative science quarterly: 530-557.

Jehn, K. A. and C. Bendersky (2003). "Intragroup conflict in organizations: A contingency perspective on the conflict-outcome relationship." Research in organizational behavior **25**: 187-242.

Jehn, K. A. and E. A. Mannix (2001). "The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance." Academy of management journal **44**(2): 238-251.

Kahn, K. B. (1996). "Interdepartmental integration: a definition with implications for product development performance." Journal of product innovation management **13**(2): 137-151.

Kaplan, S. (2008). "Framing Contests: Strategy Making Under Uncertainty." Organization Science **19**(5): 729-752.

Kaplan, S. and W. J. Orlikowski (2013). "Temporal Work in Strategy Making." Organization Science **24**(4): 965-995.

Kozlowski, S. W. J., G. T. Chao, J. A. Grand, M. T. Braun and G. Kuljanin (2013). "Advancing Multilevel Research Design: Capturing the Dynamics of Emergence." Organizational Research Methods **16**(4): 581-615.

Leonard-Barton, D. (1992). "Core Capabilities And Core Rigidities - A Paradox In Managing New Product Development." Strategic Management Journal **13**: 111-125.

Leonard-Barton, D. (1995). "Wellspring of knowledge: building and sustaining the sources of innovation." Harvard Business School Press, Boston.

Luca, L. M. D. and K. Atuahene-Gima (2007). "Market knowledge dimensions and cross-functional collaboration: Examining the different routes to product innovation performance." Journal of Marketing **71**(1): 95-112.

Menon, A., S. G. Bharadwaj and R. Howell (1996). "The quality and effectiveness of marketing strategy: Effects of functional and dysfunctional conflict in intraorganizational relationships." Journal of the Academy of Marketing Science **24**(4): 299-313.

Miles, M. B., A. M. Huberman and J. Saldaña (2014). Qualitative data analysis : a methods sourcebook. Thousand Oaks, Califorinia, SAGE Publications, Inc.

Pelled, L. H., K. M. Eisenhardt and K. R. Xin (1999). "Exploring the black box: An analysis of work group diversity, conflict and performance." Administrative science quarterly **44**(1): 1-28.

Plowman, D. A., L. T. Baker, T. E. Beck, M. Kulkarni, S. T. Solansky and D. V. Travis (2007). "Radical change accidentally: The emergence and amplification of small change." Academy of Management Journal **50**(3): 515-543.

Pondy, L. R. (1992). "Reflections on organizational conflict." Journal of Organizational Behavior (1986-1998) **13**(3): 257.

Rahim, M. A. (2002). "Toward a theory of managing organizational conflict." International journal of conflict management **13**(3): 206-235.

Salvato, C. (2009). "Capabilities Unveiled: The Role of Ordinary Activities in the Evolution of Product Development Processes." Organization Science **20**(2): 384-409.

Siggelkow, N. (2007). "Persuasion with case studies." Academy of Management Journal **50**(1): 20-24.

Simons, T. L. and R. S. Peterson (2000). "Task conflict and relationship conflict in top management teams: the pivotal role of intragroup trust." Journal of applied psychology **85**(1): 102.

Song, M., B. Dyer and R. J. Thieme (2006). "Conflict management and innovation performance: An integrated contingency perspective." Journal of the Academy of Marketing Science **34**(3): 341-356.

Song, X. M., J. Xie and B. Dyer (2000). "Antecedents and consequences of marketing managers' conflict-handling behaviors." Journal of Marketing **64**(1): 50-66.

Strauss, G. (1964). "Work-flow frictions, interfunctional rivalry, and professionalism: A case study of purchasing agents." Human Organization **23**(2): 137-149.

Tjosvold, D. (2008). "The conflict-positive organization: it depends upon us." Journal of Organizational Behavior **29**(1): 19-28.

Tjosvold, D., H. F. Sun and P. Wan (2005). "Effects of openness, problem solving, and blaming on learning: An experiment in China." The Journal of social psychology **145**(6): 629-644.

Tripsas, M. (2009). "Technology, Identity, and Inertia Through the Lens of "The Digital Photography Company"." Organization Science **20**(2): 441-460.

Tripsas, M. and G. Gavetti (2000). "Capabilities, cognition, and inertia: Evidence from digital imaging." Strategic Management Journal **21**(10-11): 1147-1161.

Tushman, M. L., W. H. Newman and E. Romanelli (1986). "Convergence and Upheaval - Managing the Unsteady Pace of Organizational Evolution." California Management Review **29**(1): 29-44.

Volberda, H. W., C. Baden-Fuller and F. A. Van Den Bosch (2001). "Mastering strategic renewal: Mobilising renewal journeys in multi-unit firms." Long Range Planning **34**(2): 159-178.

Vuori, T. O. and Q. N. Huy (2015). "Distributed Attention and Shared Emotions in the Innovation Process: How Nokia Lost the Smartphone Battle." Administrative Science Quarterly.

Walton, R. E. and J. M. Dutton (1969). "The Management of Interdepartmental Conflict: A Model and Review." Administrative Science Quarterly **14**(1): 73-84.

Zbaracki, M. J. and M. Bergen (2010). "When truces collapse: A longitudinal study of price-adjustment routines." Organization Science **21**(5): 955-972.

Table 1 - Interview report

Organizational members interviewed

Managerial level	Organization	Position	Specific role for NPD project	Number of interviews
Top management				
		CEO		1x
		COO		2x
	R&D	Head of R&D		1x
	Product mgmt.	Head of Product mgmt.		2x
	Creative	Head of Creative		1x
			Total	**7**
Middle management				
	R&D	Category Manager Procurement		1x
	R&D	Head of System and Cloud Architecture		1x
	R&D	Head of Research		2x
	R&D	Purchasing manager		1x
	R&D	Senior Project Development Manager	Technology Lead for Audio (late)	1x
	R&D	Senior Manager Design and Technology		1x
	R&D	Senior Manager Screens & Displays		1x
	R&D	Senior Manager R&D #1	Technology Lead for Speaker	2x
	R&D	Senior Manager R&D #2	Technology Lead for TV	1x
	R&D	Senior Manager System Engineering		5x
			Total	16
	Product mgmt.	Directors, Category Audio	Business Lead for Audio	1x
	Product mgmt.	Director, Category Speaker	Business Lead for Speaker	1x
	Product mgmt.	Global Product manager	Technology Lead for Audio (early)	2x
	Product mgmt.	Head of Program Management Office		2x
	Product mgmt.	Senior Manager Custom Installations		1x
			Total	7
	Creative	Concept developer	Creative Lead for TV	1x
	Creative	Director, Global Consumer Marketing		1x
	Creative	Senior Manager, Sound Concept	Creative Lead for Speaker	2x
	Creative	Senior Manager, UX Concept	Creative Lead for Audio	2x
	Creative	Senior Scoping Manager		4x
	Creative	Senior Manager, Brand & Consumer Insights		1x
			Total	**11**
Operative management				
	R&D	Corporate Patent manager		1x
	R&D	Technology Specialist #1		4x
	R&D	Technology Specialist #2		1x
	R&D	Technology Specialist #3		1x
	R&D	Tonmeister		2x
			Total	9
	Product mgmt.	Senior Marketing Project Manager		1x
	Product mgmt.	Product manager	Business Lead for TV	1x
			Total	2
	Creative	PR & Event Consultant		1x
	Creative	UX Specialist		1x
			Total	2
			Total of interviews	**55**

Table 2 – Inter-group conflicts in innovation projects

	Project	Who vs. who	Conflict context	Severity of conflict components	Conflict resolution	Project consequences	Organizational consequences
#1	TV	Heads of Product Mgmt. and R&D Vs. R&D organization	Top mgmt. decides UHD technology will be used instead of current HD. R&D organization is upset and feels mistreated, as previous weeks of work became worthless. Complaints reach CEO about mistreatment from employee's representative	Task: HIGH Jurisdiction: LOW Relationship: HIGH	Task-lever Feasibility study shows the benefits of switching to UHD, NPD's Tech Lead motivates R&D organization to work on the new technology	Performance: positive People eventually align and commit to work	-
#2	Speaker & TV	System engineers Vs. NPD Teams and Head of R&D	System engineers believe the integration of the two products is poor in light of a brand's system promise, yet lack the mandate to enforce any decision. Respective NPD teams are less concerned because of perceived different target customers, and lack the mandate to enforce anything on other product categories. Head of R&D does not intend to add additional complexities to the two projects, so decides not to act on the improved integration.	Task: HIGH Jurisdiction: HIGH Relationship: MEDIUM	Task-lever System engineers voice their concerns to COO. He pushes for a system-offering, key for the core customers. He forces the integration improvements despite the additional delay and costs.	Performance: positive Improvements in both products are implemented, and despite not being quantifiable, the benefits of a system offer are perceived.	COO creates the position of NPD System Lead for future NPD projects so to bridge across product categories, with the people who first expressed their concerns and a newly appointed Head of System Architecture reporting directly to the COO
#3	Speaker	Acoustics engineers Vs. NPT Business Lead	Acoustics engineers are given more legitimacy for the tech-first speaker and vocally debate with NPD Business Lead in charge of developing the first product brief about the speaker's features	Task: HIGH Jurisdiction: MEDIUM Relationship: LOW	Task-lever "Idea clash" results in enough alignment, and a product brief is created by integrating the perspectives of both parties	Performance: positive The product brief is approved and acoustics engineers are further engaged in the project development much earlier as compared to the standard approach	-
#4	Speaker	Top mgmt. Vs. Acoustics Engineers & NPD team	Top mgmt. stops product development as it is exceeding the envisioned investment while under-delivering in the acoustics engineers' promises about technological advancements. Wave of disappointment and frustration spreads among the people involved	Task: MEDIUM Jurisdiction: LOW Relationship: MEDIUM	Task-lever New Head of Product Management believes in the product potential and restart it with more control while supporting the push of technology's boundaries	Performance: positive NPD teams refocus and push acoustics team to leave up to their promises, eventually achieving the expected quality	-
#5	Speaker	NPD's Tech Lead Vs. Head of Product Development	As Procurement decided for a "make" rather than a "buy", NPD's Tech Lead pushes to produce in the former Struer factory – as opposed to the strategically repositioned one in Czech Republic. It would be more efficient and cheaper, but his boss takes this as a "joke"	Task: HIGH Jurisdiction: MEDIUM Relationship: LOW	Task-lever NPD's Tech Lead is given clearance by the Head of Product Development to initiate the production in Struer's former facilities as he proved the validity of his case, in terms of components	Performance: positive Production starts in Struer, components are sourced within 100km of Denmark's facilities and the complex technicalities make the proximity of engineers valuable.	

					sourcing and necessary interactions between engineers and manufacturers.		
#6	Audio	NPD Team Vs. R&D organization	NPD team involves Tech Specialist (1) to improve the product's architecture, and so slowly re-introduces it in the standard development process. People so-far not involved mistrust and almost oppose it as an "outsider" project.	Task: LOW Jurisdiction: MEDIUM Relationship: HIGH	Never resolved	Performance: negative The product is developed amidst an unsupportive and distrustful environment, especially from R&D	-
#7	Audio	NPD's Team Vs. Top Mgmt.	NPD Team asks top mgmt. for extensions in time & budget, but often masks real issues through over-confidence – at the same time, only partial information is shared from top mgmt. members to others, resulting in tensions and confusion	Task: LOW Jurisdiction: LOW Relationship: MEDIUM	Never resolved	Performance: negative Lack of awareness about underlying issues results in "technology debt", i.e. granted resources are never enough to solve the problem so that new ones are continuously requested	-
#8	Audio	System engineers Vs. NPD's Technical Lead	System engineers create a tool to evaluate the maturity of project's elements, so far developed without a proper assessment of its feasibility. NPD Team sees this as an intrusion without a mandate	Task: HIGH Jurisdiction: HIGH Relationship: MEDIUM	Jurisdiction-lever Head of R&D listens to the concerns and pushes NPD's Tech Lead to embrace such tool, be he resists the pressure, (over)confident in the NPD's Team capability to fix the issue.	Performance: negative Issues of maturity that had been pointed out will not be resolved and stay immature throughout most of the development.	COO creates the position of NPD System Lead for future NPD projects so to bridge concept development and product architecture, with the people who first expressed their concerns and a newly appointed Head of System Architecture reporting directly to the COO
#9	Audio	NPD's Creative Lead Vs. Classification Committee	The project is assessed by the Classification Committee with several errors, many of which are "ridiculous" in the eyes of NPD's Creative Lead, who also believes the current status of the Committee is not of the highest standard. There is tensions and misunderstandings.	Task: HIGH Jurisdiction: MEDIUM Relationship: MEDIUM	Task-lever Through various interactions and negotiations, the parties point out the faults in the assessment and reach partial alignment	Performance: positive Some of the errors are re-assessed, or re-worked on the project's side, leading to a fairer error-assessment for the project ready for market launch	Following the creation of his own UX development group, NPD's Creative Lead suggests to the Head of the Classification Committee to replace one member soon to retire with 2 new people to support a functional dialogue: one of his UX members, plus one from the Software department
#10	Audio	NPD's Creative Lead & Head of Creative Centre Vs. Head of R&D and SW organization	NPD's Creative Lead believes a different external company in the UK can provide a higher quality and swifter software development than the long-standing partner in India, preferred by the Head of R&D and his Software organization for its size and costs. Head of Creative Centre and NPD Creative Lead try to sneak in the UK company through procurement, but by so acting they anger the Head of R&D who threatens to withdraw all of his resources from the project.	Task: HIGH Jurisdiction: HIGH Relationship: HIGH	Jurisdiction-lever NPD's Creative Lead and the Head of Creative Centre agree to the claims of Head of R&D that it is not their mandate to select the software development partner, and reluctantly agree to collaborate with the partners in India.	Performance: negative The achieved quality is sub-optimal, and the product is released with clear software-related flaws.	Recognizing the flaws of such approach and outcome, the newly appointed COO re-defines how software is developed internally by closing the principal software organization, establishing a new and smaller group headed by a newly appointed person with experience in a more agile software development, and new partnerships with dynamic software development companies are set up