

**NEW PRODUCT DEVELOPMENT IN MEDIA FIRMS
IN THE FACE OF TECHNOLOGICAL CHANGE:
THE ROLE OF STRATEGY AND IDENTITY AMBIGUITY**

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Submitted to the 18th International Product Development Management Conference, June
6-7, 2011 in Delft, The Netherlands.

ABSTRACT

The purpose of this study was to investigate the role of identity change and ambiguity in relation to strategy and product innovation that is largely overlooked in product innovation research. Combining product innovation theory on organization-related determinants of product innovation and theory on organizational identity dynamics we developed a framework that served as a basis for our exploratory empirical investigation. Our case study interview data suggest how internal identity ambiguity becomes dysfunctional for (radical) product innovation and how it was evoked by inconsistencies in strategy and in its intersection with HRM and culture. This implies for managers that they not only guard the internal identity and control ambiguity damage, but also try to prevent inconsistencies in the realm of strategy.

INTRODUCTION

Major technological developments may offer opportunities. Some firms embrace these developments as a source of inspiration and momentum to initiate changes and increase their innovativeness. Other firms perceive these developments as a threat. Perceiving internet as a threat, newspaper firms had websites with fewer novel features, than those firms not perceiving it as a threat (Gilbert, 2005). Such technological developments may not simply be a threat leading to marginal differences in websites, market shares or sales revenues. It may be a threat to the *raison d'être*, the reason why firms exist. This is reflected in the core assumptions and beliefs of the firm: the organizational identity. The organizational identity represents what internal as well as external constituents perceive the organization is about (Hsu and Hannan, 2005; Pólos, Hannan, and Carroll, 2002). Technological developments may lead to environmental changes that cause identity ambiguity: the external identity of an organization differs from the internal identity in such a way that external and/or internal constituents do not have a good sense of what the organization is about and who the organization is (Corley and Gioia, 2004; Tripsas, 2009). Radical changes in needs of customers, similar offerings of new entrants/suppliers, and institutional arrangements as a result of technological developments can drive the external identity out of line with the internal identity. While identity ambiguity is likely

to be the result of external identity shifts, it may also be the result of shifts in the internal identity that do not match the external identity or shifts in both identities at the same time. Whatever the causes of identity ambiguity, if the discrepancy between external and internal identity is not overcome, technological change may lead to failure in the end (Henderson and Clark, 1990; Tripsas and Gavetti, 2000; Tushman and Anderson, 1986; Tushman and O'Reilly, 1996). Dutch newspaper firms face such a dark future if they do not embrace innovation seriously (Brinkman, 2009). Innovation is seen as panacea for getting these firms out of the bad weather.

Identity ambiguity is thought to be functional in the process of changing the firm's core assumptions and beliefs in line with external constituents' beliefs (Corley and Gioia, 2004). This is the case when the current identity serves as a cognitive filter that blinds the potential of technological opportunities and when it is firmly embedded in organizational capabilities and routines that hinder organizational changes (Tripsas, 2009). Then identity ambiguity may provide a sense-making framework if it is surrounded by clear future goal setting (Gioia & Thomas 1996) with sufficient attention and control of top and change management (Tripsas, 2009). In other words, the identity shifts are rather coherent and intentionally planned in an identity construction process. However, this suggests that if it is not surrounded by these conditions, identity ambiguity may also be dysfunctional in the process of change. Then it is an obstacle rather than a facilitator to innovation. Such identity ambiguity is likely to be the result of incoherent shifts in the internal identity that are not part of an intentional identity construction process. These incoherent shifts, labeled internal identity ambiguity may in turn be related to or caused by inconsistencies emerging within and between the realms of strategy, structure and systems in the midst of uncertain and insufficiently controlled change processes.

Academic research is readily available on organization-related factors that affect product innovation (Crossan and Apaydin, 2010; De Brentani, 2001; Ernst, 2002; Montoya-Weiss and Calantone, 1994). Explaining organizational inertia to adapt to technological change, research has progressed in the direction of routines/capabilities (Tushman and Anderson, 1986), cognitive factors (Gilbert, 2005), identity sense making (Gioia and Thomas, 1996), and organizational identity filters and identity change processes (Tripsas, 2009). However, academic research is largely silent when it comes to investigating the relations between changes in internal identity and changes in strategy, structure and systems and their effects on innovativeness in response to technological change. For example, the relationship between internal identity and strategy or structure needs a better understanding in the light of identity changes (Tripsas, 2009). Also research about the organizational conditions under which identity ambiguity arises and it becomes dysfunctional for innovativeness is lacking. Our research was guided by the following questions: 1) how is strategy related to internal identity change and identity ambiguity and 2) how do they affect the product innovation in response to major technological change. Here product innovation refers to the changes needed to destroy old and develop new competences or enhance existing competences for developing new products/services. The scope of the empirical research is limited to the Dutch media industry in particular, new paper firms, magazine firms and broadcast firms.

This research contributes to product innovation research by investigating the overlooked role of internal identity change in product innovation and determining when

internal identity changes hinder product innovation. It also contributes to organization and management research on the effect of identity filters and embeddedness by investigating the relationship between organizational conditions such as strategy, and identity change and ambiguity. This paper is structured as follows. First the theoretical background and the method are discussed. Then the results are presented. The last section discusses the theoretical and managerial implications of the results as well as the limitations and future research suggestions.

THEORETICAL BACKGROUND

Numerous studies in the fields of product innovation management as well as organization and management research report on the product innovativeness of firms. These studies can broadly be classified into two streams of research: determinants of product innovation success, and inertia to adapt to technological change. The first research stream addresses product innovativeness by investigating the determinants of product (or services) innovation success. These determinants can be divided into four main categories (Crossan and Apaydin, 2010; De Brentani, 2001; Ernst, 2002; Montoya-Weiss and Calantone, 1994):

- product-related factors; related to *products*: product advantage, technological synergy/acquisition; and *services*: frontline expertise, service complexity/cost, service quality evidence,
- NPD-process related factors, such as protocol/formal stages, systems and tools, proficiency of predevelopment/market-related/technological activities,
- organization-related factors, such as strategy, resource, culture, structure, management, leadership and the fits amongst these factors, and
- market/environment-related factors, including client-need fit, market potential, market competitiveness.

The second research stream investigates the lack of innovativeness or organizational inertia in the context of adapting to (major) technological change. This stream of research falls apart into three fields: i) routines/capabilities, ii) cognition, and, somewhere in between these two fields, iii) organizational identity (Tripsas, 2009). Large firms have difficulty developing the fundamental new knowledge and routines for adapting to ground-breaking technological change (Tushman and Anderson, 1986). Based on the assumption that existing behavioral routines and procedures hinder organizational change (Levinthal and March, 1993; Nelson and Winter, 1982), the related core competencies may become core rigidities (Leonard-Barton, 1992) and/or competency traps (Levitt and March, 1988). These core competencies may in turn constrain the development of the capabilities needed to cope with fundamental technological change (Barnett & Hansen 1996). In addition, cognition may constrain innovativeness in the face of major technological change. Influential cognitive factors are: the interpretation of technology as opportunity or threat (Gilbert, 2005), the attention given by management (Daneels 2003, Ocasio 1997), the erroneous beliefs about the exchangeability of resources (Daneels 2008) as well as the timeliness of beliefs in development of new business models (Tripsas and Gavetti, 2000). The third field of research is devoted organizational identity dynamics. Based on organizational behavior as well as sociological theory, the main focus is on the organizational responses to identity threats, on the role that identity has in coordinating action and providing focus on what legitimate organizational action is, and

on what frames, capabilities, knowledge, and routines are developed (Tripsas, 2009). Tripsas (2009) discusses the internal organizational identity as constraint on the interpretation of and response to identity-challenging technology and the resulting unfolding of an identity change process. We extend the work of Tripsas (2009) in the recommended future research direction of investigating the role strategy in relation to internal organizational identity shifts in response to technological developments.

Combining research on organization-related determinants of product innovativeness with research on the role of internal organizational identity dynamics is prone to bring new insights into the relation between internal identity, internal identity shifts and ambiguity, and strategy, structure and systems, and into their effects on the product innovativeness of firms in an adaptive response to major technological change.

Defining organizational identity as what internal and external constituents believe the organization is about (Hsu and Hannan, 2005; Pólos et al., 2002), we deviate from others who only take an internal perspective on organizational identity and refer to the external image of what external constituents believe (Albert and Whetten, 1985; Corley and Gioia, 2004; Dutton and Dukerich, 1991). Identity is reflected in the core beliefs, procedures, routines, capabilities, knowledge base and information filters (Tripsas, 2009).

Identity ambiguity refers to not having a good sense of what the organization is or is about (Corley and Gioia, 2004). This may be due to external or internal identity ambiguity or both (Tripsas, 2009). It exists if internal identity does not match external identity due to: client-need misfit, product-market misfit or institution-organizational misfit (Tripsas, 2009). Internal identity ambiguity refers to differences in perception of the identity among internal constituents such as top management vs lower management and employees, or differences among divisions, departments, or SBUs. External identity ambiguity refers to differences in identity of the organization among external constituents such as institutions, markets and stakeholders.

METHOD

We used a case study approach for our empirical research. A case-study approach allows an in-depth investigation of the mechanisms underlie the conceptual relationships to build theory where there is little theoretical understanding (Eisenhardt, 1989; Yin, 2003). Theoretical understanding is absence for the conceptual relationships between strategy, internal identity shifts and product innovativeness.

The empirical research was limited to the Dutch media industry and consisted of two stages. In the first stage, a pilot study was conducted with three orientation interviews with experts on the Dutch media. The main results of these interviews were the following. Firms in the Dutch media industry responded very different to internet-related technological changes, leading to a diversity of organizational practices that stimulated or hindered product innovation. Also many of these organizational practices seem to reflect the central role of the internal identity and its ambiguity. In the second stage the main case studies were conducted. The exploratory nature of our research and the diversity of firm responses to internet technology change in the Dutch media industry urged us to select a broad range of firms to allow for counter-factual checks. In total we investigated cases in 7 firms (or a business unit) where the unit of analysis was the organization of new product development. The cases included a free newspaper business

unit, a financial newspaper firm, two regional newspaper business units, a television broadcast firm, a magazine/media publisher, and book and magazine publisher.

Data were collected in 2009/2010 by 8 in-depth semi-structured interviews that were held with 7 respondents that gained publishing and editing job experience and were responsible for product innovation in leading positions. These positions were managing directors (3), editors in chief (2), and commercial directors (2), where most respondents had editing positions and experience. Interview data were transcribed and coded using procedures similar to (Eisenhardt, 1989; Miles and Huberman, 1994; Yin, 2003). Data were analyzed using a explanation building pattern-matching logic as described by Yin (2003).

RESULTS

Relationship between internal identity ambiguity and product innovation

In the Dutch media sector, in particular newspapers, identity ambiguity in terms of a product/market misfit is effectively illustrated by the editor in chief of a regional newspaper owned by a large national publisher of regional newspapers. Also against the background of the credit crunch, he draws the following picture.

“A few years ago newspaper publishers were not in the least touched by the idea that internet could become an important channel. Only recently [2008] they have begun to accept the idea that the decline in newspaper editions is a structural decline. However, already in 2000 the decline in editions started with 2-3% on an annual basis. I’m not convinced that this is coming to a hold, because the young adolescents will never subscribe [to a newspaper], not even if they are 30 or 35... Before the year 2000, it became apparent that new subscribers were increasingly of older age. After the year 2000, it became clear that there were hardly any new subscribers... This new generation is not going to subscribe anymore, not even if he/she has a car, a partner and two kids, and does not read a particular newspaper, because he has internet, commercial TV, and free newspapers. This Google-generation – to call it this way – will never read paid newspapers, not as we did in the past.” [R6: 30].

In such a state of identity ambiguity, a newspaper firm’s identity manifested in the vision becomes increasingly inconsistent with the external environment if this environment changes without adaptations in vision. As technological changes in the environment become increasingly visible to employees, if management does not address this in the firm’s vision, the opportunities that become available will not reflect firm ambitions and future career opportunities for employees. Here identity serves as a cognitive filter obstructing a response to and interpretation of the consequences of technological changes. This is illustrated with the following quote in the context of the daily business newspaper:

“In the first concept [of a vision] you will keep thinking in the old economy. You will think that the world does not change. However, the technology does change. The things we make do not go with a carrier pigeon, do not go through a newspaper, but through electronic means. ...”[R5A: 39].

This reflects internal identity ambiguity in the sense that managers and employees perceive a difference in what the firm and its activities is about or should be about. While a vision, especially a long term, explicit vision, is generally perceived as important for creating commitment of employees, if it reflects firm ambitions and employee career opportunities. As a consequence this may hinder initiatives towards an innovation strategy of developing radical new product, illustrated by the following quote.

“If you go that [old] way you run into a wall, making products and pursuing product market combinations that lead to narrowness, you will create very specific products” [R5A: 39].

In Dutch newspapers, identity ambiguity may not only relate to the issue of whether the organization is about quality improvement or innovation and the degree of innovation (radical vs incremental). It may also involve whether the organization is a newspaper firm based on journalistic independence as the primary principle or a knowledge source firm based on commercial feasibility as primary principle.

Related to the vision is the mission of the organization. A firm’s mission also is a strong representative of a firm’s internal identity. If this internal identity is ambiguous it may become dysfunctional for realizing product innovation strategies. In the daily business newspaper firm, the strategy of a radical new innovation in products could only be realized on the condition that the mission of firm was changed first. The mission finally changed from ‘publishing a newspaper to being a source of information/knowledge’. But this change was preceded by a long period of ambiguity. As the respondent illustrates the obstacle to radical product innovation:

“Are we actually the producers of a newspaper or are we a source of knowledge and information?” [R5A: 35].

This was a condition to for example develop a new service called creative brains. Creative brains consists of an advisor that actively participates in meetings to generate creative thinking. This needed not necessarily be a change on paper outlined on the website; word of mouth was sufficient.

In larger firms, however, internal identity ambiguity in terms of differences in perception on what the organization is about between top (corporate) management and progressive employees on the one side and conservative employees on the other side may also have a positive effect on product innovation, for example, if top management initiates a new business venture. This new business venture is then to be set up next to the existing organization based on a new business model and consisting of newly hired employees that devote all their time in the venture.

An editor in chief of regional newspaper (owned by a large publisher) explains it in the following way:

“... Set up a group ‘New Born’ of about 20 to 30 people (which is a small unit compared to the 900 people employed) and place this business unit completely outside the organization and the old management model. Then it’ll swing and think of nice things.” [R6: 58]

The same example is given by a regional newspaper editor in chief [R6: 58] and a managing director of a different regional newspaper [R10: 91] (both owned by a large publisher). A new newspaper was developed, targeted at a specific nationwide segment of young higher educated adolescents. In this particular case, the progressive employees (consisting of editor in chief and some 20 young (less than 30 years old) newly hired journalists) differ in their view of what a newspaper organization is about (targeted newspapers based on the assumption of heterogeneous customer needs) compared to the view of conservative journalists (general newspaper based on the assumption of homogeneous customer needs). These progressive journalists in this project were able to reconcile journalistic independence with commercial feasibility, whereas the conservative journalists in the existing organization would not have been able to do that.

The downside of such initiatives is that the internal identity ambiguity of the other group with a coherent view (conservative journalists) is reinforced, if management is not supporting change e.g. if an alternative identity is not outlined, and a clear desired future goal is missing (Gioia and Thomas, 1996). As illustrated by the regional newspaper editor in chief [R6: 58]:

“But then the existing business unit will not benefit from it, while you do want to renew this [existing business unit]. So there must be a relationship between the small and the large business unit as a flywheel that will be a driver of the main wheel. However, the executive board did not believe in such a flywheel initiative.”

Relationship between strategy and internal identity and ambiguity

Strategy inconsistencies

In the realm of innovation strategy between the current and new product strategy, there may be a misfit that is troublesome, a misfit that is not necessarily troublesome, or a perceived misfit that is not necessarily true. Each of these may cause internal identity ambiguity with respect to the question whether the firm is or should be about innovative activity or not. Selling a radical new product may hurt the sales of existing products. This may actually be true if the new product is a substitute for the existing product. For example, if a newspaper firm is selling a news website, this may cannibalize the sales of existing paper print products. But it need not necessarily be troublesome. The newly developed radical product may turn out to be more profitable or yield income on supplementary products. For example, the website may turn out to be a supplement to the print paper that will offer customers a new proposition. Another example: a newly developed newspaper website may actually facilitate ordering supplementary products such as wine, film or documentary DVD-boxes etc. However, it may also be a perceived misfit between the current and new product strategy that is not true. The firm may think that customers will terminate their print paper subscription in exchange for free news on the website or even a digital subscription to the news website. But it might actually be that the news website reaches a target group of young newsreaders that is different in needs than the existing customer group of older newsreaders. An example of the perceived misfit was found when discussing the role of the three important heads in a

newspaper business, the editors in chief, the sales department and the production department, also called the devil's triangle.

"The editors in chief may if it [being the product innovation] doesn't fit them say that they are independent and decisive, the production department argues on many occasions that it will cannibalize the number of newspaper copies, whereas the Sales department cries out that it should sell, what so ever" [R3: 29].

Inconsistencies may also be found within the broader realm of strategy. A business strategy of operational excellence or cost leadership may increase internal identity ambiguity and hinder realizing a strategy of product innovation, in particular developing radical new products. Operational excellence or cost leadership refers to increasing the efficiency of the production process aimed at reducing the costs and/or selling products at a lower price. Such a strategy may in the end result in investments in production process innovations with no product innovations or only incremental product innovations as a consequence. The efficiency increases are core are accompanied by incremental product innovations at most. A respondent with many years experience in various regional newspaper firms gave his view on what newspaper firms are about, suggesting that it is not about radical product innovation:

"I think it is a trend for the large [newspaper] corporations that they go back to the core business of efficiency, excellence: innovation along the line of printing. Where are we good at? A sort of McDonald-strategy of 1 slice of meat, then a double burger, the next is a triple burger. That is what they do perfectly. If the Dutch market is saturated, they go to Belgium first, then to Denmark.... Really deviating from their traditional menu, they had developed a new breakfast [burger], but they stay at the core" [R3: 68].

If put to the extreme, such an operational excellence strategy may however result in a complete lack of product innovations or, even worse, eat into product development process capital.

"The disadvantage of this strategy of operational excellence only is that it may end up to be a anorexia strategy. You are so emaciated that you do not innovate at all. That is what is happening in the [newspaper] sector, thus in that respect I think it is alarming" [R3: 70].

Similarly, a managing director a regional newspaper (a business unit of a large publisher) put it:

"my feeling and my experience is that if you are already very busy to keep the business unit going as a result of making it 'mean and lean', you can hardly innovate. You're happy if you're managing to keep the core product, the newspaper, alive. As a result there is too little time to talk with colleagues." [R10].

In a stronger fashion, a reconstruction strategy (realignment in big bang format) of cutbacks or downsizing (re-organization) at the corporate level may conflict with an innovation strategy of developing new products, in particular radical new products at the division or business unit level. Inconsistency with a corporate strategy was found in the daily business newspaper firm. A cutback policy hampered investments in the acquisition

of a new business, a business news radio or moving to a different building that would increase office space, status and transfer of knowledge. This is illustrating by the following quote:

“Because I knew that we were going to take over a new business radio firm, which was already discussed. But that is severely difficult, on the one hand downsizing the firm and on the other hand investing in the acquisition of a firm or in moving to this building” [R5A: 29a].

Such a conflict is raises questions about where the organization is going. While a reconstruction strategy sends a message that innovation out of the question, acquisition of a business radio and moving to another building sends the opposite message of exploring new business ways and ways of working.

Even more so [R3: 2], if two or more reconstruction strategies are succeeding each other in a short period of time, the effect may even be stronger. If a newspaper organization goes from the one cutback strategy to the other, where employees are fired, without sufficient time to recover, this may result in change fatigue: employees that become tired of change. This is illustrated in the following way:

“One of the largest problems of HDC, but also at many other regional daily newspapers, is that the one reorganization followed the other. Every two years it happened. Dozens of people, in total about 150 editors were dismissed in a period of five years. The processes are not pleasant and result in an editorial office that mainly cries out: costs, costs, costs.” [R3: 2].

This is the case if employees need to do more work (to takeover tasks of the employees that left the organization), employees cannot build new routines and employees perceived a climate of uncertainty with a high chance to be fired. This blocks or hinders employees to think (pro) actively about renewal of products/services and production process. In addition, implementation of such a reconstruction strategy also directly obstructs innovation activities of employees.

Also a diversification strategy of acquiring a new business or a firm may conflict with the innovation strategy of the existing business units resulting in different perceptions of the internal identity of the firm. A large firm with sufficient financial capital may have the strategic option to acquire a new business or firm that is innovative, without harming the existing business units, but also without investing in its innovation potential. If a firm experiences a resistance-to-change culture that is hindering innovativeness of a business unit that is not making profit, it may also decide to downsize the existing business unit or pursue severe cutbacks in costs, while at the same time use the released financial resources to invest in an innovative new business. In relation to the question whether young journalists face career opportunities in newspaper firms, a respondent reacted:

“They should go for freelance work. Mind you, the [newspaper] corporations are downsizing; they have a core editorial office and core sales departments and do not want to innovate. For innovation they go to outside to buy a small firm or buy a flourishing initiative. That is were you want to be” [R3: 67].

This quote nicely illustrates that it is internally ambiguous whether innovation is part of the identity of the firm. For top management identity is part of the firm's identity, while for young ambitious journalists is not part of the identity represented by their business unit, but part of the identity of other business units.

Strategy misfits with HRM-systems and cultural systems

A change in vision of the firm to reflect the external environmental changes such as technological change may lead to misfit with HRM-systems. If management does address technological change such that a vision is reflecting an ambition to be innovative and the corporate strategy is adjusted, the HRM-systems need to be in fit offering future career perspectives and other appraisal initiatives if the innovation performance of employees is assessed accordingly. If the HRM-system is not adjusted to the strategy internal identity ambiguity arises. For example, in the daily business newspaper this was recognized. A journalist cannot become an editor in chief if he (or she) does not show ambition that is reflecting more than just writing quality article texts for the newspaper. He also needs to reflect entrepreneurship [R5A: 23].

Similarly, the change strategy to initiate strategic changes may be inconsistent with a culture of competing values. If the culture consists of competing values such as journalistic independence and commercial feasibility that results in resistance to change, a change strategy that does not address these competing values and focuses on changing to a new situation or reinforcing the new situation appears to reinforce resistance to change. Such a change strategy increases differences in perceptions between managers and employees in what is important in the organization: journalistic independence or commercial feasibility. As a result any initiative to change is blocked, let alone innovation initiatives. However, a change strategy of first tackling the unfreezing of the old situation and thus the resistance of change and unraveling the competing values is consistent with such a culture.

DISCUSSION

We set out to explain the product innovativeness of Dutch media firms – in particular newspaper firms – responding to identity-threatening technological changes by investigating the role of changes in the realm of strategy, changes in identity and the resulting identity ambiguity. Identity ambiguity may not necessarily be functional in the process of identity construction as part of an organizational change process if it is not surrounded by clear future objectives (Gioia and Thomas, 1996) and top and change management support and control (Tripsas, 2009). Our results point out that identity ambiguity may become dysfunctional – obstructing new product development – in internal identity change processes that are incoherent, unintentional or intentional but hardly controllable by top and change management.

Our research shows that internal identity ambiguity seems to affect product innovation, where previous product innovation research hardly studied the role of identity and identity ambiguity. Product innovation research to date has mainly focused on product-related, NPD-process-related, organization-related and market-related factors that affect product innovation and/or its outcomes (Crossan and Apaydin, 2010; De Brentani, 2001; Ernst, 2002; Montoya-Weiss and Calantone, 1994) In addition, where

past product innovation research did find an effect of factors in the realm of strategy such as having and explicating an innovation strategy, a vision and innovation goals and making them explicit (Martensen, Dahlgaard, Park-Dahlgaard, and Grønholdt, 2007; Montoya-Weiss and Calantone, 1994), our research shows that inconsistencies among the various types of strategies seems to have an effect on product innovation but that some of these effect seem to be mediated by internal identity ambiguity. This ambiguity appears to result from incoherent internal identity shifts evoke by strategy inconsistencies. In also contributes to product innovation and also organization and management research by showing which and how underlying mechanisms manifested in inconsistencies in the strategies and the intersection of strategies with related the fields, seem to evoke internal identity ambiguity. These strategy inconsistencies are found within the innovation strategy and between the corporate strategy and the innovation strategy, and finally between the strategic change strategy and the innovation strategy. Also inconsistencies are found between change in vision and HRM-systems and between change strategy and a culture of competing values. Lastly this research also contributes to organization and management research on identity filters and identity changes processes, investigating the relationship between changes in strategy and in identity and finding that strategy inconsistencies evoke incoherent internal identity changes with identity ambiguity as a result.

MANAGERIAL IMPLICATIONS

Managers of Dutch media – in particular newspaper – firms may want to take into account that in their quest for a more innovative organization in response to major identity-threatening technological change, identity ambiguity may play a role. It is playing a role next to factors reported product innovation literature such as product-related, NPD-process-related, organization-related, market-related factors. Identity together will identity ambiguity are often overlooked in managerial practices as well as in scholarly product innovation research. More importantly, identity ambiguity in the domain of product innovation may not necessarily be the incentive often reported in organization and management research (see e.g. Gioia and Thomas, 1996; Tripsas, 2009).

In particular, if the internal identity is becoming out of line with the external identity and the change in internal identity is not a coherent and intentional change, its resulting ambiguity may negatively influence product innovation activities. As a consequence these managers may take notice not only of environmental change for example in technology and the way it influences the perception of external constituencies. They also may need to monitor and guard the internal identity as well as the identity change process for example along the lines suggested by Tripsas (2009).

In addition, these managers may want to take notice of the way inconsistencies within the realm of strategy that seem to affect the degree of internal identity ambiguity. This refers to inconsistencies within the innovation strategy, inconsistencies between the corporate strategy and the innovation strategy, and finally the strategic change strategy and the innovation strategy. Also inconsistencies in the intersection with strategy and other organization-related factors such as HRM-systems and cultural systems may affect the degree of internal identity ambiguity.

Furthermore, these managers want to setup a change program that goes beyond monitoring and guarding the internal identity change process. Such a change program

need not only incorporate activities that increase the innovativeness of the organization, but must also incorporate actions that decrease the strategy inconsistencies that are conducive to internal identity ambiguity as a roadblock to product innovation as well as include ambiguity damage control.

LIMITATIONS AND FUTURE RESEARCH

While our case studies enabled a broad coverage of underlying mechanisms and logical argumentations with respect to the conceptual relationships, the depth of our investigation and the external validity of the findings is limited. Future researchers need to increase the depth of the investigations by selecting critical cases preferably with a longitudinal setup in order to further develop theory and draw up hypotheses. Additionally, large scale studies are needed to test hypotheses across a variety of firms in the Dutch media sector but also across other sectors.

In our study we investigated the role of identity shifts and ambiguity around organization-related factors in the realm of strategy and the intersection of strategy with HRM and culture. Scholars may want to use our setup to study other organization-related factors such as structure and systems (HRM, culture, resources). This is likely to increase the scope of explanations why and in what way identity-ambiguity may become dysfunctional for product innovation with the aim to respond to technological changes and discontinuities.

Future researchers may also want take up the challenge to systematically study the ways in which managers may prevent or cure the dysfunctionality of identity ambiguity. Such a research challenge stretches beyond existing research that is investigating the functional role of identity ambiguity in making the identity shifts needed to get the internal identity in line with the expectations of external constituents.

ACKNOWLEDGEMENTS

We thank Mijke Slot, Valerie Frissen and TNO for the financial and other support in setting up the research. We are also grateful to the respondents in media firms willing to participate in our research.

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