BALAZS SZATMARI

We are (all) the champions:

The effect of status in the implementation of innovations

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We are (all) the champions: Het effect van status op de prestaties van innovatieve projecten

Thesis

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To my parents

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CHAPTER I

INTRODUCTION

The title refers to a Queen song entitled “We are the Champions”, which was first released in 1977 and soon became one of the most well-known rock anthems of the twentieth century. The impact of the song is undeniable. In 2011, a team of researchers conducted a field study in five English nightclubs and found it to be the catchiest song in the pop industry (Pawley & Müllensiefen, 2012). They found that on average more than 85% of people present at venues sang along with the song whenever it was played. It is probably not surprising then that it is one of the most frequently played songs at sporting and other social events. Any time it is heard, people tend to feel an urge to sing along so that they can identify themselves with the true champions and can share, at least to some extent, in the pride in winning expressed in the song. Even though it refers to an exclusive group of best performers, singing along can give everyone the sensation that they are part of this group, at least for a short while. The aim of this PhD is to show that these people who join these impromptu choirs actually might be very much right in feeling that they are “true champions”, but not in the way they may think.

In the innovation management literature, the word "champion" typically refers to individuals who make "a decisive contribution to the innovation by actively and enthusiastically promoting its progress through the critical [organizational] stages" (Achilladelis, Jervis, & Robertson, 1971: 14). As such, the role of champion is typically considered an active role (e.g., Chakrabarti, 1974; Markham, 2000; Howell & Shea, 2006). We argue, on the other hand, that besides active championship – which is how innovation management scholars traditionally talk of championship – one can also have passive championship, which refers to projects being continuously maintained without any active interference in project selection and continuation decisions. In this thesis, we make the case that *everyone* is a champion in some sense, at least in a passive way. As the cover of this book illustrates, social actors (individuals, groups, and organizations alike) do not work independently of one another but organize themselves in hierarchical social constructions (Garicano, 2000), or in other words, status hierarchies (Magee & Galinsky, 2008). We define status hierarchy as a rank order of social actors with respect to their perceived underlying ability to deliver value to their relevant stakeholders (Magee & Galinsky, 2008). Being part of these hierarchies, social actors continuously emit quality signals to their environment in accordance with their position in these hierarchies, regardless of their actions (Merton, 1968; Podolny, 2001; Guler, 2007). These signals then affect the perceptions of others about the underlying quality of the focal actors (Chattopadhyay, Finn, & Ashkanasy, 2010) and the contributions they make to achieving organizational goals (Kim & King, 2014), through the covering clouds of uncertainty as the cover of this book implies (Podolny, 1994). One way to observe the contribution of actors is to investigate their involvement in projects. Since the decision-makers' assessments of the value of projects are affected by the signals sent by those involved in

the project (Reitzig & Sorenson, 2013), quality signals contribute to projects being selected and sustained, regardless of their actual quality or expected value (Sleesman, Conlon, McNamara, & Miles, 2012). Thus decision-makers can be influenced not only by active contributions – quality signals can also have a similar "championing role". Hence, we can distinguish between active and passive championship.

Increasing our understanding of the effects of quality signals is essential, because based on our argument above, one might expect them to have at least two important consequences. On the one hand, quality signals may help project leaders to gain the necessary support for innovation projects, without which "ideas for product innovations may remain dormant for future development and implementation" (Frost & Egri, 1991: 270). Thus, these signals may give leaders the support they need to achieve great things, such as the Kennedy's Apollo project. On the other hand, those same signals may be an important source of decision errors (Sleesman et al., 2012) which could in some cases even lead to huge failures (Rothwell, Freeman, & Horlsey, 1974). For instance, there was one notable example in video game development. George Broussard was a well-known video game producer and designer who founded 3D Realms. He also led the development of one of the most successful video games, Duke Nukem 3D. After the game was released, critics went fairly wild with praise, and the title sold about 3.5 million copies, making the company extremely wealthy (Thompson, 2009). In 1997, Broussard announced a sequel to the game, called Duke Nukem Forever. However, after twelve years of development and after spending an estimated budget of at least 20 million dollars, 3D Realms went into bankruptcy (Thompson, 2009).

So, here we have a very talented game developer, a highly successful company that has already proved itself in the past, and a title that everyone loved, critics and gamers alike. Yet mixing these ingredients resulted in the biggest failure in the industry. How could this happen? Everyone who has some experience of teaching might agree that asking a question in the right way can sometimes help in finding the answer. This research project aims to explain similar cases by asking not how this could happen, but posing that question from an *alter-centric* perspective: *How could everyone let this happen?* The alter-centric perspective differs from the ego-centric one in the sense that the starting point of the theorization process is not the focal actor (ego) whose performance (failure or success) is being explained, but the members within the focal actor's environment (the alters). We propose that there may have been many different factors that contributed to the failure, but one of the most important is overvaluation of quality. This overvaluation derives from the *status* of the project leader, the group, and the organization (Benjamin & Podolny, 1999; Reitzig & Sorenson, 2013; Kim & King, 2014). Hence, the main goal of this PhD research project is to explore how status affects the ability of project leaders, project groups, and organizations to implement innovations in order to show that "we are all champions" through our status, as long as we are associated with any project in any way.

For this purpose, we chose to investigate the video games industry for the following reasons. First, it is a highly turbulent environment where a large amount of product development is taking place at a very rapid pace (Irish, 2005). Second, this turbulence means that the environment is highly uncertain. Therefore, status should have important consequences for the development of new products (Podolny, 1994). In order to explore how status affects the implementation of innovations, we analyse a unique dataset

compiled from three different sources and find support for our prediction that status has important positive and negative effects with regard to the implementation of innovations. The thesis is structured as follows. In the next section, we provide a brief theoretical background and an overview of the three studies in the thesis. Then we present three studies in greater detail. Finally, we end the thesis with a general discussion of the findings.

STATUS IN INNOVATION PROJECT MANAGEMENT

Status is a one-dimensional indicator of the underlying quality of an actor that is relevant in a given context (Jensen & Roy, 2008). Status is closely related to another signal of quality: reputation. Status and reputation often have been used interchangeably as signals of quality in previous research (see Washington & Zajac, 2005, for an extensive discussion on this topic). Status captures differences in the social positions of actors in the social hierarchy which represents a "socially constructed, intersubjectively agreed-upon and accepted ordering or ranking of individuals, groups, organizations, or activities in a social system" (Washington & Zajac, 2005: 284). Reputation, on the other hand, refers to how an actor's past actions and future prospects are perceived by relevant stakeholders (Fombrun, 1996). Thus, reputation denotes a narrower expectation of future behaviour that is directly based on past demonstrations of that behaviour (e.g., previous demonstrations of performance), whereas status denotes a broader expectation that is *not necessarily* tied to past behaviour (Podolny, 2005). As such, both status and reputation serve as signals of unobservable quality. However, there are important differences that make status of greater

theoretical interest to us. First, status is a signal to a broader audience, because it is a more generally applicable quality signal for two reasons. One reason is that status does not need to originate from previous actions in a given environment, unlike reputation (Podolny, 2005; Jensen & Roy, 2008). Another reason is that market actors require less domain-specific knowledge to interpret status signals than reputation signals (Jensen & Roy, 2008). Second, decision-makers look at status before they consider reputation, and use it to eliminate most of the possible alternatives and thereby ease their decision-making process (Jensen & Roy, 2008; Stern, Dukerich, & Zajac, 2014). Although there might be valid reasons to assume that reputation may also have important consequences in the implementation of innovations, it is beyond the scope of this thesis.

According to Podolny (1993), status dynamics play an important role when the underlying quality cannot be directly observed. Podolny (1994) also showed that status influences the choice of decision-makers in the selection of exchange partners, especially when market uncertainty is high. Since the creation of innovations is an inherently uncertain undertaking (Balkin, Markman, & Gomez-Mejia, 2000; Cusumano, 2010; Markham & Lee, 2013), we expect that status should have important consequences for the socio-political process of implementing innovations and launching them on to the market (Van de Ven, 1986). Assessing the true quality of innovation projects is a challenging process, and is open to subjective interpretation, heuristics, and even political manoeuvres (Tversky & Kahneman, 1974; Van de Ven, Polley, Garud, & Venkataraman, 1999; Green, Welsh, & Dehler, 2003; Sethi, Iqbal, & Sethi, 2012).

These arguments lead us to expect that status as a quality indicator may influence how relevant members of the organization perceive projects and may be a source of bias

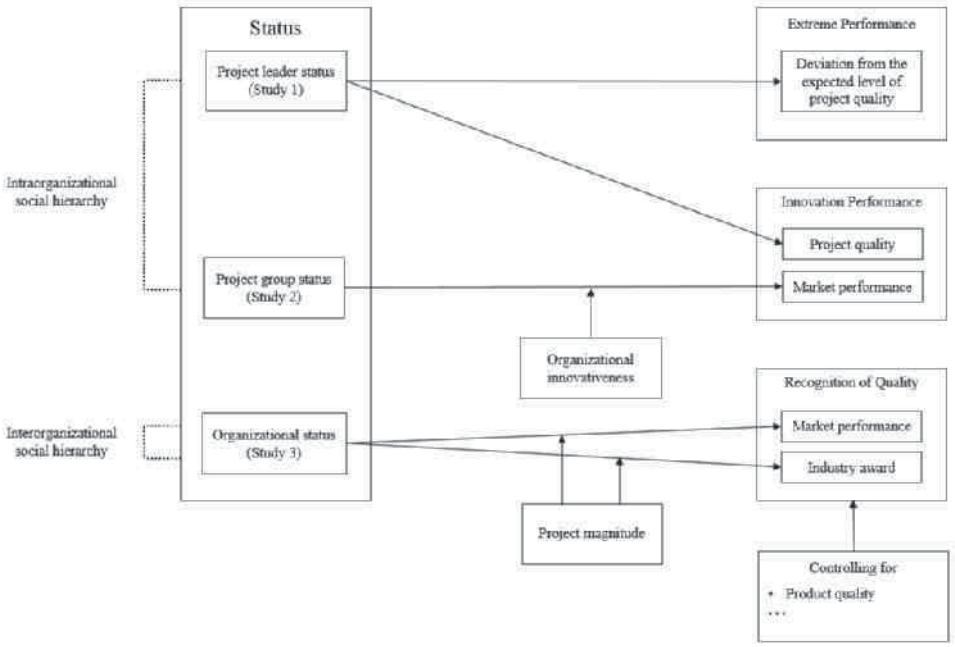
(Knudsen & Levinthal, 2007; White & Holman, 2011; Csaszar, 2013). Organizations engage in innovation to generate higher profits, increase their competitive advantage, or realize their visions. This is typically done by means of projects (Shenhar & Dvir, 1996). However, the actors involved (individuals, teams and organizations) need to gather the necessary financial and/or social support before they can carry out their projects. Others in the environment support them in their project, depending on how valuable they perceive that project to be (Green et al., 2003; Schmidt, Sarangee, & Montoya, 2009). Since the contributions of high-status individuals are seen as more valuable than the quality of those contributions would warrant (Kim & King, 2014), status should affect actors' ability both to realize their innovative ideas and to benefit from them.

We specifically focus on two kinds of environments: intra- and interorganizational environments. At the intraorganizational level, we argue that the status of the project leader and the project group influences how their projects are perceived by the most important decision-makers and other organizational members. We argue that status can be useful but with too much status, there can also be negative effects. On the interorganizational level, we look at how status impacts the assessment of target stakeholders in the market as to the perceived quality of an organization's output, and how this affects the organization's ability to gather resources for their future undertakings. We now explain these mechanisms in greater detail by giving an overview of the three studies in this thesis.

OVERVIEW OF THE THESIS

The main body of this thesis comprises three empirical studies aimed at increasing general understanding of both the positive and negative effects of status in the implementation of innovations. An illustrative overview of these studies is given in Figure 1.

FIGURE 1
Overview of the Studies in the Thesis



Study 1 – Irrational Resistance or Irrational Support? The Implications of Project Leader Status for Project Quality

Study 1 explores the effects of project leader status in the implementation of innovations. We hypothesize that there is an inverted "U-shaped" relationship between project leader status and project quality. Furthermore, we predict that project leader status is a contributory factor in absolute deviation from the expected quality, both positive and negative. We argue that this is because status generates unconditional support for innovation projects, regardless of their actual quality. Although their status may help project leaders to overcome *irrational resistance* to high-quality projects, this can also generate *irrational support* for low-quality projects. As such, status tends to "bring about extreme […] performance: big wins and big losses" (Sanders & Hambrick, 2007: 1056). Analyzing the social network positions of project leaders in video game companies, we find that project leaders benefit from their status up to a certain point, after which their performance can be seen to decrease. Moreover, high-status project leaders also show a greater variation in performance than their low-status counterparts, in both positive and negative directions. The main contribution of this paper to the innovation management and status literature is to show that whilst the status of a project leader provides important advantages up to a certain point, leaders with high status can also implement projects of exceptionally low quality.

Study 2 – Blinded by Status? How Organizational Innovativeness Moderates the Effect of Status

In Study 2, we investigate the relationship between project group status and project performance and the degree to which organizational innovativeness moderates this relationship. We theorize that status should generally be beneficial for project groups, because it gives them better access to resources and social support that they can draw on in order to improve their project's performance. However, the increased social support might be counterproductive in environments where there is a high level of support for the innovation-related activities of high-status groups. In such environments, status may lead to complacency and a lack of valuable feedback that may offset the positive effects of status. As such, we predict that organizational innovativeness – namely the extent to which the culture is highly supportive of the implementation of innovations – will negatively moderate the effect of project group status on project performance. Analysing the network position of project group members, we find support for our predictions. This study offers a valuable contribution to both the innovation management and the status literature by demonstrating that having increased access to resources because of status is not always beneficial for innovation projects, especially in an environment where there is a high level of support for such projects.

Study 3 – Pride Cometh before a Fall: When High-status Actors Engage in Projects of Great Magnitude

In Study 3, we look at the effects of organizational status on the recognition of quality by an organization's target stakeholders. We hypothesize that organizational status will have a positive impact on market performance and will increase the likelihood that an organization will receive industry awards, regardless of the actual quality of its products. Thus, in line with the Matthew effect, high-status actors are able to realize more revenues and achieve greater recognition than can be explained by the actual quality of what they have produced. We also suggest, though, that these relationships are negatively moderated by the magnitude of the development project in question. Determining the status of an organization by the number of awards it has received, we find that high-status organizations indeed gain more financial and recognition benefits than their low-status counterparts for a given level of product quality. However, when high-status organizations engage in projects of great magnitude, they fail to realize all the potential benefits from their status. The main contribution of this study is that it increases our understanding of the dynamics of the Matthew effect. Specifically, we show that acting in a way that is not in line with one's position in the social hierarchy may weaken one's position in that hierarchy.

Differences across the Study Designs

There are significant differences in the design of the three studies that are important to note, because they influenced our decisions regarding the operationalization of these studies. The most important differences lie in the choice of actor (individual, group, or

organization). In Study 1, we were interested in what helps individuals manoeuvre their projects through the socio-political arena of organizations. This is why we looked at the person who was most responsible for the outcome of the project and most motivated to keep it alive throughout the whole innovation implementation process: the project leader. In Study 2, on the other hand, our main theoretical focus was on how the attitude of others within the organization to particular projects is affected by the status of members of those projects, which then determined the help and support they received from others within the organization. This is why we looked at the status of all the project contributors, as social support is something which almost every project member receives, not just those in specific formal positions. Another difference related to this point is that only in Study 2 did we hypothesize about the moderating effect of organizational innovativeness. This is because Study 2 was mainly concerned with attitudes to the project and project members, and the support provided, which are shaped by cultural factors, more specifically the culture of innovation. We did not expect that these cultural factors would influence how status affects project-related decision-making.

A very important difference between Study 1 and the other two studies lies in how we operationalized the dependent variable (innovation performance). While both project quality and sales figures are good measures of innovation performance, in Study 1 we chose to explain performance in terms of quality rather than sales, in contrast to the other studies. This is because in Study 1 we were focusing on the project selection process where the quality of the project, not its revenue-generating potential, is directly observable (even though assessing quality accurately is extremely difficult). Sales figures are affected by many factors (e.g., marketing efforts) that were not relevant to the relationships

investigated in Study 1. The revenues a product generates are more the result of a collective effort (e.g., development, marketing, financing, etc.) by entire project groups and organizations.

The differences in the specific hypotheses regarding the effects of status can be explained by the differences in the actors investigated in the three studies. In Study 1, we expected that the relationship between status and performance would be curvilinear, whereas, in Study 2 and 3, we hypothesized that the relationship would be linear. This is because individuals are constrained in terms of their cognitive capacity (Ackerman, 1986) and their time (Bothner, Kim, & Smith, 2012). High-status individuals (or "stars") receive much more information and attention through the support they get due to their status, and hence have to deal with the negative consequences of their time and cognitive constraints exponentially more than their low-status counterparts. Larger and well-organized high-status groups and organizations need to cope with the negative effects of their time and cognitive boundaries extensively only in theory, as their capacity is a function of the organized collective capacity of multiple individuals (organizational or group members) and of the specialization of these individuals (Oldroyd & Morris, 2012). As such, they are more effective with dealing with the possible negative side-effects of the support they get because of their status. Hence, we did not see any theoretical reason why the mechanisms that explain the decreasing performance of high-status individuals would be applicable to groups and organizations in the real world.

Finally, it is important to explain the reasons for the differences in how we operationalized the main independent variable in this thesis: status. As stated above, we looked at two different levels: intra- and interorganizational levels. Status signals need to

be directly observable and, by definition, need to be suitable for ordering actors by rank in their social environment according to their ability to supply their stakeholders with quality (Podolny, 1993). In creative industries, such as the video game industry, it is a common practice to measure status on the basis of awards (e.g., Jensen, 2010). Hence, in Study 3 we chose to measure organizational status by industry awards. However, industry awards are inappropriate for ranking individuals and groups within their organization, since they are given in recognition of exceptional performance that is, by definition, very rare. Thus, with industry awards, we could not differentiate between the vast majority of individuals and groups within an organization. Network position, on the other hand, is suitable for this purpose (Grigoriou & Rothaermel, 2014), and it can be seen as a good signal of an individual's or group's perceived ability to provide high-quality work (Oldroyd & Morris, 2012; Reitzig & Sorenson, 2013). This is because central individuals and group members are highly visible, and are therefore seen as high performers in their organization, to whom their peers often turn for help and advice (Oettl, 2012; Oldroyd & Morris, 2012). For these reasons, network position was a good alternative way of measuring the status of individuals and project groups within their organization's social network in Studies 1 and 2 (Hallen, 2008; Rider, 2009; Waguespack & Sorenson, 2011; Grigoriou & Rothaermel, 2014). Although there are examples of measuring organizational status based on network position (e.g., Hallen, 2008), we considered it a less effective measure than awards when we were explaining the market performance of organizations in Study 3, because, unlike industry awards, industry ties are seldom readily observable to product consumers (see a more detailed discussion of this issue in Chapter IV).

The final chapter summarizes the main findings of this thesis, discusses the main theoretical and practical implications, and outlines directions for future research. The purpose of this thesis is to provide insights into the social side of innovation (Perry-Smith & Shalley, 2003; Kijkuit & van den Ende, 2010; Yuan & Woodman, 2010). By showing how status affects the outcome of innovation efforts, we offer valuable insights for both the innovation management and status literature. We shed light on both the positive and negative effects of status and social influence. Since the success of innovation efforts is determined in large part by the socio-political dynamics of the innovation process (Van de Ven, 1986; Baer, 2012; Sethi et al., 2012), we believe that this thesis adds to our understanding of the social factors that determine the success or failure of innovation undertakings.

CHAPTER II

IRRATIONAL RESISTANCE OR IRRATIONAL SUPPORT? THE IMPLICATIONS OF PROJECT LEADER STATUS FOR PROJECT QUALITY[1]

ABSTRACT

In this study, we explore the effect of project leader status in uncertain projects, and predict that status will have an inverted curvilinear relation with project quality and a positive linear relation with absolute deviation from the expected quality. In order to test our hypotheses, we analysed social network data retrieved from an extensive online database of videogames. We find that status has a positive effect on project quality up to a certain point, and thereafter it has a negative effect on quality. In addition, status increases the absolute deviation from the expected project quality. Our study offers important insights for both theory and practice into the role of status and social capital in uncertain activities.

[1] A short version of this study has been published in the *Academy of Management Best Paper Proceedings* in 2014.

INTRODUCTION

High-status organizational members are likely to be put in charge of particularly important tasks, because they are perceived to be highly competent (Ibarra & Andrews, 1993). Their competent image, valuable connections and access to resources helps high-status actors to overcome the irrational resistance that for instance innovation projects often face (Axtell, Holman, Unsworth, Wall, & Waterson, 2000; Baer, 2012; Battilana & Casciaro, 2012). However, because perceptions of the underlying quality of such high-status individuals can be erroneous and biased (Lynn, Podolny, & Tao, 2009), there is reason to believe that those around them may give undue weighting to the contributions made by high-status individuals. In fact, innovation projects of high-status individuals are often overvalued even though the projects in question actually have a low quality. Thus, besides overcoming irrational resistance, high-status actors may also create irrational support for their low-quality innovation projects (i.e., projects that exhibit low performance because of an inappropriate fit with the market or organizational needs). In this study, we address this problem.

In order to study how the status of individuals affects the quality of their innovation projects, it is crucial to consider how organizations and their members respond to the uncertainty that these innovation projects face and how decisions about innovation projects are made and shaped. Organizational responses to uncertainty are driven by managerial cognitions (Eggers & Kaplan, 2013). However, uncertainty increases the cost of obtaining reliable information, and hence increases the need for informal indicators of quality (Green, Welsh, & Dehler, 2003; Podolny, 2005; Barczak, Griffin, & Kahn, 2009).

Especially when there is high uncertainty, the status of an individual is seen as an indicator of whether he or she will be able to provide high-quality work (Podolny, 1994). High status also shows that someone has social capital (Oldroyd & Morris, 2012; Call, Nyberg, & Thatcher, 2015). While social capital might provide a useful way for individuals to attract organizational support, both for themselves and for their high-quality projects, it can also create the conditions in which low-quality projects are regarded as suitable for implementation. Following this argument, we predict that status will have a curvilinear effect on innovation project quality. Furthermore, since individuals with very high status have received unconditional support, we expect that high status will lead to greater variation in performance, captured by the deviation of the expected quality of the project in question. Consequently, organizational members with very high status are more likely to be associated with projects that lie at the extremes in terms of project quality. In order to test our hypotheses, we conducted a social network analysis of project leaders managing innovative product development projects in the videogame industry. This is an appropriate setting in which to test our theory, since it is a dynamic and uncertain industry (Venkatraman & Lee, 2004) where informal quality indicators such as status should have a decisive effect on organizational decision-making.

Our study offers several important contributions. First, while status research has already recognized the possible biasing effect of status (Reitzig & Sorenson, 2013), we advance this literature by exploring the effects of status on quality. Our results imply that when individuals benefit from overvaluation of quality (Merton, 1968; Kim & King, 2014), this may in fact have negative effects on innovation project quality. Second, social network scholars have convincingly demonstrated the effects of social capital on

individual (Reagans & McEvily, 2003; Moran, 2005) and team performance in organizations (Hansen, 1999; Hansen, Mors, & Løvås, 2005). However, very little is known about the potential detrimental effects of social capital on project quality (Ferriani, Cattani, & Baden-Fuller, 2009). We show that status, measured in terms of social capital (Bonacich, 1987), has an inverted U-shaped relationship with project quality. Third, we offer important insights for innovation and project management theory. Scholars in this area have focused on how organizational support can be created for uncertain projects (Axtell et al., 2000; Baer, 2012; Battilana & Casciaro, 2012). However, we find that high levels of support can in fact be detrimental to the quality of innovative projects.

Finally, increasing attention is being given to the antecedents of extreme performance — the absolute deviation from the expected outcome (Chatterjee & Hambrick, 2007; Sanders & Hambrick, 2007). Our key addition to the literature is to demonstrate that high status can be a contributory factor in absolute deviation from the expected quality, both positive and negative. While previous scholars focused on personal characteristics and risk-taking behaviour (Chatterjee & Hamrick, 2007; Sanders & Hamrick, 2007), we show that the way in which individuals are perceived by others within their organizational environment in terms of their social relationships is an important factor why a project does not achieve the expected outcome (Graffin, Bundy, Porac, Wade, & Quinn, 2013), and can result in the project drifting significantly from the level of quality expected. This means that high-status actors have a significantly higher risk of producing project failures with greater consequences. It is crucial to increase our understanding of the factors that lead not only to great project successes but also to great project failures, as a single failure is often enough to put the organization itself in danger. Organizations tend to

expose their top performers in particular to situations which may give them high visibility and acclaim, thus increasing their status (Oldroyd & Morris, 2012). However, we show that this might not be desirable in all cases — for instance, when those individuals are engaged in uncertain innovation projects.

STATUS AND DECISION-MAKING

Formal decision-making is inhibited by uncertainty as the costs of collecting reliable information are higher (Podolny, 2005). As a result, there is a greater reliance of informal decision-making criteria. For instance, in a study on new product development Barczak, Griffin, and Kahn (2009) found that only 60 percent of the projects were selected to progress to the development process using formal criteria. The rest are selected on the basis of informal criteria. In addition, Green, Welsh, and Dehler (2003) found that decisions to continue with projects and management advocacy for product development projects cannot be explained entirely by objective evaluation criteria. Thus, it seems that, when faced with uncertainty — as is the case with many innovation or product development projects (Moenaert & Souder, 1990) — managerial cognition substantially determines the effectiveness of resource allocation and organizational responses.

The question of what shapes decision-makers' cognitions is ripe for future research. One promising stream of research for future studies is that of status. When there is a high level of uncertainty in the decisions that have to be taken, people's status can have a very strong influence on decision-making processes (Podolny, 1994). For example, Podolny and Stuart (1995) found that the status of actors in a particular technological niche influences

the likelihood that subsequent innovations will build upon a particular innovation of that niche. Moreover, Reitzig and Sorenson (2013) showed that middle-managers are less likely to accept strategic initiatives by individuals from subunits different from their own. This negative biasing effect can be offset by the status of the subunit from which the initiative originates. Thus, status seems to be an important factor in determining decision-making effectiveness.

Despite the critical role of status in project-related decision-making, not much is known about the relationship between status and performance in the implementation of projects. By performance, we mean the extent to which an innovation project fulfils its intended purpose. For instance, in the case of new product development, a high-performing project is one that achieves success on the market. In other words, there is a good product–market fit (Sethi et al., 2012). In this study, we capture this product-market fit by the quality of the innovation project that is implemented and commercialized on the market. High-status individuals are probably more likely to be associated with, or to associate themselves with, high-quality projects. However, our interest lies in the effect of status on the internal project selection environment in organizations. We see status as a critical factor that influences how projects are perceived and supported by the rest of the organization. Previous research suggests that status leads to performance advantages due to an increased *recognition* of quality, often referred to as the Matthew effect (Merton, 1968). All other things being equal, high-status individuals will arguably deliver more valuable contributions to an organization. Since they are considered to be better performers, they are more likely to be given valuable opportunities and resources that they can use to improve their future performance (Stuart, Hoang, & Hybels, 1999).

In this study, we focus on the consequences of how high-status actors are perceived. As such, our theory is mainly alter-centric, meaning that it describes how the members of project leaders' social network perceive and generate support for projects depending on the status of project leaders. Obviously, the degree to which project leaders gain support from others for their projects might also have consequences for how these project leaders perceive themselves. Yet, the starting point of our theory are always the alters. Thus, our theory differs from ego-centric ones in the sense that ours focuses on why high-status project leaders are given more freedom to realize great successes, as well as failures. Ego-centric theories would be appropriate to answer research questions such as why project leaders, who experience that they have high status, might behave in a more risk-taking way (e.g., Jordan, Sivanathan, & Galinsky, 2011). We test our theory in the context of innovation projects of the most successful companies in the videogames industry — a context that has high managerial relevance. This is an uncertain environment in which a prerequisite for successful project implementation is the ability of middle-managers (i.e., project leaders) to influence the organizational decision-making mechanisms, either directly or indirectly. Therefore, the main reason of the performance outcomes of status in this context roots in the perception of alters, not in the variation in the behaviour of focal persons (egos).

We extend existing studies and examine how status affects project quality and the variation in quality. We focus on both quality and variation in quality to provide a complete picture of the quality effects of project leader status. Whereas a project leader's ability to affect the quality of his or her project depends on the conditions that enables him or her to perform well, status affects variation in project quality through its effect on the

project selection environment that determines which projects get sustained or terminated during the implementation process. In other words, a low-status project manager is less likely to get low-quality projects implemented. In contrast, when a high-status project leader is associated with a low-quality project, this project will often not be terminated due to the influence of the project leader's status in the project-related decision-making process.

STATUS AND PROJECT QUALITY

We argue that project leaders have a very important impact on their teams' performance (Mollick, 2012) and on the organizational decision-making processes, both of which should have important implications for project quality. Previous research has provided some evidence of a positive relationship between status and performance, because status shapes the perceptions of others. For instance, research at the firm level shows that high-status partners obtain public funding faster (Stuart et al., 1999) and have more bargaining power (Phillips, 2001). Furthermore, high status implies greater social capital (Knoke & Burt, 1983; Oldroyd & Morris, 2012; Call et al., 2015). In the social network literature, social capital has typically been associated with access to non-redundant and high-quality information (Hansen, 1999; Burt, 2004) and expertise (Lee, 2010). Therefore, high-status network members get more help from their network contacts (Brass & Burkhardt, 1993; Bunderson, 2003; Sparrowe & Liden, 2005; Battilana & Casciaro 2012). This, for example, creates the support needed for them to increase the speed at which they implement projects (Dayan, Elbanna, & Di Benedetto, 2012). Hence,

status should lead to valuable opportunities to implement a high-quality project that will perform well on the market.

However, status can also be detrimental. Because high-status individuals are seen as highly competent (Simcoe & Waguespack, 2011) and as more effective leaders (Sande, Ellard, & Ross, 1986), they might be given undue support by the organization for their activities. In consequence, other members of the organization may not be critical enough of the work of those high-status individuals, and may also overvalue the output of individuals with high status (Kim & King, 2014). Therefore, the perception of a high-status individual's project's quality might be biased by the overvaluation of quality high-status individuals benefit from. As a result, when a low-quality project is associated with high-status individuals, others are less likely to see the project's flaws, and high-status individuals will be less likely to receive the valuable and honest feedback they need in order to improve their work. The importance of feedback in task-related performance has long been recognized in previous research (Kluger & DeNisi, 1996). Ultimately, not receiving critical task-related feedback might therefore result in poorer project quality.

Status can also be detrimental for a second reason. High-status individuals are more likely to be invited to give public talks, asked to lead more important tasks and projects, and given more public acclaim and recognition (Bothner, Kim, & Smith, 2012; Oldroyd & Morris, 2012). This has two important consequences. First, high-status individuals tend to be distracted from their project-related activities (Bothner et al., 2012). Second, their positive image within the organization is likely to be reinforced, and this may in turn alter their own self-perceptions (Gioia, Hamilton, & Patvardhan, 2014). While others in the organization instigate the reinforcement process, the consequence is that high-status

individuals may become overconfident about their own capabilities (Bothner et al., 2012). Both, distraction and overconfidence, can prevent a high-status project leader from finding a good product–market fit, which can result in lower project quality. To summarize, we expect that status will have an inverted U-shaped relationship with project quality. That is, status opens up important opportunities for individuals to boost their project's quality by accessing high-quality resources and non-redundant information or by using their network to exert influence. For these reasons, status should increase project quality, but only up to a certain point. Too high status may become a liability because it inhibits the flow of valuable task-related feedback and leads to distraction, and both of these may reduce the likelihood of finding an appropriate product-market fit.

Hypothesis 1: There is an inverted U-shaped association between status and project quality.

In the following section, we argue that another possible side-effect of status may be higher absolute deviation from expected quality, in particular because high-status individuals might significantly affect organizational decision-making. That is, high status might lead to great successes but also to great failures. While most individuals are motivated to protect their status, high-status individuals are particularly effective at doing so because of their network position and image of perceived competence. First of all, due to their network position, high-status individuals are in a particularly advantageous position to share positive beliefs about themselves and their projects throughout the whole organization (Burt, 1992; Royer, 2003). Moreover, they tend to have more valuable connections which can be beneficial for implementing certain concepts and ideas (Baer, 2012). These arguments suggest that the networks of high-status individuals are more

suitable for the implementation of innovation projects which may face resistance in the organization (Sethi et al., 2012). It is reasonable to assume that the other organizational members raise less barriers to the implementation of innovation projects of high-status project leaders, since the contribution of high-status organizational members tend to be overvalued (Kim & King, 2014). Consequently, other organizational members have a more positive attitude toward the projects of high-status project leaders compared to those of their low-status counterparts, as their projects are seen more valuable regardless of their actual quality.

Status might also be crucial in maintaining support for innovation projects throughout the whole implementation process. High-status members of an organization are often sought out by others for advice and guidance (Oldroyd & Morris, 2012) because they appear to be more competent and able to deliver what is expected from them by other organizational members (e.g., Kilduff & Krackhardt, 1994; Ibarra & Andrews, 1993; Stuart et al., 1999; Chattopadhyay, Finn, & Ashkanasy, 2010). Therefore, if the decision-makers have any doubt regarding certain innovation projects, those doubts are more likely to disappear when a high-status member attempts to dispel them. Thus, by exploiting their image and network, high-status individuals are better able to gain support for their innovation projects. A belief that is adopted by most members of an organization is likely to be adopted eventually by the remaining organizational members (Abrahamson, 1991). This means that, even when the management's performance expectations are initially not so promising with respect to a certain project, they are rather reluctant to terminate a project of a high-status member, since they also might adopt the positive belief in the project. It is also likely that terminating such a project may incur disapproval from people

at other levels within the hierarchy, and might then harm the image of the person making that decision, as he or she might be perceived as a barrier to innovation.

The possible biases that status may create have important consequences for the effectiveness of organizational decision-making. While status can be seen as a means to overcome organizational resistance, it may also generate unconditional support for innovation projects, regardless of their quality, because other organizational members tend to believe that high-status individuals will deliver what is expected from them. On the one hand, this can prevent decision-makers from terminating valuable projects which would otherwise have been stopped because of the threat they posed to the organization's current status quo (Sethi et al., 2012). On the other hand, status might also lead to the continuation of low-quality projects. Status might therefore lead to the implementation both of projects that are extremely successful and of ones that are very marked failures. In other words, status might result in larger deviation — both positive and negative — from the expected quality level of the innovation project (Sanders & Hambrick, 2007). That is to say, status can not only suppress irrational resistance but can also generate irrational support.

Hypothesis 2: There is a positive association between status and absolute deviation from the expected project quality.

METHOD

Sample and Setting

We tested our hypotheses in a new product development context because innovation projects incorporate a high level of uncertainty (Moenaert & Souder, 1990). Hence, status should have an observable effect in such a context (Podolny, 1994). We collected data on innovation projects from the online database *MobyGames.com*, which contains information about most of the videogames developed from 1972 onwards. The videogame industry is an appropriate setting for our study, as it allows us to construct accurate professional networks of game developers (Cattani & Ferriani, 2008) in an uncertain and complex environment (Venkatraman & Lee, 2004). The database contains project quality data based on user ratings and review scores from industry critics. An attractive feature of the dataset is that it allows us to use a standardized measurement, enabling us to make reliable comparisons between quality scores for projects with different sizes of development and advertising budgets and to compare projects aimed at different market segments. Finally, the archived data allows us to investigate more effectively sensitive topics such as the possible negative side-effects of status. Other data collection methods (e.g., surveys) are argued to be less appropriate for this type of research (Chatterjee & Hamrick, 2007).

Our study focuses on the status of the project leader. In our setting, the project leader is the main game producer for each videogame project (Mollick, 2012). We consider videogame projects to be innovation projects because they are concerned with generating

and implementing novel ideas (Scott & Bruce, 1994; Yuan & Woodman, 2010). The producer function is a senior role undertaken by a person who takes full responsibility for managing the project as a business, including delivering a finished product on time (Irish, 2005). The videogame industry has gone through significant growth and technological change over the last decades, and with product development increasing in complexity as a result, there came a need for a formal overarching role of this kind (Irish, 2005). While the producers facilitate all decisions of the product development team, their role also involves ensuring that their projects get the necessary resources and advocacy from the executive management. They do so by evangelizing the product in the organization and by eliminating all barriers to product development (Irish, 2005). Since top managers in game development and publishing companies typically make decisions on whether or not to go ahead with a project after interacting with the producer of the project (Irish, 2005), the producer has a direct influence on project implementation and continuation decisions.

We decided to narrow down our selection to the projects of a set of successful companies that were either dominant throughout the whole observation period or were on the path toward establishing dominance. We did so to test our theory in a conservative setting, because the effectiveness of project-related decision-making in such successful companies was better than that of most of other organizations. In order to select these organizations, we used the database of Euromonitor International (2013) that has been monitoring the global video game market since 2008. Using this database, we selected all the companies that were in the top 10 companies in terms of global market share in at least one of the years between 2008 and 2012. Our selected companies jointly and consistently held at least 60 percent of the global market share during this period. Every additional

company would increase the market share we cover by less than one percent. All of these companies were either dominant or on the path of becoming dominant before 2008, and therefore, their decision-making mechanisms were presumably successful — successful enough to enable them become dominant or maintain their dominant position.

Using this sampling strategy, we initially ended up with 12 companies. These organizations are considered the most dominant videogame developer companies in the given time frame. However, three out of these 12 companies were a result of mergers between two separate organizations. Therefore, we also included the merging companies before the merger as two separate entities and as a third separate entity after the merger, which had the combined experience and knowledge base of the two merging organizations. We found 4,741 projects (out of 7,771) for which there was information about the developer team. Using all the information from these 4,741 projects, we constructed separate longitudinal affiliation networks for each of the 18 companies so that we could get a reliable picture of the producers' network position in their organizations. We subsequently selected all projects where we could identify the main producer, and where this role could clearly be associated with one and only one person (1,842 projects). This was necessary because sometimes a project might have several main producers with equal positions. However, we were interested in how a single individual can affect project quality in a more formalized environment. We did not find such a project in one of the organizations, so we ended up with 17 companies. Given that the role of producer has appeared relatively recently, selecting projects with a single producer led to a sample of more recent projects (from 1987 onwards). Another reason for selecting more recent

projects is that the industry was very small and growing slowly before 1990 in terms of employees and videogames produced.[2]

An affiliation network is a network of vertices connected by common group memberships such as projects, teams, or organizations (Cattani & Ferriani, 2008). Social network analysts have a long tradition of analysing affiliation networks, such as co-authorships (McFadyen & Cannella, 2004) and collaborations among Broadway artists (Uzzi & Spiro, 2005). Newman, Watts, and Strogatz (2002) argue that affiliation networks tend to be more reliable than friendship ties, for example, since group membership can be identified with greater precision. Following prior social network analysis research, we used a three-year moving time window (Uzzi & Spiro, 2005; Cattani & Ferriani, 2008): that is, there was said to be a tie between two persons if they had worked together on to implement at least one project in the three years prior to a given year.

Dependent Variables

Project quality. We measure project quality by the user ratings and review scores from critics that can be found on the website *MobyGames.com*. The former is the average of the ratings from the website's user community. It has been widely argued that customer satisfaction is positively associated with market success, thus this can be regarded as a reliable measure of project performance (Rego, Morgan, & Fornell, 2013). The critic review score is the combination of reviews and rankings of each game from professional critics and reviewers from a number of industry-specific online, television, and print

[2] We compared the mean quality scores of projects with a single producer with those of all other projects, but the difference was statistically insignificant ($t = 0.63$, $p > .10$).

media. The scores for the critic reviews and user ratings were measured using different scales. The critic review scores varied between 0 and 100, with 100 representing the most positive review, whereas user ratings were on a scale of 0 to 5, with 5 representing the highest rating. We standardized the two scores by multiplying the user rating scores by 20, and took the average of both scores to get a combined project quality score. If one of the scores was missing (as happened 379 times for the critic review score and 163 times for the user ranking score out of the 1,842 projects), we took the other score as the final quality score. Our measurement makes product quality scores comparable across time and organizations.[3]

Project quality deviation. Following the steps taken by Sanders and Hambrick (2007), we operationalized project quality deviation as follows: We first regressed project quality on all our variables, including our main independent variables (status and status squared) to predict what project quality can statistically be expected from project leaders (χ^2 = 10,003.4, $p < 0.0001$). We then took the absolute value of the residuals of this regression because we were interested in the absolute deviation from the expected quality level, regardless of its direction (Sanders & Hambrick, 2007). We also checked our results measuring project quality deviation by the absolute deviation of the quality of the project in question from the average quality of all projects the producer had implemented before the release of the video game in question, controlling for the average quality of all previous projects of the same producer. The results were similar to those reported in this study.

[3] We compared the mean quality scores of the projects from the 17 successful companies with those of all the projects implemented by other organizations. As expected, the difference was statistically significant (μ_1-μ_2 = 4.35, t = 18.22, $p < 0.0001$). Thus, the 17 successful companies implemented projects that subsequently achieved higher quality scores than other companies.

Independent Variable

Status. We measure individuals' status in their organization based on their network position in their organization. We apply Bonacich's centrality measure to our affiliation network matrices using the following formula (Bonacich, 1987; Podolny, 2005; Rider, 2009; Bothner et al., 2012):

$$S_{ikt}(\alpha, \beta) = \sum_{j} (\alpha + \beta S_{jkt}) d_{ijt}$$

where S_{ikt} denotes the status of actor i, in firm k, at time t, where t is the release year of the game in question, and d_{ijt} denotes whether nodes i and j have implemented a project together in the three years prior to time t (i.e., the year in which the game was published).[4] Note that we looked at the whole network in these companies, not only ties between leaders. Since we are interested in an actor's organizational status, we did not use industry awards as a measurement of individuals' social ranking in their organization given that industry awards are typically given to acknowledge only exceptional artistic performances (Cattani & Ferriani, 2008). As the vast majority of project leaders and organizations never get any award, awards cannot be used to rank individuals in the social hierarchy of their organizations (i.e., to measure their status). Another consequence of analysing individuals' organizational status is that we did not include ties that stem from an actor being involved in implementing a project in a completely different organization, without any collaboration

[4] We also considered reconstructing the social hierarchy by calculating which project leaders outperform other project leaders, following Bothner, Kim, and Smith (2012). In our context, this would be inappropriate though, since the fact that a project leader outperforms another can be attributed to many different things. This is not the case in the driving and athletic contests studied by Bothner *et al*. (2012). Despite the fact that one project leader performs better than another, those within their environment may still hold that second individual in higher regard, because, for instance, he or she has penetrated a new market for the firm. Hence, as Waguespack and Sorenson (2011) did when investigating the film industry, we measure status based on undirected project affiliation relationships. However, following Rider (2009), we apply Bonacich's power centrality instead of degree centrality in undirected affiliation networks, because it is not simply the number of relationships that matters but also the centrality of those with whom an individual has worked.

with the organization in question before year t. We selected the scaling parameter α, so that, in each year, actors with entries equal to 1 do not get disproportionally high or low status scores (Bonacich, 1987). Following Grigoriou and Rothaermel (2014), we measured status based on the relative centrality of each individual compared to other individuals in an organization. Therefore, we rescaled the centrality scores, such that they add up to 100 for each year in each firm, thereby enabling us to compare centrality scores across companies and years (Borgatti, Everett, & Johnson, 2003). We chose 100 for interpretive purposes. β is a parameter that denotes the travelling distance of communication in the network. Essentially, β serves as a length-based weight that can be adjusted when calculating the status score of a given node in order to weight the status scores of nodes that are further away from that node. In this study, β is set to ¾ of the inverse of the highest normed eigenvalue of the corresponding affiliation matrix, in line with prior network analytic studies (Podolny, 2005; Rider, 2009; Bothner et al., 2012). Thus, the connectedness of two nodes which are far away from each other in the network is relatively unimportant in determining their status scores due to the low weight their connectedness has in calculating their status scores.

Control Variables

Project-level variables. We include the year of release of the game as a continuous variable to control for trends, technological changes, and changing user and critic perceptions over time.[5] Furthermore, we include project team size as a proxy for

[5] We also considered using year indicators, but it did not result in a significantly better model ($p > 0.99$), and none of the year indicators were statistically significant. Therefore, in this paper, we present the more parsimonious model, including the year of release as a continuous variable.

development budget. We also control for both newness-to-market and newness-to-firm of the project as an indicator of the risk and organizational resistance associated with a project, and of the producer's ability to link it to the current organizational status quo in order to overcome this resistance (Sethi et al., 2012). To obtain these variables, we used 62 category codes drawn from information found on the *MobyGames.com* website. The category codes can take values 0 or 1, with 1 meaning that the game fits in a certain category (e.g., action game, racing game, etc.). This resulted in a 62-digit code for each project that captured the product's main characteristics. Newness-to-market is included in our models as a dummy variable, where 1 means that the combination of category codes given to the project is completely new — i.e., there had been no similar game published between 1972 and the year in which the game in question was published (in time t). Newness-to-firm is calculated in a similar way, but the project's category codes are compared only to those of other projects developed or published by the company in question before time t. Moreover, whether a game is licensed or not might affect the amount of resources the team has access to and other organizational members' perceptions of the project. A licensed game is an adaptation of a movie (e.g., James Bond movies), a comic book (e.g., Superman), or a TV series (e.g., Star Trek). One might assume that in the case of such videogames, consumers tend to decide to buy these products irrespective of its quality. Hence, these projects might get less resources and result in a lower quality product. We control for this effect by including a dummy variable, with 1 meaning that the game is licensed. We also control for whether a project is externally developed; that is, the publisher company is not identical to the developer company. We do so because externally developed projects might get different amounts of resources from internally developed ones, and externally developed projects might also have a greater division of labour in the

development and publishing activities. Moreover, a producer might find it more difficult to create commitment to externally developed projects. Finally, we include the project's target group, since it may affect resource access and the ability of the project leader to sell the project to top management. This is because each target market is associated with different levels of risk. The target market is determined by the scores of the Entertainment Software Rating Board (ESRB). The ESRB assigns age and content ratings for video games and specifies the appropriate target group for each videogame: everyone, everyone10+, kids to adults (changed to "everyone" after 1998), teen, and mature. We control for target market by including four dummy variables in our analyses with "everyone" being the reference category.

Producer-level variables. We control for the number of parallel projects a producer implements in year t, since this might affect his or her ability to allocate enough time to the managing the project in question. In addition, we control for the project leader's experience, which is the sum of all the projects the producer has implemented in all the previous years. We control for network constraint because it might affect an individual's innovation-related performance and his or her ability to broker between people (Burt, 1992, 2004). To compute network constraint, we applied Burt's constraint measure which is given by the following formula (Burt, 2004): $c_{ij} = \left[p_{ij} + \sum_q p_{iq} p_{qj}\right]^2;\ i \neq j$, where p_{ij} is the proportion of i's network time and energy invested in actor j. Finally, we included past performance as a producer-level variable, because past performance might be an indicator of individual competencies which might be stable traits underlying individual performance (Groysberg & Lee, 2008). Previous research has repeatedly and convincingly demonstrated that there is a strong relationship between previous and future performance

(Groysberg & Lee, 2008; Lee, 2010). Past performance is the mean of project quality scores of all projects implemented by a certain producer before a given year. Including this variable significantly reduced our sample size (to 349 projects), since it could be constructed only for those projects where the producer had carried out at least one project before a given year. Therefore, we also ran models without including past performance. Results from this analysis are very similar to the findings we report in this paper.

Firm-level variables. We included firm innovativeness because novel projects might face less resistance in firms which are more open to highly novel projects (Sethi et al., 2012). To construct firm innovativeness in a given year, we aggregated the number of projects which were new-to-market in a firm's project portfolio in year t-1, t-2, and t-3, and divided this measure by the sum of all firm projects implemented in the same time window. We applied a moving time window for firm-level variables, because the company culture and the review process, hence firm innovativeness as well, can be seen as dynamic characteristics. It is important to control for the number of firm projects implemented by a firm in t-1, t-2, and t-3 because a large number of implemented projects might indicate that there is relatively little resistance to novel products within the firm and that it has a flexible project review process. Finally, since we rescaled the status scores so that they added up to 100 in each year in each firm, status may be seen as a function of firm network size, because the larger the network size, the more distributed status scores become. Therefore, it is also important to control for firm network size.

Analysis

After excluding all observations with relevant missing data, we ended up with 349 projects, involving a total of 179 producers from 17 companies. The mean of the quality scores of excluded observations did not significantly differ from that of our final sample ($t = 0.62$, $p > .10$). Since there might be within-cluster dependence among the observations, we built a linear mixed effects model in which we included the project leaders as a level 2 and the companies as a level 3 random effect. Since project quality has a normal distribution, whereas project quality deviation has a positively skewed distribution, we also checked our results using generalized linear mixed effects models to predict project quality deviation. Our results were similar to those reported in this paper. Also, to prevent high multicollinearity, we mean-centered the status scores before entering the linear and squared terms in our regression model to predict project quality and deviation from the expected level of quality. Another issue inherent in social network analysis is the violation of the assumptions of non-independence of the observations and the normality of distribution of population variables (Borgatti et al., 2003). To obtain p-values free from these assumptions, we also did permutation tests (Lewis, Kaufman, Gonzalez, Wimmer, & Christakis, 2008), and we found additional support for our findings. We decided to report the results from our mixed effects regression as these models allow us to take into account the hierarchical nature of the data.

RESULTS

In Table 1, we report descriptive statistics as well as bivariate correlations. Since we rescaled status scores such that they sum up to a hundred in each year in each firm, one point in status score corresponds to the percentage an individual captures from the organizational status scores in his or her organization. No project leader was able to capture significantly more than two percent of the organizational status scores between 1987 and 2012 in our sample. Note that we included only middle-managers with the same formal role (i.e., producers) and no member of the top-management (e.g., CEOs) in our analysis. Based on their status scores, we define the following categories of project leaders to ease the discussion of the results: (1) low-status project leaders who own only a negligible proportion of the organizational status scores (close to zero percent), (2) middle-status project leaders who capture about one percent of the organizational status scores, and (3) high-status project leaders who capture close to two percent of the organizational status scores. Finally, Table 1 suggests that status significantly and positively correlates with project quality, but not with project quality deviation.

Table 2 presents our statistical analyses of how a project leader's status affects project quality. Hypothesis 1 predicted that there is an inverted U-shaped relationship between status and project quality. Our results show support for Hypothesis 1, as we find that the coefficient of the linear term of status is positive (β = 14.93, $p < .05$) and that of the squared term of status is statistically significant and negative (β = -8.88, $p < .05$). Thus, very high values of status no longer have a positive effect on quality: the effect is in fact negative. In order ease the interpretation of the effect size, we plotted the effect of status

TABLE 1
Descriptive Statistics and Correlation Matrix[a]

	Variable	Mean	s.d.	Min	Max	1	2	3	4	5	6	7	8	9
1.	Project quality	75.76	10.84	20.5	89.5									
2.	Performance quality deviation	6.23	5.09	0.05	31.51	-0.45*								
3.	Status	0.14	0.26	0.00	2.08	0.19*	0.02							
4.	Year of release	2002.02	4.89	1987	2012	-0.05	-0.07	-0.52*						
5.	Project team size	150.99	211.89	7	2885	0.05	-0.04	-0.19*	0.42*					
6.	Newness-to-market	0.20	0.40	0	1	-0.02	0.07	-0.01	0.01	-0.02				
7.	Newness-to-firm	0.42	0.49	0	1	0.20*	-0.15*	0.25*	-0.05	-0.01	0.00			
8.	Licensed	0.21	0.41	0	1	-0.25*	0.11*	-0.15*	-0.07	0.02	-0.12*	-0.22*		
9.	External development	0.52	0.50	0	1	-0.20*	0.17*	-0.25*	0.05	0.07	-0.01	-0.80*	0.17*	
10.	Target group: Everyone	0.42	0.49	0	1	-0.03	-0.03	-0.07	0.16*	-0.16*	-0.02	0.14*	0.08	-0.21*
11.	Target group: Everyone 10+	0.07	0.25	0	1	0.02	-0.02	-0.10	0.50*	0.10	-0.02	-0.10	0.00	0.10
12.	Target group: Kids to Adults	0.17	0.38	0	1	0.09	0.03	0.39*	-0.66*	-0.21*	-0.03	0.05	0.11*	-0.04
13.	Target group: Mature	0.09	0.28	0	1	-0.05	-0.03	-0.09	0.11*	0.27*	0.02	-0.06	-0.14*	0.12*
14.	Target group: Teen	0.25	0.43	0	1	-0.03	0.04	-0.15*	0.15*	0.13*	0.06	-0.11*	-0.09	0.13*
15.	Parallel projects	1.70	1.08	1	6	0.07	0.05	0.34*	-0.40*	-0.23*	0.07	0.10	-0.02	-0.18*
16.	Experience	4.27	5.94	1	34	0.21*	-0.10	0.44*	-0.20*	-0.18*	0.00	0.25*	-0.12*	-0.23*
17.	Network constraint	0.02	0.03	0.00	0.25	-0.05	0.01	0.17*	-0.43*	-0.19*	0.06	-0.06	0.07	0.01
18.	Past performance	74.95	9.29	32	100	0.33*	-0.20*	0.18*	-0.05	-0.10	0.01	0.23*	-0.24*	-0.20*
19.	Firm innovativeness	0.20	0.07	0	0.53	0.08	-0.05	0.12*	-0.27*	-0.21*	0.01	0.09	-0.07	-0.01
20.	Number of firm projects	73.95	40.23	2	190	-0.12*	0.10	-0.34*	-0.05	0.01	-0.08	-0.29*	0.26*	0.29*
21.	Firm network size	4423.14	3723.71	86	20199	-0.08	0.00	-0.41*	0.54*	0.45*	-0.07	-0.19*	0.18*	0.27*

	Variable	8	9	10	11	12	13	14	15	16	17	18	19	20
9.	External development	0.17*												
10.	Target group: Everyone	0.08	-0.21*											
11.	Target group: Everyone 10+	0.00	0.10	-0.23*										
12.	Target group: Kids to Adults	0.11*	-0.04	-0.39*	-0.12*									
13.	Target group: Mature	-0.14*	0.12*	-0.27*	-0.08	-0.14*								
14.	Target group: Teen	-0.09	0.13*	-0.49*	-0.16*	-0.26*	-0.18*							
15.	Parallel projects	-0.02	-0.18*	0.00	-0.08	0.34*	-0.12*	-0.17*						
16.	Experience	-0.12*	-0.23*	0.12*	-0.06	0.21*	-0.12*	-0.20*	0.35*					
17.	Network constraint	0.07	0.01	-0.04	-0.08	0.18*	0.01	-0.07	0.02	-0.11*				
18.	Past performance	-0.24*	-0.20*	0.04	-0.03	-0.02	-0.01	-0.01	0.09	0.24*	-0.07			
19.	Firm innovativeness	-0.07	-0.01	-0.06	-0.07	0.17*	-0.04	-0.02	0.04	0.09	0.12*	0.10		
20.	Number of firm projects	0.26*	0.29*	-0.07	0.02	0.17*	-0.08	-0.02	-0.12*	-0.17*	-0.21*	-0.17*	-0.15*	
21.	Firm network size	0.18*	0.27*	0.03	0.20*	-0.33*	0.05	0.10	-0.34*	-0.29*	-0.27*	-0.21*	-0.37*	0.48*

[a] n = 349, project leaders = 179, companies = 17
* p < .05

on project quality in Figure 2 with 95 percent confidence interval. For interpretive purposes, we used uncentered status scores. It can be seen that middle-status project leaders implement projects with the highest project quality scores. Middle-status project leaders implement projects that tend to be evaluated about eight points higher compared to projects that are implemented by low-status project leaders. Furthermore, high-status project leaders with high status tend to implement projects with similar scores compared to low-status project leaders on average. We also find support for Hypothesis 2 which predicted a positive linear association between status and absolute deviation from the expected quality (β = 3.65, p < .05) (see Table 2). Hence, we may conclude that the positive relationship between status and project quality deviation is statistically significant. That is, the status of project leaders increases the absolute deviation from their project's expected quality level in both directions. More specifically, when project leaders capture one more percent from the organizational status scores, their projects tend to deviate from the expected level of quality with 3.65 more quality scores, in either positive or negative direction. Thus, the positive effect of status on project quality turns to be negative for very high values of status, while status has a linear positive effect on project quality deviation. This implies that project leaders with a very high status not only exhibit diminishing performance, but also great variation in project quality.

Provided that middle-status project leaders tend to implement projects with quality scores which are eight points higher than their low- and high-status counterparts on average, we argue that status can make a difference, since this difference is close to the standard deviation of project quality scores in our sample (10.84). Thus, the effect size of status on project quality is substantial (Hypothesis 1). Moreover, whereas high-status

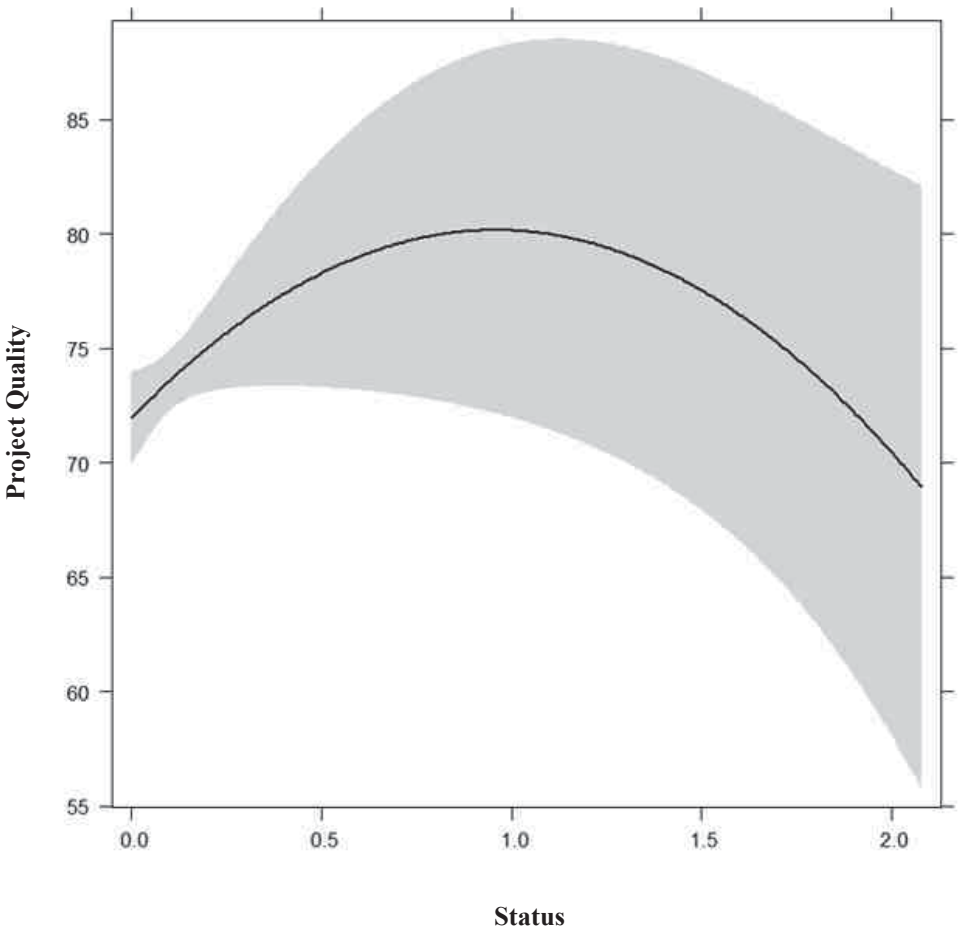
TABLE 2
Estimates for Mixed Effects Models of Project Quality and Project Quality Deviation[a]

	Project quality		Project quality deviation	
Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Constant	3.10	3.84^{+}	-1.51	-1.35
	(2.20)	(2.21)	(0.96)	(0.97)
Year of release	0.03	0.19	-0.03	0.07
	(0.22)	(0.25)	(0.10)	(0.11)
Project team size	0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Newness-to-market	-1.38	-1.72	0.92	0.93
	(1.29)	(1.30)	(0.62)	(0.61)
Newness-to-firm	-1.09	-1.26	0.48	0.35
	(2.16)	(2.15)	(0.95)	(0.95)
Licensed	-5.31***	-5.01**	1.00	1.19^{+}
	(1.53)	(1.53)	(0.69)	(0.69)
External development	-3.81^{+}	-3.87^{+}	1.90*	1.88*
	(2.13)	(2.11)	(0.94)	(0.94)
Target group controls	Included		Included	
Parallel projects	0.03	-0.08	0.38	0.41
	(0.62)	(0.62)	(0.29)	(0.29)
Experience	0.11	-0.01	-0.09	-0.09
	(0.14)	(0.15)	(0.06)	(0.06)
Network constraint	-0.47	11.42	-5.02	0.11
	(25.20)	(26.11)	(11.74)	(11.84)
Past performance	14.01	9.38	-7.03	-6.67
	(9.81)	(9.97)	(4.38)	(4.40)
Firm innovativeness	-0.02	-0.00	0.01	0.02*
	(0.02)	(0.02)	(0.01)	(0.01)
Number of firm projects	0.00	0.00	-0.00	-0.00^{+}
	(0.00)	(0.00)	(0.00)	(0.00)
Firm network size	0.03	-0.08	0.38	0.41
	(0.62)	(0.62)	(0.29)	(0.29)
Status		14.93*		3.65*
		(7.58)		(1.53)
Status × Status		-8.88*		
		(4.02)		
Log Likelihood	-1292.61	-1290.20	-1027.36	-1024.63
Number of observations	349	349	349	349
Number of project leaders	179	179	179	179
Number of firm IDs	17	17	17	17
Variance: Project leaders	36.00	34.64	3.00	3.73
Variance: Firm IDs	0.00	0.00	0.00	0.00
Residual	70.87	70.38	18.59	17.74

[a] Standard errors are in parentheses.
*** $p < 0.001$,
** $p < 0.01$,
* $p < 0.05$,
$^{+}$ $p < 0.10$
Two-tailed tests.

project leaders tend to implement projects with quality scores which are eight points lower on average compared to their middle-status counterparts, the variation in project quality

FIGURE 2
The Effect of Status on Project Quality



scores they exhibit leads them to reach the average quality scores of middle-status project leaders in some cases. The expected deviation increases by β_{status} (3.65) with each status score. Thus, high-status project leaders tend to exhibit $2\times\beta_{status}$ ($2\times3.65=7.3$) scores higher deviation in either direction compared to their low-status counterparts. While, on

the one hand, this allows them to reach the quality scores of their high-performing middle-status counterparts, on the other hand, it also leads to the implementation of projects with low quality, projects with quality scores about 7.34 points lower than those of low-status project leaders. Hence, we suggest that the size of the effect of status on quality deviation is also of high practical importance (Hypothesis 2).

In addition, according to an unsealed agreement between a game developer and a major game publisher company a quality score of 80 is an important threshold for video games companies.[6] The contract stipulates that the publishing company will have the right to terminate the contract for the development of a series of video games, if the evaluation score of a particular game in question developed by the same developer does not reach the score of 80 in the database of *GameRankings* or *MetaCritic* which, very similar to *MobyGames.com*, aggregate user and critique review scores from a large variety of websites. According to our results, only the project quality scores of middle-status project leaders and some projects of high-status project leaders tend to reach 80 (out of 100). Based on our theory, we argue that there are different reasons for why high-status leaders reach scores of 80 compared to middle-status project leaders. Whereas middle-status managers are more likely to reach the score of 80 because of their superior performance compared to other project leaders, some high-status project leaders tend to reach 80 because of the high variation in quality scores they exhibit. Low-status project leaders are less likely to reach such a score compared to their middle- and high-status counterparts,

[6] Activision-Bungie contract. This document was ordered to be unsealed by the Los Angeles Superior Court and provides the public with in-depth details of an agreement between a game developer and a major game publisher company. Retrieved from http://documents.latimes.com/bungie-activision-contract on 05/01/2013.

since their projects tend to be of lower quality. Moreover, their projects exhibit a low variation in quality scores.

Based on previous research on status, one may argue that the effect of status on quality is in fact due to how status leads to an increased attention (Azoulay, Stuart, & Wang, 2014) and to how it shapes the perceptions of critiques and users. For instance, Kovacs and Sharkey (2014) have found in the book market that an increase in status can cause a shock that results in a higher number of evaluations and lower product evaluation scores by the readers of an online book review website. They conclude that readers do pay attention to status signals. Thus, an increase in status may lead to a more heterogeneous audience and that more people might be disappointed with a certain performance because they had higher expectations. We argue that such a concern is not valid in the case of our study for two reasons. First, users and critiques tend to be aware of the person of the project leader to a much lesser extent in the case of video games compared to products of other industries, such as books and their writers or films and their film producers. In the video game industry, critiques and users pay more attention to the organization itself instead. Second, in this study, we are mainly concerned with each individual's organizational status, which is most of the time unknown to stakeholders outside of their organization. We do acknowledge however that industrial status, which is outside of the scope of this study, may affect evaluation scores to a larger extent compared to the project leaders' organizational status.

In order to find support for our claims above, we collected data on the number of reviews each video game gets to capture the amount of attention each product gets from the market (critiques and users). The correlation between the number of reviews and the

status of project leaders is in fact not positive but negative (r = -0.03) albeit close to zero. The status of the firm however, measured by the power centrality of the organization that released the game[7], correlates positively and more strongly with the number of reviews (r = 0.10). We also collected information on the number of awards each video game got from the Academy of Interactive Arts and Sciences.[8] As expected, the industrial status of project leaders, measured by the number of awards all the projects got in which they participated in the past, positively correlates with the number of reviews (r = 0.02), although the correlation is weak. The status of the organization on the other hand, measured by the number of awards each firm got in the past, correlates stronger with the number of reviews (r = 0.21). Furthermore, we also regressed our variables used to predict project quality and quality deviation on the number of reviews using mixed effects models, and the results were qualitatively similar to those of our correlation analysis reported in this paragraph. Hence, we conclude that the effect of project leader status on quality occurs not because of how project leader status might influence the perceptions of critiques and users.

DISCUSSION

In this study, we explored the effect of status on project quality and project quality deviation. By analysing data on social networks of videogame developers retrieved from an extensive online database, we tested and found support for our theory. Our first hypothesis concerned the curvilinear relationship between status and project quality, which

[7] Here, the construction of the affiliation networks of organizations was very similar to that of individual networks. Thus, there was a tie between two firms, if they had developed or released a video game together in the previous three years before a given year, and β was set to ¾ of the inverse of the highest normed eigenvalue of the corresponding affiliation matrix.

[8] D.I.C.E. awards. Retrieved from http://www.interactive.org on 02/01/2015

appeared to be supported in our multilevel analysis. We explain this finding by arguing that, on the one hand, status facilitates access to more diverse and higher quality resources (Ancona & Caldwell, 1992). On the other hand, too high a status creates an environment that leads to distraction from project-related activities (Bothner et al., 2012) and to a lack of valuable task-related feedback. We also found strong support for our second hypothesis concerning the positive association between status and absolute deviation from the expected quality. Our finding leads us to conclude that high-status individuals tend to implement projects that exhibit high variation in terms of project quality. This is because high-status individuals are in a better position to gather unconditional support. Whereas very high status creates distraction, and prevents individuals from receiving honest and valuable task-related feedback, it also leads to unconditional support that helps them to keep their projects alive, even when the performance expectations are less promising.

One might find it surprising that the predicted level of quality is similar for project leaders whose status is very high compared to their low-status counterparts (Figure 2). However, previous theory offers some plausible explanations for why this might be the case. Since high-status individuals are motivated to protect their status (Ridgeway & Walker, 1995), they are more likely to direct most of the attention to their successes rather than their failures (Smith-Doerr, Manev, & Rizova, 2004). Low-status individuals lacking of such a motivational factor might be rather motivated to discuss and learn from their failures.

Implications

Our study makes several important contributions. Scholars of social network theory have typically seen social capital as an asset that increases the innovation performance of individuals (e.g., Moran, 2005), teams (e.g., Hansen, 1999; Hansen et al., 2005), and firms (e.g., Ahuja, 2000). We contribute to this literature by showing that being well-connected and occupying a central location in a network (i.e., our measure of status) may have detrimental effects on project quality. Being connected to the right people (Baer, 2012) has significant benefits in terms of enabling a leader to gather the necessary support for projects, but only up to a certain point. When high-status organizational members receive excessive attention due to their extremely positive image, they start to experience distraction and receive feedback which is less critical. As such, individuals start to perform less well once they have a very high level of status. We demonstrate that being well-connected also has the effect of creating unconditional support, increasing an individual's ability to continue with less valuable projects that would otherwise not have reached the marketplace, and that, once on the market, perform below expectations.

Second, we advance the literature on new product development by demonstrating that status can have disadvantages when developing innovative projects and products. Previous research suggests that status and access to resources and social capital offer important advantages for product development (Ancona & Caldwell, 1992), increase the speed of implementation (Dayan et al., 2012), and help individuals to overcome organizational resistance (Sethi et al., 2012). While not denying the advantages of status for new product development, we show that status can in fact be a double-edged sword, as it can overcome irrational resistance but can also engender irrational support. Green et al.

(2003) found that top management advocacy for projects is affected by a set of unobserved performance thresholds that are independent of the project's expected performance. Our study sheds more light on these thresholds by identifying status as an important factor that might lower these thresholds.

Third, we provide important insights for theory on status. Reitzig and Sorenson (2013) showed that middle-managers might be positively biased toward strategic initiatives developed by high-status business units. We extend these insights by showing the consequences of the biasing effect of status concerning project implementation. Most importantly, we demonstrate that status can lower project quality or result in high deviation from the expected quality. That is, while high status can create the necessary conditions for superior quality, at the same time it can also increase the likelihood of significant failures. Other actors in the network of high-status individuals find it difficult to accurately assess the quality of those individuals' output (Kim & King, 2014). While status theory generally assumes that this perceptional bias might increase the subsequent performance of high-status individuals (Merton, 1968; Kim & King, 2014), we argue that this might not necessarily be the case. Since other members of the organization of a high-status individual often barely countenance the possibility of failure when it comes to evaluating the activity of such individuals, high status might result in both decreasing project quality and in a higher absolute deviation from the expected quality.

Managerial Implications

Our findings offer important insights for managerial practice. First, our results suggest that managers should implement various measures in their decision-making processes in order to reduce the negative biasing effect of status, particularly when a "star" (i.e., high-status) organizational member is in charge of a project. One way of doing this might be to increase the formalization and to reduce the flexibility of the review process (Sethi & Iqbal, 2008). Second, top-performers are very often celebrated within organizations and become very high-profile, with their status increasing accordingly (Oldroyd & Morris, 2012). Our study reveals that, especially when an individual has acquired very high status, this might not always be beneficial because his or her performance might turn out to suffer as a result. To improve the quality of projects of low-status individuals, managers need to find ways of boosting their status within the organization. They might do this, for example, by introducing them to important and well-connected organizational members, or by assigning them to work with high-status individuals. Finally, it can be argued that our study offers valuable guidelines for top management teams about who to assign the role of project leader to, based on the resource needs of projects. Extrapolating from our findings, we believe that it is reasonable to argue that top managers should assign project leaders with medium status to manage costly projects. This will maximize project quality and minimize the chance of huge failures that would do serious damage to the organization's profits.

Limitations and Directions for Future Research

The most important limitation of our study is that we had insufficient information on precisely how and when status might be affecting project selection and continuation decisions. Future research could examine the decision-making process in greater detail to assess what positive and negative effects status may have at different points in that process. It is possible that the main reason why higher status leads to greater variation in performance is because high-status project leaders are already influencing the project selection process in the front-end of the product development process (Reitzig & Sorenson, 2013). At this stage, there is the highest level of uncertainty, so high-status project leaders have more freedom in framing the project idea, as under such conditions, people tend to engage in framing activities which are likely to be dominated by high-status individuals (Kaplan, 2008; Sethi et al., 2012). It is also plausible that high status may escalate commitment to a project during the development phase. Even where other people's faith in a project and their expectations of its likely performance drop significantly, high-status organizational members may try to keep their project alive by exerting their influence and mobilizing support in order to "save face" (Guler, 2007) until such point as they can blame any lack of performance on other external factors such as market conditions.

Furthermore, we did not have information on projects that were not implemented. Hence, one may argue that our data did not in fact reflect the actual social networks of the companies analysed in this study — a common limitation in social network studies aimed at analysing affiliation networks (e.g., McFadyen & Cannella, 2004; Cattani & Ferriani, 2008). While we recognize the importance of this limitation, it can nevertheless be argued that affiliation networks serve as an adequate proxy for the actual social network.

Moreover, it can also be argued that this type of critique is less applicable to status studies, since the main focus of such studies is not analysing the communication or information flow in the network but the effect of how individuals' ability to provide high quality work is *perceived*. We believe that ties stemming from projects that have been implemented should contribute to individual status to a greater extent than ties stemming from projects that have not been implemented.

Another limitation of our study concerns our company selection strategy. We tested our theory in a sample of all the projects of game developer companies that were among the top 10 most dominant companies between 2008 and 2012. These organizations are the ones that managed to become dominant and maintain their dominant position throughout our whole observation period (between 1987 and 2012). We argued that successful companies had a better than average decision-making system with respect to their project selection and sustainment decisions. Using arbitrary thresholds is a common practice in management research (e.g., Fortune 500 companies). Moreover, we believe that it is theoretically interesting that status influences project quality and its variation in successful companies. Nevertheless, future research should test our theory in a sample of highly unsuccessful companies as well. For instance, it is possible that status has the potential to affect the effectiveness of project-related decision-making even more negatively in unsuccessful companies, because such organizations presumably have fewer measures to mitigate the effects of their biases in their decision-making processes. Alternatively, it is also possible that status in fact has a smaller effect in highly unsuccessful companies, since their decision-making processes are prone to bigger problems than the biasing effect of status, which prevent status from unfolding its effect.

Finally, it is important to note that there are connections between the status of particular individuals, since their status often comes from being associated with other high-status individuals or institutions (Waguespack & Sorenson, 2011; Reitzig & Sorenson, 2013; Stern, Dukerich, & Zajac, 2014). Thus, the status of a project leader is strongly related to the status of his or her team. Although we expect that project leader and team status are very similar constructs which will have very similar effects on the organizational decision-making process, team status is beyond the scope of our study, because we are interested in the impact that a single middle-manager can have on the performance of his or her project and team (Mollick, 2012).[9] Future research should explore the extent to which these constructs are identical and the implications of this.

To conclude, this study is an important first attempt to theorize and empirically test how project quality is affected by organizational status derived from an individual's relationships, and through it, we demonstrated that status can be potentially damaging in an organizational setting because of its biasing effect on organizational decision-making.

[9] In our sample, the correlation between project leader status and the average status scores of team members, excluding the score of the project leader him-/herself, is very high ($r = 0.86$, $p < 0.001$), implying that these constructs are very similar in nature, if not the same, and including both of them in a regression model would result in very high multicollinearity.

CHAPTER III

BLINDED BY STATUS?
HOW ORGANIZATIONAL INNOVATIVENESS MODERATES THE EFFECT OF STATUS

ABSTRACT

This study explores when organizations should mobilize high-status project groups to implement innovations. We hypothesize that project group status has a positive effect on innovation project performance. However, we also suggest that this effect depends on how supportive the environment is of the innovation-related activities of the group, as reflected by organizational innovativeness. In order to test our hypotheses, we analyse a unique dataset which combines social network and sales data from the video games industry. We find support for both the positive effect of project group status on innovation project performance and the negative moderating effect of organizational innovativeness. Implications for theory and practice are discussed.

INTRODUCTION

When are groups composed of "star" employees unlikely to fulfil the high expectations associated with realizing projects? Star employees are individuals who have high status in an organization and who are often expected to do better at innovation because of their perceived competence and strong network position (Oldroyd & Morris, 2012). Decision-makers might intuitively be motivated to assign star employees to important projects. This is thought to increase the status of the project group which could be important for the success of the project. Indeed, previous research suggests that since status leads to admiration and increased attention (Azoulay, Stuart, & Wang, 2014; Merton, 1968), it has important advantages. For instance, high-status management groups are found to have exclusive access to high-quality resources (Stuart et al., 1999). They are argued to have more informal influence (Sande, Ellard, & Ross, 1986) and they also capture greater value from their network (Castellucci & Ertug, 2010). High-status groups are also in a better position to form and maintain alliances (Stern et al., 2014). Finally, they seem to be more successful in implementing their innovation projects (Reitzig & Sorenson, 2013). As such, one would expect that the status of a project group should lead to better innovation performance in general, mainly because it gives a group exclusive access to high-quality resources that can be utilized to improve project innovation quality (Merton, 1968).

In this paper, we look at innovation project performance defined as the extent to which an innovation project fulfils its intended purpose (e.g., Sethi, Iqbal, & Sethi, 2012). For a new product development project, for instance, this would correspond to the

revenues generated by the project (Sethi et al., 2012). Although previous theory might suggest that the positive relationship between status and innovation project performance is relatively straightforward, in environments that are highly supportive of innovation, status might be more detrimental, and therefore, should have a less positive effect on innovation project performance. This is counterintuitive, given the better access to resources that high-status groups enjoy. We argue, however, that in environments where innovation is supported, status will lead to inefficient use of resources by the project group. In turn, this might be harmful for innovation project performance. It is important to discover what effect status has on performance in such environments because it also improves our understanding of how innovative organizations can increase their performance and competitiveness. To develop our theoretical framework, we draw from status theory and focus specifically on how high-status groups and their competence are *perceived* by others (Podolny, 2001).

In this paper, we examine the moderating effect of organizational innovativeness. Organizational innovativeness reflects the extent to which the organization that the project group belongs to is supportive of innovation projects. Since implementing innovations usually involves a high level of uncertainty (e.g., Moenaert & Souder, 1990), environments which support innovation are inherently tolerant of uncertain activities. As such, our theory is not about how uncertainty alters the effect of status (e.g., Podolny, 1994; Podolny & Stuart, 1995), but about how other organizational members' tolerance toward uncertainty may change the way that status affects performance in innovation projects that involve uncertain activities. When there is a high level of support, the social surroundings of a high-status group tend to become less critical. Two things can then happen. First, this leads

to a lack of motivation on the part of the project group to utilize resources effectively. Second, the feedback received by the group is likely to be less valuable in terms of improving the project. So, in innovative settings high-status groups will exhibit less performance advantages over low-status groups compared to low-innovative settings. Therefore, we hypothesize that organizational innovativeness negatively moderates the relationship between project group status and innovation project performance. We test our hypotheses in a new product development context, using a unique dataset in which we combined data on sales and social networks in the video games industry.

Our study offers an important contribution to two different streams of literature. First, we contribute to status theory by showing that the mechanisms of the Matthew effect can in fact backfire when the environment (i.e., the project group's organization) is supportive. While status theory scholars often argue that because of the expectations attached to high status, it should lead to better performance (Azoulay et al., 2014; Kim & King, 2014; Merton, 1968), we show that status can also lead to resources being allocated to projects which eventually perform poorly, especially when the group operates in an innovative setting. As such, our study contributes the ongoing debate about whether status is advantageous for performance (see Bothner, Kim, & Smith, 2012) by showing that the effect of group status depends on how supportive the environment is of innovation-related tasks. Second, innovation management scholars have typically seen status or influence as a beneficial tool for the implementation of innovations. Influence is said to facilitate better access to resources (Ancona & Caldwell, 1992) and faster implementation (Dayan et al., 2012), and reduces the need for detrimental political compromises (Sethi et al., 2012). We,

on the other hand, show that in innovative settings the informal influence which status bestows can in fact be detrimental to innovation project performance.

THEORETICAL BACKGROUND

Status and Uncertainty

Status is a one-dimensional indicator of the underlying quality of an actor (Jensen & Roy, 2008). By definition, status is positively associated with an actor's ability to provide high-quality work (Podolny, 2005). However, status research suggests that people can derive additional benefits from their status beyond what might be explained by their actual contribution to an organization, because being perceived to be competent can bring some important advantages (Stern et al., 2014; Stuart et al., 1999). Status scholars refer to these advantages as the Matthew effect, a phenomenon in which high-status actors are perceived to be highly competent, and are therefore given greater recognition and access to resources. Subsequently, high-status actors can capitalize on that recognition and access to resources and can improve their performance even further (Azoulay et al., 2014; Merton, 1968).

The reason why status is related to access to resources and performance is its effect on perceptions. Social actors in general are motivated to seek connections with other actors who signal a high potential to create high-quality work. People expect that such connections will offer them various tangible and intangible benefits (Jensen, 2006). However, it is difficult to determine whether someone will actually be able to deliver high-

quality work when there is a great deal of uncertainty about the underlying quality of individuals and their contributions. For example, in innovation-related activities, at the point when a decision about the implementation of the project needs to be made, it is difficult to assess whether an actor is capable of overcoming all the foreseen and unforeseen difficulties involved. Hence, uncertainty increases the cost of collecting reliable information about quality (Podolny, 2001). Under such conditions, decision-makers increasingly rely on broader quality indicators such as status because these are more apparent and thought to reflect actual quality (Podolny, 2001). For instance, Reitzig and Sorenson (2013) have shown that decision-makers rely on status to make their task of project evaluation easier. Thus, high-status actors are perceived to be highly competent, and are therefore sought-after and given more attention, especially in uncertain contexts (Oldroyd & Morris, 2012).

We expect that the effect of status on performance might be contingent on how uncertainty is perceived: in other words, on the extent to which uncertainty and uncertain activities of social actors are perceived positively. Whereas Podolny (2001) argues that perceptions of uncertainty vary depending on whether they are those of an ego (i.e., the person in question) or an alter (i.e., someone else within that person's environment), we expect that these perceptions might also differ between two different alters, because of differences in attitudes, biases, etc. As such, our study is alter-centric. It focuses on how other people within the environment of a particular group perceive and support the innovation-related tasks that the group is undertaking (which might have consequences for how the group reacts to this support). In particular, we argue that the innovativeness of an

organization shapes the way in which people within that organization perceive uncertainty about project groups and the quality of their contributions.

While the moderating effect of uncertainty on the relationship between status and performance has been explored before (e.g., Podolny, 1994), we contribute to status theory by investigating the moderating effect of organizational innovativeness which reflects the uncertainty-tolerance of the organization. We suggest that organizational innovativeness moderates the effect of project group status on innovation project performance in the implementation of innovations. Uncertainty and uncertainty-tolerance are different, albeit related, constructs. It is important to increase our understanding of the interaction between status and organizational innovativeness, since although the status literature would suggest that uncertainty magnifies the effect of status on performance, uncertainty-tolerance – as reflected in how innovative an organization is – might have the opposite effect on this relationship.

In the next section, we elaborate on our arguments as to why this might be so. Innovation project performance refers to the extent to which an innovation project fulfils its intended purpose. We investigate innovation project performance in the video game industry, where project performance is measured by the revenues generated by the piece of software in question. A project group is a collection of individuals who participate in the implementation of a project. We look at project group status, because, theoretically, everyone's status matters when other organizational members are assessing the underlying quality of the project group and of the project being implemented. That said, not everyone's status in a group matters to an equal extent – in terms of the overall status of the group those with more status carry more weight than those with low status. We now

develop our hypotheses with respect to the effect of project group status on innovation project performance and the moderating effect of organizational innovativeness.

HYPOTHESES

Project Group Status

The core of our argument is that status leads to actors being given exclusive access to high-quality resources and that this should increase innovation project performance. We have three main reasons to expect so. First, we propose that high-status groups receive more attention. They attract attention from others in the organization who are part of their social network (Oldroyd & Morris, 2012). For instance, it has been argued that status leads to visibility in the field of science (Azoulay et al., 2014; Judge, Cable, Colbert, & Rynes, 2014; Merton, 1968) and also in the film industry (Perretti & Negro, 2006). This visibility means that the projects of high-status groups are more likely to be spotted and recognized within a portfolio of projects. Attention is a scarce resource in organizations (Pfeffer, 1994), and those groups who are the most visible are better at attracting the attention of other people. In turn, attracting sufficient attention is a necessary condition for getting access to resources from the organization.

Second, the contributions made by high-status groups are not only more visible, but their underlying quality is typically also valued more highly. As status can be seen as an indicator of a group's ability to provide an organization with work of a quality that is valued (Podolny, 1993), members of high-status groups are regarded as more competent

than others (Chattopadhyay, Finn, & Ashkanasy, 2010; Oldroyd & Morris, 2012). Furthermore, it is not only the group's underlying quality that tends to be overvalued, but also the projects that they work on (Kim & King, 2014). It is likely that decision-makers will take the perceived competency of the group into account when they have to make a judgment on the potential of a project and whether or not resources should be allocated to it. For instance, when a project is associated with a high-status group, decision-makers may assume that the project group will be more successful at overcoming problems and setbacks.

Finally, as a consequence of receiving greater attention and recognition, high-status groups have a broader network which they can draw on. Specifically, they have not only more connections, but also more valuable connections with key decision-makers (Baer, 2012). Getting support for their projects from such members helps them even more to implement their projects. Therefore, we expect that through their network, and because of their visibility and image of competence, high-status groups will have better access to organizational resources (e.g., financial resources, help, information, etc.). These resources are likely to be more difficult for low-status groups to access (Brass & Burkhardt, 1993). For these reasons, we argue that group status is likely to lead to an increased access to resources, which should have a positive effect on innovation project performance (Ancona & Caldwell, 1992). This is because with access to more financial, human, and social capital, an innovation project group can apply more expertise to improve the quality of a project idea and implementation process and to overcome any difficulties that may arise during the development of a project (Ancona & Caldwell, 1992).

Hypothesis 1. Group status has a positive effect on innovation project performance.

Organizational Innovativeness

We argue next that organizational innovativeness – an indicator of the extent to which a group's environment is supportive of activities that are inherently uncertain – should moderate the effect of group status on project performance. Organizational innovativeness is characterized by "a basic willingness on the part of the organization to depart from existing technologies or practices and to venture beyond the current state of the art" (Lumpkin & Dess, 1996: 142). In an environment of this kind, managers and employees are supportive of taking action even when there is a high level of uncertainty. In such contexts, innovation projects face significantly less political resistance than would be found in firms with a low degree of organizational innovativeness (Sethi et al., 2012). As firms with a high degree of organizational innovativeness are more tolerant of failure (Tian & Wang, 2014), they are more likely to let projects develop before weeding them out. Thus, these organizations tend to apply a more risk-taking approach in their innovation-related activities. Less innovative organizations, on the other hand, are less likely to go ahead with and support the development of innovative projects because they are more risk-aversive.

The main point of our first hypothesis was that high-status groups are better able to gather resources in order to implement their project (Reitzig & Sorenson, 2013). In organizations that are less innovative, undertaking any form of innovation is understandably more difficult, given that people within such organizations are generally unwilling to challenge the status quo. Despite the fact that high status might signal that the group is capable of high-quality work, in less innovative organizations, high-status groups still have to justify their actions and are given less freedom regarding the use of

organizational resources. Thus, in less innovative settings, even high-status groups need to justify why they need resources and prove that resources allocated to them are used in the most effective and efficient way. The fact that they need to prove their competence and to justify their requests for resources motivates them to think more about how they should use those resources. In addition, they should feel a stronger motivation to repay the trust that others put into them by trying to performing better (Bothner et al., 2012). Finally, since high-status groups are subject to challenge in firms with a low degree of innovativeness, the feedback they receive should be more critical and thus more valuable. This feedback should give them more opportunities to identify flaws in their project and to improve their work. In contrast, low-status groups have limited access to resources to begin with, even though they are able to provide sound justification for allocating resources to their projects. Hence, they are expected to perform worse than high-status groups in organizations with a low level of innovativeness.

Other than in firms with a low degree of innovativeness, the culture in more innovative organizations can be seen as supportive of innovation. Employees and managers in these organizations have a higher tolerance of uncertain activities. Such environments nurture innovation-related activities and risk-taking behaviour. As such, the project review process is more flexible and groups have more freedom to decide how to use their own resources and those of the organization (e.g., consider Google's 20 percent time policy to support employees to create their own projects or join other projects). In such innovative organizations, high-status groups are given more scope to decide how to use their resources and are challenged less than those of lower status. This is because high-status groups signal that they are doing a high-quality job. One of the results may be that

they become less concerned about justifying why they need resources or considering how those resources are used, and complacency may set in (Bothner et al., 2012). Furthermore, in such environments, project groups with high status should be more effective at building on the excitement which other organizational members feel because of the innovative nature of their projects (Schmidt & Calantone, 2002). Indeed, those within more innovative organizations are likely to be more appreciative of the innovative nature of projects, and where a particular innovation is managed by a high-status group, they will feel more certain that the group will implement it successfully. As such, high-status groups get less valuable feedback – feedback which is essential for improving performance (Kluger & DeNisi, 1996). Indeed, feedback is critical so that projects groups can identify weaknesses in their projects and improve their work. On the contrary, the activities of low-status groups are monitored more closely, as others within the organization are less certain that these groups will perform well. Therefore, low-status groups are given more critical, and thus valuable, feedback from which they can identify important flaws in their projects. This should have a positive effect on their performance. For this reason, we expect that the effect of group status on innovation project performance is less positive in organizations with a high level of innovativeness. While status gives better access to resources in general, in more innovative settings, it also leads to more complacency and less valuable feedback that may have a countervailing effect in such settings.

Hypothesis 2: Organizational innovativeness negatively moderates the relationship between group status and innovation project performance.

METHOD

Sample and Setting

We tested our hypotheses in a new product development context because innovation projects involve a high level of uncertainty. Hence, status should have an observable effect in such contexts (Podolny, 1994). Our specific setting is the videogame industry. We consider videogame projects to be innovation projects because they are concerned with generating and implementing novel ideas (Scott & Bruce, 1994; Yuan & Woodman, 2010). Our dataset is combined from two sources. First, we collected data on innovation projects from the online public database *MobyGames.com*, which contains information about most of the videogames developed from 1972 onwards. *MobyGames.com* lists their goal as: "*To meticulously catalog all relevant information about electronic games (computer, console, and arcade) on a game-by-game basis, and then offer up that information through flexible queries and data mining. In layman's terms, it's a huge game database."*[10] Second, we use data on the sales figures of video games collected from the NPD Group. The NPD Group collects information for most major retailers on the sales of most console video games sold in the US between 1995 and 2014. This dataset contained information on more than 13,000 projects, many of which relate to the same video game but developed for multiple platforms.

The videogame industry is an appropriate setting for our study as it allows us to construct accurate professional networks of game developer groups (Cattani & Ferriani, 2008) in an uncertain and complex environment (Venkatraman & Lee, 2004). The archived

[10] *MobyGames.com* FAQ, available at http://www.mobygames.com/info/faq (04/09/2015)

data allows us to investigate more effectively sensitive topics such as the possible negative side-effects of status. Other data collection methods (e.g., surveys) are argued to be less appropriate for this type of research (Chatterjee & Hambrick, 2007). From *Mobygames.com* we collected the names and positions of the developer group members, and some of the more important characteristics of more than 41,000 videogames. We needed to narrow down our analysis from the global market, because, to the best of our knowledge, there is no detailed information on the monthly sales performance of all the video games released all over the world. This is important because monthly sales data allow us to compare revenues generated by each video game using time-windows of the same length for each video game. In this study, we apply a twelve-month time-window. We focus on the US market, because it has been by far the largest video game market since 2000.[11]

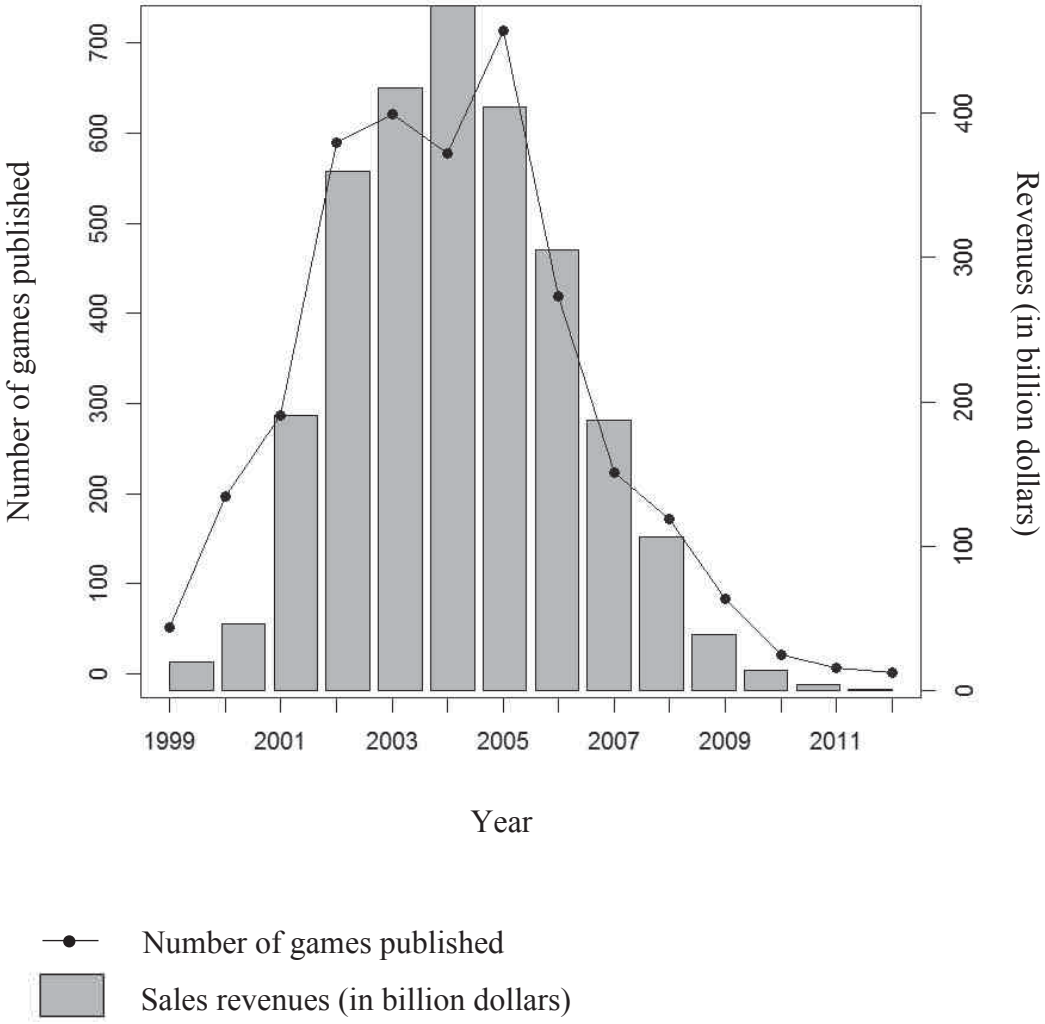
We chose to focus on sixth-generation consoles, because that was the newest platform generation for which the whole life cycle was covered by our data. The term "sixth-generation consoles" refers to a family of video game consoles that have the computational capacity to produce 128-bit graphics, as opposed to earlier 64- and 32-bit consoles. Sixth-generation consoles include the following consoles: Dreamcast, PlayStation 2, Gamecube, and Xbox. The life cycle of this generation ranges from November 1998, when Dreamcast was released, to January 2013, when Sony announced that the production of PlayStation 2 had been discontinued worldwide.[12] For this platform generation we have information about nearly all video games which were released for this

[11] Euromonitor International database, available at http://www.portal.euromonitor.com/Portal/Default.aspx (01/08/2015)
[12] The Guardian, available at http://www.theguardian.com/technology/2013/jan/04/playstation-2-manufacture-ends-years (01/08/2015)

platform and the revenues these games generated in the US (see Figure 3). We did not focus on the seventh-generation consoles because the life cycle for these consoles is not yet complete, given that a significant number of games are still being developed and released. Following Mollick (2012), we decided to focus on a single platform, because the financial performance of video games is highly dependent on the success of platforms for which they have been developed. In so doing, we filtered out every platform-related effect from our analysis. In Figure 4, it is clear that, in terms of games developed for sixth-generation platforms, PlayStation 2 had the largest market share of revenues throughout the whole lifecycle of these platforms, except in 1999 and 2000. In 1999, there was only one sixth-generation console available, the Dreamcast. After the release of PlayStation 2 in 2000, games developed for PlayStation 2 quickly took over. Therefore, we focus on video games developed for PlayStation 2. This reduced our sales data to 2,113 projects released between 2000 and 2012.

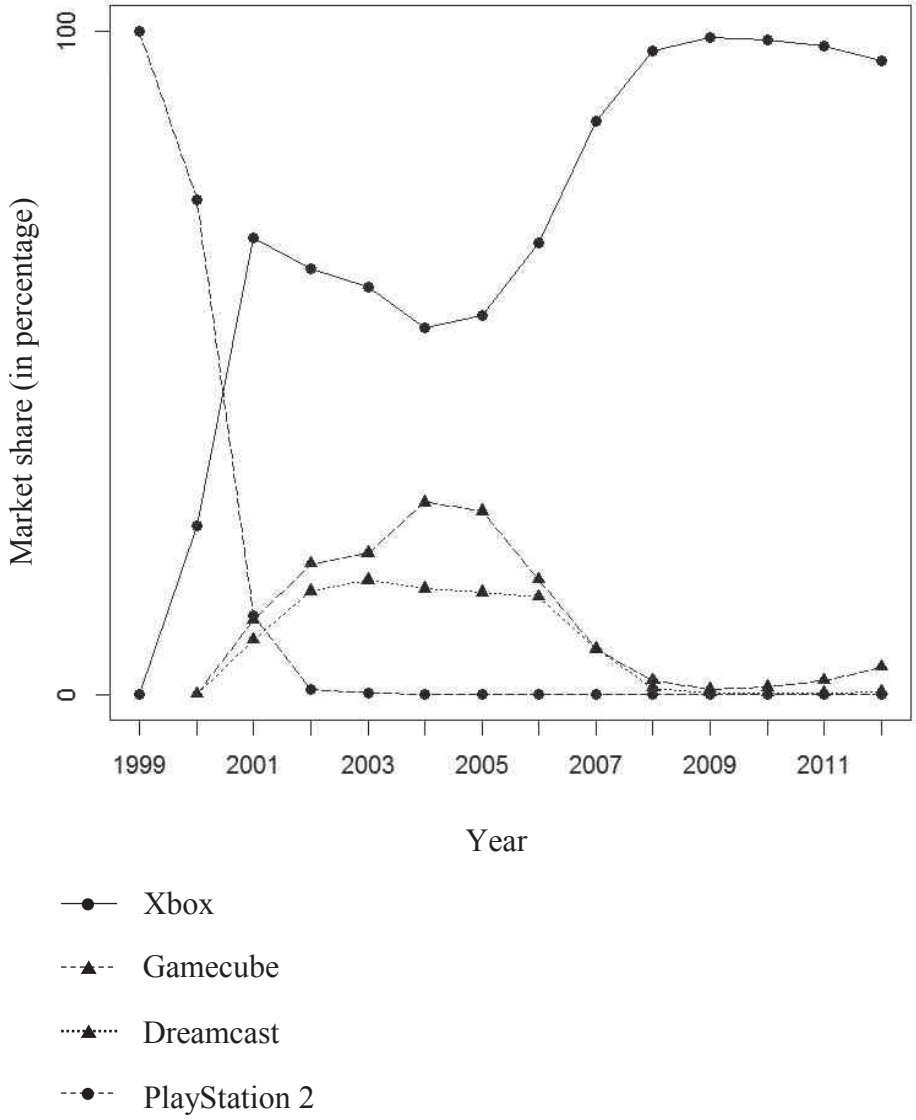
We decided to limit our analysis to the companies that were most dominant globally, because what most interests us are the mechanisms used by members of companies when deciding which projects to prioritize, and the support, resources and feedback provided during the development of those projects. Only large established organizations can serve as a context for our analysis because they generally develop a number of projects in parallel, with substantial development budgets, something that smaller players and new entrants usually cannot do. Larger companies also tend to have more experience and use a more structured form of implementation in order to ensure high revenues from their projects. Smaller companies, however, may develop many games with relatively low investment. In their case, poorly performing products are just a natural

FIGURE 3
Number of Games Published for Sixth-generation Consoles in the US and Their Accumulated Revenues in Each Year from 1999 to 2012



Source: NPD Group

FIGURE 4
The Market Share of Video Games Developed for Each Sixth-generation Console in Terms of Revenues in Each Year between 1999 and 2012



Source: NPD Group

consequence of the experimental approach taken in their development and the company's lack of experience and resources. This approach enabled us to test our theory in a conservative way.

In order to select these companies, we used both the databases of NPD Group and Euromonitor International. The latter has monitored the global video market since 2008.[13] Since the US video game market has been and still is by far the largest one in the world, we assumed that the most dominant companies in the US market can also be seen as dominant actors globally. Given our focus on the global leaders, we selected projects from those firms that were part of the 10 most dominant companies in terms of global or US market share in any of the years between 2000 and 2012, because these companies had, together, consistently held more than 60 percent of the global market share between 2008 and 2012 and consistently held more than 80 percent of the US market share between 2000 and 2012 (Cattani & Ferriani, 2008). In the end, our sample consisted of 307 projects developed between 2000 and 2012 by 20 companies.

We constructed separate longitudinal affiliation networks based on all available information on all the projects of these 20 companies between 1997 and 2012, regardless of the platform for which they were developed (3,024 projects). This enabled us to gain a reliable picture of every individual's network position in his or her organization. We looked at projects between 1997 and 2012, because we used a three-year lagged time-window to construct the affiliation networks for projects released between 2000 and 2012. An affiliation network is a network of vertices connected by common group memberships

[13] Euromonitor International database, available at http://www.portal.euromonitor.com/Portal/Default.aspx (01/08/2015)

such as projects, teams, or organizations (Cattani & Ferriani, 2008). Social network analysts have a long tradition of analysing affiliation networks, such as co-authorships (McFadyen & Cannella, 2004) and collaborations among Broadway artists (Uzzi & Spiro, 2005). Newman, Watts, and Strogatz (2002) argue that affiliation networks tend to be more reliable than friendship ties, for example, since group membership can be identified with greater precision. Following prior social network analysis research, we used a three-year moving time window (Uzzi & Spiro, 2005; Cattani & Ferriani, 2008): that is, there was said to be a tie between two persons if they had worked together to implement at least one project in the three years prior to a given year. We set the boundary of each affiliation network around one organization, because organizational members can have only a very limited insight into the interorganizational ties of their co-workers. Thus, interorganizational ties might influence other organizational members only to a very limited extent.

Dependent Variable

Innovation project performance. We used sales data from NPD Group (Mollick, 2012). We summed the revenues generated by each videogame in the twelve months after a game was released in order to investigate the performance of each game in equal-length time-windows. Since the video game industry is a hit-driven industry, the revenues are highly skewed. We therefore took the natural logarithm of sales (Mollick, 2012).

Independent Variables

Group status. Following Waguespack and Sorenson (2011) and Grigoriou and Rothaermel (2014), we derive each group member's status based on his or her position in the affiliation network. We measure status by applying Bonacich's centrality measure to our affiliation network matrices using the following formula (Bonacich, 1987; Podolny, 2005; Bothner et al., 2012):

$$S_{ikt}(\alpha, \beta) = \sum_j (\alpha + \beta S_{jkt}) d_{ijt},$$

where S_{ikt} denotes the status of actor i, in firm k, at time t, where t is the release year of the game in question, and d_{ijt} denotes whether nodes i and j have implemented a project together in the three years prior to time t (i.e., the year in which the game was published). As stated above, we define individual status as a person's perceived ability to provide high-quality work. As central actors are highly visible, network centrality provides an adequate way to measure status, because highly visible actors are seen as star performers in organizations (Oldroyd & Morris, 2012). Therefore, they are the ones whom people often turn to for help and advice (Oettl, 2012; Oldroyd & Morris, 2012). Moreover, individuals who occupy a very central position in their organization are the ones who are more often entrusted to undertake collaborative tasks and given access to resources because they are thought to be highly competent (Call et al., 2015). Since we are interested in an actor's organizational status, we did not include ties that stemmed from an actor being involved in implementing a project in a completely different organization, without any collaboration with the organization in question before year t. Although we recognize that measuring status based on deference between social actors would be a good alternative to our

network-based measurement (e.g., Gould, 2002), the former would be unfeasible in our setting. Hence, we measure status by the network position of social actors.

Like Grigoriou and Rothaermel (2014), we measured status by examining the relative centrality of people compared to others within the organization. More specifically, we rescaled the centrality scores, such that they add up to 100 for each year in each firm, thereby enabling us to compare centrality scores across companies and years (Borgatti, Everett, & Johnson, 2003). As such, the status score of each group member shows the proportion that the member had captured from the organizational status pool. We selected the scaling parameter α, so that, in each year, actors with entries equal to 1 do not get disproportionally high or low status scores (Bonacich, 1987). β is a parameter that denotes the distance that communication can travel in the network in the network. Essentially, β serves as a length-based weight that can be adjusted when calculating the status score of a given node in order to weight the status scores of nodes that are further away from that node. In this study, β is set to ¾ of the inverse of the highest normed eigenvalue of the corresponding affiliation matrix, in line with prior network analytic studies (Podolny, 2005; Bothner et al., 2012). Thus, the connectedness of two nodes which were far away from each other in the network was relatively unimportant in determining their status scores, due to the low weight that their connectedness had in calculating their status scores.

In order to calculate the status of a project group, we took the average of status scores of all project group members who can be associated with a certain project (Soda, Usai, & Zaheer, 2004). Where members had not implemented any project connected to the organization in question during the three years prior to a given year, we assumed that they

had no status during that year (Soda et al., 2004). Therefore, we set the status scores for those project group members to zero. We took the natural logarithm of group status scores, after adding a small constant to them to avoid zeros, because status hierarchies are highly skewed constructions in nature, and this could apply to our sample.

Organizational innovativeness. In order to capture the extent to which an organization is willing to engage in uncertain development projects, we first created a dummy variable for each project, which indicates whether a project is novel. A project is novel in our dataset if it is new-to-market (Moenaert & Souder, 1990). We used 62 category codes based on information that can be found on the *MobyGames.com* website. The category codes could take the values 0 or 1, 1 meaning that the game fitted into a certain category (e.g., action game, racing game, etc.). We considered a project novel if no similar game had been released prior to the game in question (Stettner & Lavie, 2014). We then calculated organizational innovativeness based on the proportion of revenues an organization had realized from novel projects compared to all projects in years t-1, t-2, and t-3, and this enabled us to determine the extent to which an organization had relied on and nurtured innovative projects in a given year (we did not limit our calculation only to projects developed for PlayStation 2). We applied a moving time window, because organizational innovativeness, hence the company culture and the review process, might change over time.

Control Variables

Game-specific controls. We included the *year of release* as separate year dummies for each year to control for year-specific effects. We also controlled for *newness-to-market* as an indicator of the risk and organizational resistance associated with a project (Sethi et al., 2012). A project was new-to-market in our analysis when the combination of 62 category codes for a certain video game suggested that it was new-to-market. In other words, when there had had never been a similar video game released before the game in question. We also controlled for *newness-to-firm* for similar reasons. To operationalize this variable, we again looked at the possible combinations of the 62 category codes for a video game. Then, we compared the category codes of each project but only for those projects developed by a given organization before year t. Another control we included in our analysis was whether a game was *licensed*. Being licensed might affect not only the amount of resources the group had access to but also other organizational members' perceptions of the project. A licensed game is an adaptation of a movie (e.g., James Bond movies), a comic book (e.g., Superman), or a TV series (e.g., Star Trek). One might assume that with such videogames, consumers tend to buy these products irrespective of their quality. We controlled for this effect by including a dummy variable, with 1 meaning that the game was licensed. Moreover, we controlled for the project's *target market*, since this may affect resource access and the ability of the project group to sell the project to top management. This is because each target market is associated with different levels of risk. The target market was determined by the ratings of the Entertainment Software Rating Board (ESRB). The ESRB assigns age and content ratings for video games and specifies the appropriate target group for each videogame: everyone, everyone10+, teen, and

mature. We controlled for target market by including three dummy variables in our analyses, with "everyone" being the reference category.

Project controls. We included the natural logarithm of *project size*, calculated by the number of individuals who can be associated with a project, as a proxy for the development budget. As a proxy for marketing budget, we included the *number of reviews* on the website *Mobygames.com*. These are the professional reviews that *Mobygames.com* collects from a wide variety of online websites that specialize in rating and reviewing video games. Video game publishers generally provide professional reviewers with a beta version of their software so that they can write critiques of their products, often even before the official release of the game. Therefore, the number of reviews of a video game is a good indicator of the effort a firm has made to market its new product. It is reasonable to expect that video games with a larger marketing budget will show stronger sales performance. Finally, we included the *project group network constraint*, because, in an organizational context, network constraint affects the ability of social actors to gather support for their projects (Battilana & Casciaro, 2012). To compute the network constraint of each individual in an organization, we applied Burt's constraint measure which is given by the following formula (Burt, 2004): $c_{ij} = \left[p_{ij} + \sum_j p_{iq} p_{qj}\right]^2; i \neq j,$ where p_{ij} is the proportion of i's network time and energy invested in actor j. The constraint score of actor i is given by $\sum_i c_{ij}$. To calculate the project network constraint, we took the average of constraint scores of all project group members.

Firm-level controls. Finally, since we rescaled the status scores so that they added up to 1 in each year in each firm, status may be seen as a function of firm network size,

because the larger the network size, the more widely distributed the status scores become. Also, the number of individuals who participate in the development of projects associated with a given firm may be seen as a good proxy for the amount of resources and social capital accessible to a firm. Therefore, it is important to control for *firm network size*, which we log-transformed, given the skewed distribution

Analysis

Since groups are nested in organizations, there might be within-cluster dependence among the observations (cf. Washington & Zajac, 2005). Hence, we built a linear mixed-effects model, including organizations as a level 2 random effect. We mean-centered our main independent variables of interest, group status and organizational innovativeness to prevent too high multicollinearity.

RESULTS

The descriptive statistics and bivariate correlations can be found in Table 3. From our independent variables, organizational innovativeness correlates significantly and positively with innovation project performance at the 5 percent significance level. The positive correlation coefficient implies that innovative firms tend to implement projects that are more successful. Surprisingly, project group status correlates negatively with innovation project performance. Table 4 presents our statistical analysis of the predictors of innovation project performance. First, we regressed all our control variables on innovation project performance (Model 1). Second, we added group status to the model

TABLE 3
Descriptive Statistics and Correlation Matrix[a]

	Variable	Mean	s.d.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Project performance (in million dollars)	1004.33	1352.90	16.65	8544.61													
2.	Group status	0.02	0.03	0	0.19	-0.11*												
3.	Organizational innovativeness	0.53	0.19	0	0.86	0.22*	-0.25*											
4.	Newness-to-market	0.09	0.29	0	1	-0.05	0.08	-0.04										
5.	Newness-to-firm	0.38	0.49	0	1	0.08	0.00	0.30*	-0.01									
6.	Licensed	0.45	0.50	0	1	0.24*	-0.26*	0.27*	-0.02	0.02								
7.	Target group: Everyone	0.40	0.49	0	1	0.14*	-0.11	0.32*	-0.03	0.06	0.34*							
8.	Target group: Everyone 10+	0.08	0.27	0	1	-0.05	-0.05	-0.07	-0.01	0.02	0.10	-0.24*						
9.	Target group: Mature	0.17	0.38	0	1	-0.18*	0.02	-0.15*	-0.05	0.01	-0.29*	-0.37*	-0.13*					
10.	Target group: Teen	0.35	0.48	0	1	0.03	0.12*	-0.17*	0.08	-0.08	-0.18*	-0.60*	-0.21*	-0.33*				
11.	Project size	242.13	165.81	4	953	0.14*	-0.27*	0.03	-0.02	0.14*	0.13*	-0.25*	0.21*	-0.01	0.15*			
12.	Number of reviews	39.78	30.41	0	172	0.34*	-0.22*	0.30*	0.03	0.30*	0.16*	-0.07	0.12*	0.00	0.01	0.38*		
13.	Project group network constraint	0.01	0.01	0	0.06	-0.03	0.16*	-0.08	0.09	0.03	-0.13*	-0.02	-0.17*	0.19*	-0.04	-0.39*	-0.16*	
14.	Firm network size	7003.25	4536.89	444	17836	0.18*	-0.52*	0.57*	-0.10	0.15*	0.40*	0.24*	0.15*	-0.27*	-0.12*	0.30*	0.34*	-0.47*

[a] n = 307, companies = 20
* p < .05

(Model 2). Third, we added our moderator variable (Model 3). Finally, we entered our interaction effect (Model 4).

As expected, group status positively affects innovation project performance in both Model 2 and Model 3 at the 5 percent significance level (Model 2: $\beta = 0.25$, $p < .05$). This implies that project groups with high status tend to implement projects that generate higher revenues, everything else being equal. Thus, Hypothesis 1 is supported. Model 4 shows our tests for our second hypothesis which predicts that organizational innovativeness negatively moderates the relationship between group status and project performance. In Model 4, the coefficient of the interaction effect is indeed negative and significant (Model 4: $\beta = -1.07$, $p < .05$). Figure 5 depicts the effect of group status on project performance when innovativeness is low (one standard deviation below the mean) or high (one standard deviation above the mean). As expected, group status has a positive effect in firms with a low degree of organizational innovation. The positive effect of group status turns out to be much weaker in firms with a high degree of organizational innovation. Thus, we find support for Hypothesis 2.

Post-hoc Robustness Checks

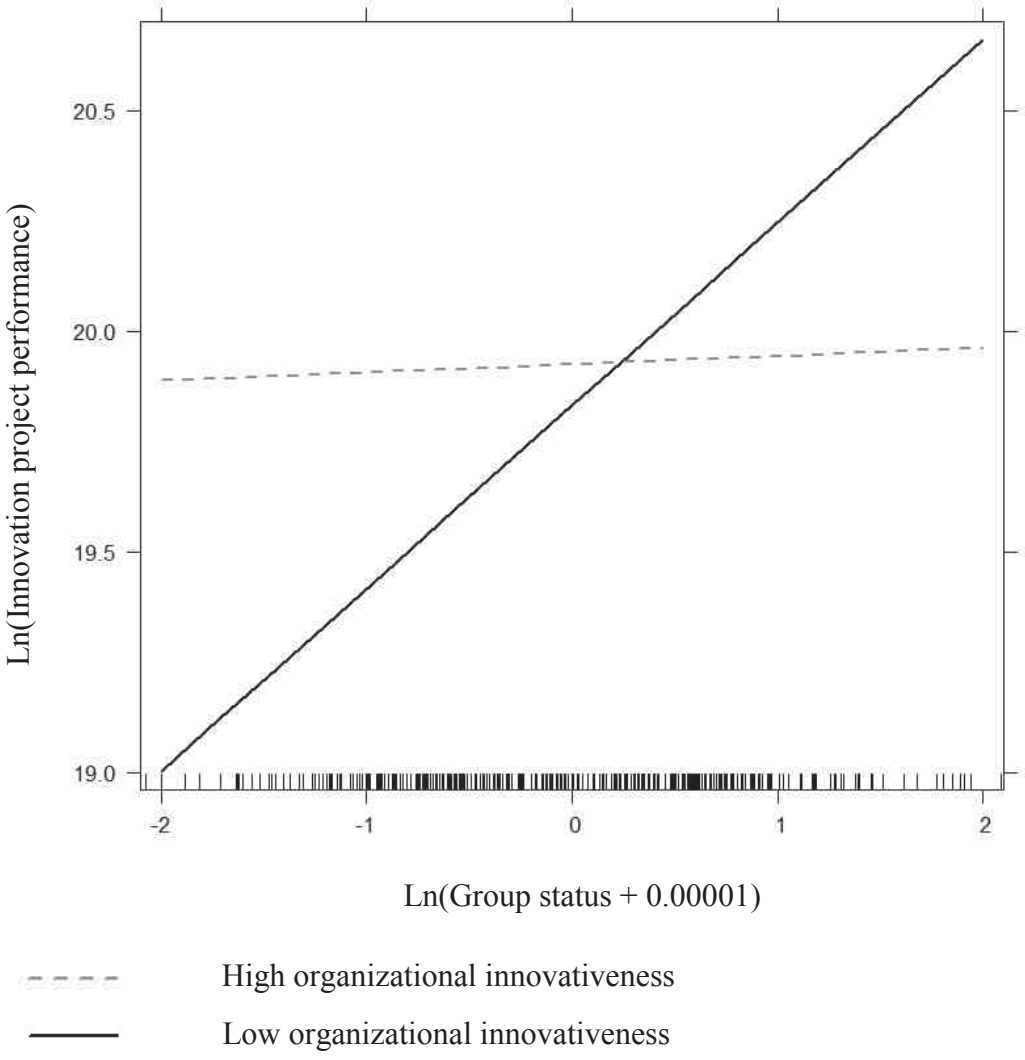
We ran a number of post-hoc analyses to substantiate our findings (see Appendix A). First, group status could also be operationalized as the sum of the status scores of all group members, instead of their average. As such, the score would reflect the proportion of status scores the group had captured from the organizational status pool. Table A1 shows that the results are very similar to those shown in Table 4.

TABLE 4
Estimates for Mixed Effects Models of the Natural Logarithm of Innovation Project Performance[a]

	Model 1	Model 2	Model 3	Model 4
Intercept	15.26***	12.67***	12.71***	13.34***
	(1.43)	(1.77)	(1.78)	(1.79)
Year dummies		Included		
Newness-to-market	0.17	0.15	0.15	0.15
	(0.21)	(0.21)	(0.21)	(0.21)
Newness-to-firm	0.19	0.12	0.12	0.13
	(0.15)	(0.14)	(0.15)	(0.14)
Licensed	0.26+	0.30*	0.30*	0.30*
	(0.15)	(0.15)	(0.15)	(0.15)
Target group: Everyone 10+	-0.02	-0.08	-0.08	-0.05
	(0.26)	(0.26)	(0.26)	(0.26)
Target group: Mature	-0.36+	-0.36+	-0.36+	-0.34+
	(0.20)	(0.20)	(0.20)	(0.20)
Target group: Teen	0.06	0.08	0.08	0.12
	(0.16)	(0.16)	(0.16)	(0.16)
Number of reviews	0.27**	0.31***	0.31***	0.32***
	(0.09)	(0.09)	(0.09)	(0.09)
Ln(Project size)	0.02***	0.02***	0.02***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Project group network constraint	7.66	24.09+	24.36+	21.80
	(11.70)	(13.67)	(13.71)	(13.65)
Ln(Firm network size)	0.36*	0.61***	0.60***	0.54**
	(0.15)	(0.18)	(0.18)	(0.18)
Ln(Group status + 0.00001)		0.25*	0.25*	0.22*
		(0.11)	(0.11)	(0.11)
Organizational innovativeness			0.14	0.25
			(0.60)	(0.59)
Ln(Group status + 0.00001) × Organizational innovativeness				-1.07*
				(0.54)
AIC	937.40	934.16	936.11	934.30
BIC	1019.39	1019.87	1025.55	1027.47
Log likelihood	-446.70	-444.08	-444.05	-442.15
Number of observations	307	307	307	307
Number of firms	20	20	20	20
Variance: Firms	0.07	0.06	0.06	0.05
Variance: Residual	1.04	1.02	1.02	1.01

[a] Two-tailed tests. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, +$p < 0.10$

FIGURE 5
The Moderating Effect of Organizational Innovativeness on the Relationship between Group Status and Innovation Project Performance



Furthermore, we also checked our results using two alternative measurements of organizational innovativeness. Table A2 shows our results when we measure organizational innovativeness by the number of novel projects implemented by an

organization in the three years before a given year. As it can be seen, we find additional support for Hypothesis 2, as the coefficient of the interaction term is negative and significant (Model 4: β = -0.03, p < .01). Table A3 shows our results measuring organizational innovativeness with the proportion of novel projects implemented by an organization in the three years before a given year. Although the coefficient of the interaction term is negative, it is not significant at the 5 percent significance level. Thus, this measurement does not support Hypothesis 2. We believe that using the proportion of revenues realized from novel projects as a measurement of organizational innovativeness is better than the number or proportion of novel projects implemented by an organization, because it differentiates between the more important and the less important novel projects. For example, an organization that gets 90 percent of its revenues from a few, very successful, novel projects will rely on its competence to develop novel projects more than an organization that develops proportionally more, but much less successful, novel projects that generate only a minor proportion of its revenues. The former organization is expected to facilitate the development of novel projects better. Companies that develop unsuccessful novel projects, even if they do so in proportionally large numbers, will not facilitate the development of novel projects, because that is not in line with their core competence. In addition, it better reflects the significance of novel projects within an organization's project portfolio.

Finally, we found it surprising that the correlation coefficient of status and performance is negative. Therefore, we conducted post-hoc analysis to check whether this might be because of the curvilinearity of the effect of group status on innovation project performance. We tested this hypothesis by measuring group status with both the average

and the sum of status scores of all project group members (see the results in Model 2 and 4 respectively in Table A4). The average of the status scores of all project group members did not have a significant curvilinear effect on project performance, but the sum had an exponential positive effect on performance. Since status scores are a function of firm network size, it might be the case that the negative correlation of group status and performance is in fact driven by the correlation between group status and firm network size. While the coefficient of group status is consistently positive in our mixed-effect models, our results using OLS regressions imply that the effect of group status is positive as long as firm network size is controlled for (see Table A5). This is because status scores and firm network size are negatively correlated. Since firm network size correlates positively with innovation project performance, one may conclude that firms with smaller networks tend to implement projects that would perform less well. However, in such firms, status scores tend to be higher, because the scores are distributed among fewer individuals. Therefore, it can be argued that the main reason why there is a negative correlation between status scores and innovation project performance is that groups with higher status scores tend to operate in firms with smaller networks, which tend to implement less successful projects.

DISCUSSION

In this study we investigated the effect of group status on innovation project performance. Our aim was to shed light on how organizational innovativeness potentially moderates this effect. In order to test our hypotheses, we analysed project development,

social network, and sales data from the video games industry. We hypothesized and found that group status will have a positive effect on innovation project performance. In addition, we examined the moderating effect of organizational innovativeness. Organizational innovativeness reflects the extent to which the environment of an innovation group is supportive of the group's innovation-related efforts. We looked at the moderating effect of organizational innovativeness because innovative organizations are very tolerant of uncertain activities, and this might modify the effect of status to a large extent (Podolny, 2001). More specifically, we argued that in innovative organizations high-status groups are given significantly more scope to realize their innovation projects. As a consequence, high-status groups do not need to justify their use of organizational resources, and not having to do so might lead to complacency. Moreover, they might receive less valuable feedback on their innovation-related contributions compared to high-status groups in less innovative settings. These two factors might have negative consequences for innovation project performance. In line with our expectations, we found support for our prediction that organizational innovativeness negatively moderates the relationship between group status and innovation project performance.

Implications

Our study offers an important contribution for two distinct areas of management theory. First, we offer insights for the innovation management literature. Innovation management scholars often argue that influence and status are highly beneficial for project groups when they want to implement innovative projects. More specifically, influence and status gives groups access to resources that can be utilized to improve the performance of

innovation project (Ancona & Caldwell, 1992), speed up implementation (Dayan et al., 2012), and reduce the need for political compromises which are very detrimental to innovation performance (Sethi et al., 2012). We, however, show that in an innovation-related context the informal influence which comes from status can be more detrimental than one might think. Specifically, we find that the effect of group status on innovation project performance is dependent on how innovative the organization is. Thus, innovation management scholars should not assume that having better access to resources is beneficial in all instances, because it might also lead to inefficiency as result of complacency or a lack of valuable feedback at the project level during the project implementation process.

Second, we contribute to the status literature. Studying the various factors that may influence the effect of status is important, because the relationship between status and performance might not always be positive. Status researchers argue that status gives people exclusive access to high-quality resources, which should then increase innovation project performance. In turn, better innovation project performance should provide even more access to resources. This is often referred to as the Matthew effect (Azoulay et al., 2014; Bothner et al., 2012; Merton, 1968). Therefore, "star" employees should be assigned to innovation projects in order to ensure resource availability. We argue, though, that the Matthew effect can in fact backfire, especially when the environment is highly supportive. When this happens, better access to resources can be disadvantageous, because high-status groups are not challenged in how they are utilizing resources. In such cases, bringing "star" employees to project groups might be detrimental.

Our findings can be linked to the ongoing debate on the relationship between status and performance (see Bothner et al., 2012). Bothner et al. (2012) found an "inverted-U"

shaped relationship between individual status and individual performance in two sports-related settings – athletics and racing. They argue that high-status actors benefit from having access to social, human, and financial capital, but that very high status leads to complacency and distraction. The difference between their study and ours can be explained by the fact that they were conducted in different settings. While our results suggest that the effect of status on performance is positive, we also found that environments might vary in terms of the extent to which high-status actors become complacent, and that this depends on the degree to which high-status groups are challenged by others within their organizational environment. Furthermore, we also suggest that overvaluation bias affects innovation project performance in different ways depending on the environment. While in environments where it is challenging to undertake innovations overvaluation can generate the necessary support, in innovation supportive environments overvaluation may lead to groups being given the necessary support, which may lead to feedback that is less valuable. Our study contributes to the status literature by showing that the relationship between status and performance is contingent on the degree to which uncertainty is tolerated by an organization, captured by the innovativeness of the organization.

Managerial implications

Our study also offers important implications for practice. Our findings suggest that practitioners should pay attention to quality signals in their project-related decision-making. More specifically, we argue that, in less innovative firms, decision-makers should assign innovation projects to high-status groups in order to make sure that such projects get the necessary support and are not terminated prematurely. We investigated innovation

projects in a highly turbulent and uncertain industry that were all innovative to some degree. Our findings might also suggest that, in other settings where there are projects that involve very little innovation, high-status groups should be assigned to projects surrounded by less uncertainty, or even to non-innovation projects. This is because in such situations, high-status groups can ensure there is the necessary access to resources; at the same time, the fairly high level of uncertainty surrounding the project also prevents status signals from leading to overvaluation of the contribution of the high-status group members and of the project itself. On the other hand, decision-makers in environments that support innovation should be cautious about relying on status. In innovative organizations, high-status groups might use resources less efficiently. This can be avoided if decision-makers assign low-status team members to groups that are implementing very uncertain projects in innovative organizations or by making the environment more challenging for high-status project groups. Another way to tackle this problem is to apply proper evaluation and feedback mechanisms that are not connected to the status of each group. This can be achieved by using a blind-review report system in which each group has to justify resource requests and utilization. This might be particularly beneficial in innovative organizations.

Limitations

Our study has some limitations and our findings should therefore be generalized with caution. We focus here on the three most important limitations. First, we investigated only the video game industry. Hence, the generalizability to other contexts might be questionable. For instance, the video game industry can be characterized as having a highly turbulent environment. In more conservative settings, status might have a much

clearer positive effect on project performance. In such industries it is much more difficult to bring about changes in the organizational environment. For this reason, the positive side of status might be more prevalent, as status helps groups to gather support and initiate change in an environments which are overprotective of the current way of doing things.

Second, we did not have information on the effect of quality signals on project-related decision-making processes. This might be an important limitation, because an alternative explanation of our findings may be that quality signals bias the decision-making mechanisms. This bias may be detrimental to innovation project performance, because it might contribute to innovation projects being selected and sustained regardless of their quality (Reitzig & Sorenson, 2013). Although this is in line with the arguments we put forward in Hypothesis 1 regarding the better access to resources enjoyed by high-status groups, one could also argue that organizational innovativeness affects the relationship between group status and innovation project performance because of other project selection mechanisms. More specifically, it might be argued that high-status groups are more able to implement and sustain their low-quality projects in innovative organizations, because in such organizations project-related decision-making processes tend to be more flexible (Sethi & Iqbal, 2008). This in turn helps to explain why the innovation projects of high-status groups working in innovative settings perform less well. Although the study of Markham and Lee (2013) shows that innovative companies actually tend to have more formalized processes of project-related decision-making, we acknowledge this limitation and suggest that future research should look in more detail at how quality signals affect innovation project performance through their impact on organizational support and project-related decision-making.

Third, we had no information on projects that were not implemented. This has two important consequences. First, we have performance data on projects that reached the marketplace. It is possible that, in less innovative settings, high-status groups in fact fail more often, because their projects get terminated prematurely. Although we acknowledge this possibility, we argue that this is unlikely to happen because high-status groups should be more successful at implementing their projects, regardless of project quality (Reitzig & Sorenson, 2013). Second, one could also argue that our data did not in fact reflect the actual social networks of the companies analysed in this study – a common limitation in social network studies aimed at analysing affiliation networks (e.g., McFadyen & Cannella, 2004; Cattani & Ferriani, 2008; Waguespack & Sorenson, 2011).

APPENDIX

Additional analyses

TABLE A1
Estimates for Mixed Effects Models of the Natural Logarithm of Innovation Project Performance, Measuring Group Status by the Sum of All Group Members[a]

	Model 1	Model 2	Model 3	Model 4
Intercept	15.26***	13.84***	13.89***	14.10***
	(1.43)	(1.49)	(1.51)	(1.39)
Year dummies		Included		
Newness-to-market	0.17	0.15	0.15	0.16
	(0.21)	(0.21)	(0.21)	(0.20)
Newness-to-firm	0.19	0.11	0.11	0.13
	(0.15)	(0.14)	(0.15)	(0.14)
Licensed	0.26+	0.30*	0.29*	0.24+
	(0.15)	(0.15)	(0.15)	(0.14)
Target group: Everyone 10+	-0.02	-0.08	-0.07	-0.06
	(0.26)	(0.26)	(0.26)	(0.25)
Target group: Mature	-0.36+	-0.37+	-0.36+	-0.44*
	(0.20)	(0.20)	(0.20)	(0.19)
Target group: Teen	0.06	0.08	0.08	0.14
	(0.16)	(0.16)	(0.16)	(0.15)
Number of reviews	0.27**	0.08	0.08	0.22+
	(0.09)	(0.12)	(0.12)	(0.12)
Ln(Project size)	0.02***	0.02***	0.02***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Project group network constraint	7.66	24.81+	25.11+	24.31+
	(11.70)	(13.52)	(13.55)	(12.94)
Ln(Firm network size)	0.36*	0.61***	0.60***	0.50**
	(0.15)	(0.17)	(0.17)	(0.16)
Ln(Group status + 0.00001)		0.22*	0.23*	0.19*
		(0.09)	(0.09)	(0.09)
Organizational innovativeness			0.15	0.20
			(0.60)	(0.51)
Ln(Group status + 0.00001) × Organizational innovativeness				-1.56***
				(0.32)
AIC	937.40	933.23	935.17	914.06
BIC	1019.39	1018.95	1024.62	1007.23
Log likelihood	-446.70	-443.62	-443.59	-432.03
Number of observations	307	307	307	307
Number of firms	20	20	20	20
Variance: Firms	0.07	0.06	0.06	0.03
Variance: Residual	1.04	1.02	1.02	0.96

[a] Two-tailed tests. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, +$p < 0.10$

TABLE A2
Estimates for Mixed Effects Models of the Natural Logarithm of Innovation Project Performance, Measuring Organizational Innovativeness by the Number of Novel Projects[a]

	Model 1	Model 2	Model 3	Model 4
Intercept	15.26***	12.67***	12.63***	11.48***
	(1.43)	(1.77)	(1.96)	(1.82)
Year dummies		Included		
Newness-to-market	0.17	0.15	0.15	0.15
	(0.21)	(0.21)	(0.21)	(0.21)
Newness-to-firm	0.19	0.12	0.12	0.03
	(0.15)	(0.14)	(0.14)	(0.13)
Licensed	0.26+	0.30*	0.30*	0.31*
	(0.15)	(0.15)	(0.15)	(0.14)
Target group: Everyone 10+	-0.02	-0.08	-0.08	-0.07
	(0.26)	(0.26)	(0.26)	(0.25)
Target group: Mature	-0.36+	-0.36+	-0.36+	-0.38+
	(0.20)	(0.20)	(0.20)	(0.20)
Target group: Teen	0.06	0.08	0.08	0.12
	(0.16)	(0.16)	(0.16)	(0.15)
Number of reviews	0.27**	0.31***	0.31***	0.34***
	(0.09)	(0.09)	(0.09)	(0.09)
Ln(Project size)	0.02***	0.02***	0.02***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Project group network constraint	7.66	24.09+	24.20+	20.49
	(11.70)	(13.67)	(13.93)	(13.53)
Ln(Firm network size)	0.36*	0.61***	0.61**	0.80***
	(0.15)	(0.18)	(0.22)	(0.20)
Ln(Group status + 0.00001)		0.25*	0.25*	0.66***
		(0.11)	(0.11)	(0.17)
Organizational innovativeness			-0.00	-0.02
			(0.02)	(0.02)
Ln(Group status + 0.00001) × Organizational innovativeness				-0.03**
				(0.01)
AIC	937.40	934.16	936.15	931.45
BIC	1019.39	1019.87	1025.60	1024.62
Log likelihood	-446.70	-444.08	-444.08	-440.73
Number of observations	307	307	307	307
Number of firms	20	20	20	20
Variance: Firms	0.07	0.06	0.06	0.00
Variance: Residual	1.04	1.02	1.02	1.03

[a] Two-tailed tests. ***p < 0.001, **p < 0.01, *p < 0.05, +p < 0.10

TABLE A3
Estimates for Mixed Effects Models of the Natural Logarithm of Innovation Project Performance, Measuring Organizational Innovativeness by the Proportion of Novel Projects[a]

	Model 1	Model 2	Model 3	Model 4
Intercept	15.26***	12.67***	12.34***	12.33***
	(1.43)	(1.77)	(1.86)	(1.85)
Year dummies		Included		
Newness-to-market	0.17	0.15	0.15	0.15
	(0.21)	(0.21)	(0.21)	(0.21)
Newness-to-firm	0.19	0.12	0.14	0.14
	(0.15)	(0.14)	(0.15)	(0.15)
Licensed	0.26+	0.30*	0.32*	0.32*
	(0.15)	(0.15)	(0.15)	(0.15)
Target group: Everyone 10+	-0.02	-0.08	-0.10	-0.09
	(0.26)	(0.26)	(0.26)	(0.26)
Target group: Mature	-0.36+	-0.36+	-0.35+	-0.35+
	(0.20)	(0.20)	(0.20)	(0.20)
Target group: Teen	0.06	0.08	0.08	0.08
	(0.16)	(0.16)	(0.16)	(0.16)
Number of reviews	0.27**	0.31***	0.30***	0.30***
	(0.09)	(0.09)	(0.09)	(0.09)
Ln(Project size)	0.02***	0.02***	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)
Project group network constraint	7.66	24.09+	25.75+	25.90+
	(11.70)	(13.67)	(13.82)	(13.90)
Ln(Firm network size)	0.36*	0.61***	0.62***	0.62***
	(0.15)	(0.18)	(0.18)	(0.18)
Ln(Group status + 0.00001)		0.25*	0.25*	0.22
		(0.11)	(0.11)	(0.24)
Organizational innovativeness			0.97	0.85
			(1.28)	(1.62)
Ln(Group status + 0.00001) × Organizational innovativeness				0.16
				(1.37)
AIC	937.40	934.16	935.60	937.59
BIC	1019.39	1019.87	1025.04	1030.76
Log likelihood	-446.70	-444.08	-443.80	-443.79
Number of observations	307	307	307	307
Number of firms	20	20	20	20
Variance: Firms	0.07	0.06	0.07	0.07
Variance: Residual	1.04	1.02	1.02	1.02

[a] Two-tailed tests. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, +$p < 0.10$

TABLE A4
Estimates for Mixed Effects Models of the Natural Logarithm of Innovation Project Performance, Testing for the Curvlinearity of the Effect of Group Status[a]

	Model 1	Model 2	Model 3	Model 4
	Average of status scores		Sum of status scores	
Intercept	12.71***	12.56***	13.89***	12.49***
	(1.78)	(1.87)	(1.51)	(1.48)
Year dummies	Included			
Newness-to-market	0.15	0.15	0.15	0.19
	(0.21)	(0.21)	(0.21)	(0.21)
Newness-to-firm	0.12	0.12	0.11	0.09
	(0.15)	(0.15)	(0.15)	(0.14)
Licensed	0.30*	0.30*	0.29*	0.29*
	(0.15)	(0.15)	(0.15)	(0.14)
Target group: Everyone 10+	-0.08	-0.08	-0.07	-0.18
	(0.26)	(0.26)	(0.26)	(0.25)
Target group: Mature	-0.36+	-0.35+	-0.36+	-0.36+
	(0.20)	(0.20)	(0.20)	(0.20)
Target group: Teen	0.08	0.08	0.08	0.04
	(0.16)	(0.16)	(0.16)	(0.15)
Number of reviews	0.31***	0.31***	0.08	0.03
	(0.09)	(0.09)	(0.12)	(0.11)
Ln(Project size)	0.02***	0.02***	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)
Project group network constraint	24.36+	24.55+	25.11+	29.72*
	(13.71)	(13.74)	(13.55)	(13.24)
Ln(Firm network size)	0.14	0.11	0.15	0.08
	(0.60)	(0.61)	(0.60)	(0.55)
Ln(Group status + 0.00001)	0.25*	0.25*	0.23*	0.43***
	(0.11)	(0.11)	(0.09)	(0.10)
Ln(Group status + 0.00001)^2		0.01		0.11***
		(0.06)		(0.03)
AIC	937.40	934.16	935.60	937.59
BIC	1019.39	1019.87	1025.04	1030.76
Log likelihood	-446.70	-444.08	-443.80	-443.79
Number of observations	307	307	307	307
Number of firms	20	20	20	20
Variance: Firms	0.07	0.06	0.07	0.07
Variance: Residual	1.04	1.02	1.02	1.02

[a] Two-tailed tests. ***p < 0.001, **p < 0.01, *p < 0.05, +p < 0.10

TABLE A5
Estimates for Ordinary Least Squares Models of the Natural Logarithm of Innovation Project Performance[a]

	Model 1	Model 2	Model 3
Intercept	19.97***	15.89***	12.22***
	(0.07)	(1.04)	(1.70)
Ln(Group status + 0.00001)	-0.13	0.12	0.25*
	(0.08)	(0.10)	(0.11)
Ln(Firm network size)		0.47***	0.67***
		(0.12)	(0.16)
Year dummies	Not included	Not included	Included
Newness-to-market			0.13
			(0.22)
Newness-to-firm			0.08
			(0.14)
Licensed			0.31*
			(0.15)
Target group: Everyone 10+			-0.12
			(0.27)
Target group: Mature			-0.45*
			(0.21)
Target group: Teen			0.10
			(0.16)
Number of reviews			0.33***
			(0.09)
Ln(Project size)			0.02***
			(0.00)
Project group network constraint			21.38
			(13.89)
Organizational innovativeness			-0.13
			(0.44)
AIC	1038.52	1025.19	935.35
BIC	1049.71	1040.11	1021.07
Number of observations	307	307	307

[a] Two-tailed tests. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, +$p < 0.10$

CHAPTER IV

PRIDE COMETH BEFORE A FALL
WHEN HIGH-STATUS ACTORS ENGAGE IN PROJECTS OF GREAT MAGNITUDE

ABSTRACT

This study explores the dynamics of the Matthew effect in the creative industries. We suggest that high-status organizations are able to realize more financial and status benefits for demonstrating the same level of quality as their low-status counterparts. However, we also suggest that high-status organizations might fail to achieve all the potential advantages of their position in the status hierarchy when they implement a project of great magnitude, because of the incongruence between status and magnitude. Analysing a unique dataset compiled from three different sources in the video game industry, we find support for our hypotheses. We discuss the implications for both theory and practice.

INTRODUCTION

When do firms fail to realize all the potential benefits of their status? High-status organizations are much admired (Simcoe & Waguespack, 2011; Azoulay, Stuart, & Wang, 2014) and are given many resources by their target stakeholders (Stuart et al., 1999), and these give them momentum to undertake new endeavours in the form of high-stake projects. However, when they take on such projects, this can create confusion about the identity of the organization itself and its products, because incongruent messages about status may be sent to target stakeholders. As a consequence, these endeavours do not deliver the anticipated results or might even lead to failures (Hsu, Hannan, & Kocak, 2009). Consider, for instance, how mass beer producers have failed in their attempts to enter the microbrewery sector, despite having vast resources (Carroll & Swaminathan, 2000). One main reason for this was that the image of mass producers was incompatible with the authentic, passion-driven, and quality-focused image of microbreweries (Carroll & Swaminathan, 2000). In other words, by trying to penetrate the microbrewery industry without making any attempt to hide their original identity, mass producers sent out signals that were at odds with their established image. This study is aimed at exploring the consequences of incongruence between image and action.

Previous research has long recognized the benefits that status provides. Since Merton (1968) coined the term "the Matthew effect," referring to the cumulative advantages enjoyed by high-status actors, several studies have found support for the positive effects of status at the organizational level (e.g., Podolny & Phillips, 1996; Podolny, 2005; Jensen, 2008; Sauder, Lynn, & Podolny, 2012; Stern, Dukerich, & Zajac,

2014). This line of research suggests that high-status organizations get more attention and admiration, and, as a result, can achieve their goals more effectively than their low-status counterparts. As such, they are able to obtain more resources which they can capitalize on to gain even more status. Indeed, Benjamin and Podolny (1999) found that in the Californian wine industry high-status wine producers can charge more for a bottle of wine of the same quality than low-status producers. The additional revenue this brings then allows them to invest more in the production process and in the quality of materials.

Our research critically examines the benefits that high-status organizations might realize because of the Matthew effect. Although having access to greater resources allows an organization to create better quality products (Benjamin & Podolny, 1999), investing much of these additional resources in a subsequent endeavour might give the target stakeholders of a high-status organization the impression that the organization is working on a large-scale, monumental project. When high status is paired with greater investments, target stakeholders can become confused and, eventually, disappointed by the outcome of such a monumental project (Wade, O'Reilly, & Pollock, 2006). Thus, being a high-status organization and working on a monumental project may prevent an organization from realizing all the potential benefits of its position in the status hierarchy. Our specific interest is in examining how the dynamics of status hierarchies (i.e., the rank order of market actors based on their status) affect the perceptions of target stakeholders, not how they affect the organization's processes and actual outputs. Therefore, in our model, product quality is always taken as an exogenous factor.

Our dependent variable is thus the recognition of quality, regardless of actual product quality. We look at two indicators which correspond to how quality is perceived

and recognized by two important groups of stakeholders. First, we examine market performance, and how consumers perceive a certain product and how willing they are to purchase it. Product consumers typically experience a great deal of uncertainty in their product selection process, as they rarely interact with products prior to consumption. Hence, according to the status literature, the status of a producer of a product should influence consumer choice regardless of actual product quality (Podolny, 1994). Second, we examine industry awards. Here we investigate how experts perceive a product, and whether or not they give an industry award to the best product or contributor in a given year (e.g., the Oscar awards), after a thorough selection process, which eliminates most of their uncertainty about the true quality of the products. Despite the fact that the uncertainty these committees experience in their selection of which product should be awarded is negligible, we will develop the argument that that status should still influence their selection process, regardless of actual product quality.

We look at the creative industry for two main reasons. One reason is that creative enterprises struggle with dual identities (e.g., Bourdieu, 1993). While they need create artistic excellence, they also need to ensure a continuous flow of financial resources so as to maintain an adequate level of economic performance. These competing logics create tension in creative organizations (e.g., Glynn, 2000; Eikhof & Haunschild, 2007; Ebbers & Wijnberg, 2013), which has important implications for how those organizations are perceived by their target stakeholders (Abbing, 2002). Another reason is that, in the creative industries, there is a long tradition of professional critics who assess product quality in order to inform consumers and make their choice easier (e.g., Holbrook, 1999).

The fact that critical reviews are publicly available allows us to investigate the Matthew effect while controlling for product quality.

Analysing a unique dataset combined from three different sources in the video games industry, we find support for our predictions. First, we show that high-status organizations are likely to be at an advantage regardless of product quality, as they are more likely to be given industry awards – which further increases their status – and they also achieve greater sales returns. Thus, we show that those organizations who were ranked high in the social hierarchy in the past are more likely to be ranked high as well in the future by third parties, regardless of whether they actually demonstrate an ability to produce high-quality products. Second, we look at the effect of project magnitude as another signal of product quality, measured by the number of contributors in a project, because it has been repeatedly shown that quality signals may interact with one another, becoming modified as a result (e.g., Ebbers & Wijnberg, 2012; Stern, Dukerich, & Zajac, 2014). We see projects of great magnitude as large-scale projects that create the impression of being monumental in terms of size in the minds of target stakeholders. We look specifically at project magnitude, because it has been shown to be an important market signal that affects the perceptions of target stakeholders (e.g., Carroll & Swaminathan, 2000; Basuroy, Chatterjee, & Ravid, 2003). Our results suggest that the magnitude of a project negatively moderates the positive relationship between status and recognition of quality, regardless of actual product quality. A plausible explanation for this negative interaction effect is that magnitude and status are incongruent signals in the creative industries.

Our study contributes to the status literature in a number of ways. First, it has been a methodological challenge for status scholars to distinguish effectively between the effects of status and quality. As such, convincing empirical evidence for the dynamics of the Matthew effect has been scarce (see Sauder et al., 2012, for a review; Kim & King, 2014). Our combined database, however, allows us to provide strong evidence of the Matthew effect by disentangling the effect of organizational status from the effect of product quality on product performance. Although it has been extensively argued that market actors are particularly influenced by organizational status when they experience some degree of uncertainty (e.g., Podolny, 1994) – and the creative industries are no exception to this rule (Waguespack & Sorenson, 2011) – we show that status can have an important effect even when there is very little uncertainty over the underlying quality (i.e., in the case of members of an awards committee).

Second, we also draw attention to an important mechanism that might prevent status dynamics from taking effect. More specifically, high-status organizations gain momentum by re-investing the resources which they have obtained because of their high status (Benjamin & Podolny, 1999). Exploiting this momentum by implementing projects of great magnitude, however, may cause high-status organizations to fail to realize all the potential benefits of their status. Thus, our study gives researchers and practitioners important insights not only into the "burdens of celebrity" (e.g., Wade et al., 2006; Graffin et al., 2013; Kovacs & Sharkey, 2014), but also into why status hierarchies are dynamic (e.g., Frank, 1985; Gould, 2002; Podolny, 2005; Lynn, Podolny, & Tao, 2009; Sauder et al., 2012). Many researchers have assumed that status hierarchies are rigid social constructions, whereas others have challenged this view, arguing that these hierarchies are

shaped by local dynamics (see Magee & Galinsky, 2008, for a review). Our study bridges these views by demonstrating that status hierarchies can in fact be both rigid and subject to local dynamics. The dynamism of these hierarchies depends on the extent to which organizations act in ways that are congruent with their position in the hierarchy.

Third, there has been an increasing attention to the interaction between different signals of quality – for example, between status and reputation (Jensen & Roy, 2008; Stern et al., 2014) or between different dimensions of reputation (Ebbers & Wijnberg, 2012). This line of research has emphasized the importance of congruence in the interaction between quality signals. Our study contributes to the status literature by showing how status and magnitude, as incongruent quality signals (Litman, 1983; Podolny, 1993; Carroll & Swaminathan, 2000; Basuroy et al., 2003; Luo et al., 2009), interact with each other and reduce each other's effects on performance and recognition of quality.

THEORY

Status and Recognition of Quality

Our first hypotheses concern how status affects an organization's ability to gain recognition for its quality from both consumers and industry experts. Status is a quality indicator that denotes an organization's ability to supply its consumers with high-quality products (Podolny, 2005). We are focusing on the signalling effect of status, thus on the advantages that high-status organizations have compared to their low-status counterparts when offering the same level of product quality (Podolny, 2005). It has been shown that

market actors rely on quality indicators, which are easily observable, when they have a choice to make and uncertainty is high (Podolny, 1994). For example, Podolny and Scott Morton (1999) showed that incumbents use status to form a judgment about a new entrant's vulnerability and potential as a valuable partner, and as such, status lowers the barriers to entry for a new market. Similarly, Stern et al. (2014) found that when choosing alliance partners, incumbents rely on the status of the founders of new ventures in order to assess their underlying quality. Consumers rely on organizational status because obtaining reliable information on organization's underlying ability to ability to provide quality goods and services is costly. Therefore, consumers are willing to pay more for products from high-status organizations, because they trust these high-status actor more to supply high-quality products (Podolny, 2005).

Scholars have used this theoretical mechanism to explore many different advantages of status. For example, they have shown that status can facilitate access to financial capital (Stuart et al., 1999; Stuart & Ding, 2006) and can lead to greater sales growth (Podolny, Stuart, & Hannan, 1996). However, scholars have been facing challenges finding support for pure status advantages, because it has been difficult to disentangle those from quality advantages (Sauder et al., 2012). A notable exception is Benjamin and Podolny's (1999) study of the Californian wine industry. They were able to control for the underlying quality of products using the judgment of expert wine tasters, and found that high-status wine producers can charge more than low-status producers for a given level of quality. In line with their research, we also hypothesize that high-status organizations will achieve higher sales for a given level of quality than low-status actors for two reasons. First, high-status actors attract more attention (Azoulay et al., 2014), and their products are

therefore more visible than those of their competitors. Second, consumers rely on status signals to ease their choice when they feel uncertain about the underlying quality of products available to them (Benjamin & Podolny, 1999).

Hypothesis 1: The status of an organization has a positive effect on the market performance of its products; product quality being equal.

Thus, consumers who feel uncertain about the underlying quality of products rely on organizational status to make their decision-making easier. One may argue, however, that when industry experts are formulating their opinions, they should not be influenced by status, because industry experts, and especially award committees, experience much less uncertainty in their selection process. This is for the following reasons. First, experts are very experienced at assessing the quality of products. They therefore pick up cues relating to quality that consumers do not. Second, they have the opportunity to interact extensively with the product and compare it to other products before reaching a judgment. Therefore, the uncertainty they experience should be significantly lower. For instance, consider the selection process used by the Academy of Motion Picture Arts and Sciences for the prestigious Oscar awards. The members of the Academy are experts in assessing film quality, and they become very familiar with each of the nominations before making a final decision about which film or contributor should be singled out as the best in each category.

On the other hand, there are also reasons to assume that award committees might also be biased by status. By bias, we mean that products from high-status organizations are more likely to be recognized with a prestigious award that denotes exceptional quality than products from low-status organizations, even when the actual quality of those products is

similar. First, the contribution of high-status organizations may be overvalued. Merton (1968) found that when articles published are of equal academic importance, the amount of credit given to an article by the academic community depends on the prestige of the author. In addition, Kim and King (2014) showed that judges tend to be biased in favour of high-status players when making a judgment about quality. In the case of prestigious award committees, this effect may lead to a mechanism similar to the halo effect, in the sense that they sort the products of high-status organizations into categories perceived as having higher value (Waguespack & Sorenson, 2011). When evaluators assess the quality of a product from an organization whose products have already been judged to be the best in other contexts, they may tend to assign the new product to the same category.

Second, high-status actors are perceived to have control over a vast amount of valuable resources, which is a source of power (Magee & Galinsky, 2008). It has already been argued that high-status organizations accumulate advantages due to their social position, which provides them with exclusive access to resources. The process of resource accumulation is also observable by external stakeholders (e.g., via press releases, company and industry reports, etc.). Thus, industry experts believe, with some justification, that high-status organizations will have valuable resources at their command. Power does not have to be actively exercised to be recognized and to confer benefits (French & Raven, 1968). Because they can see the power of high-status organizations, industry experts are motivated to act in line with the interests of those organizations in order to derive benefits or avoid possible sanctions in the future. One way of doing this is to give preference to high-status organizations when making decisions about awards, even though low-status organizations may be demonstrating the same level of quality.

Finally, high-status actors are more visible, and so are their products (Simcoe & Waguespack, 2011; Azoulay et al., 2014). Hence, in the selection process for awards, something that has been produced by a high-status organization is more likely to be make it on to a shortlist to go before a committee (Jensen & Roy, 2008), and therefore stands a higher chance of winning. In contrast, products developed by low-status actors might not even get noticed by industry experts, even if they are of exceptional quality. As a consequence, these products are less likely to receive awards, regardless of their actual quality. Thus, we expect that products of high-status organizations are more likely to get recognition for exceptional quality.

Hypothesis 2: The status of an organization has a positive effect on the likelihood that its products will be given an award; product quality being equal.

The Effect of Project Magnitude

We now explain the circumstances in which high-status actors might fail to realize all the potential benefits of their advantageous social position. We look at the effect of project magnitude, which captures the impression a projects makes because of its scale, on the relationship between status and recognition of quality, because great project magnitude might give signals that are incongruent with high status. In creative industries, status can be seen as a signal which shows that an organization is capable of artistic excellence (Bakker, 2001). It has been recognized for a long time that there is a tension between an artistic logic and an economic logic in creative industries (e.g., Bourdieu, 1993; Glynn, 2000; Ebbers & Wijnberg, 2013) such as the video games industry (Tschang, 2007). We

hypothesize that project magnitude negatively moderates the relationship between status and recognition of quality for three reasons. First, to target stakeholders it may seem to signal a lack of determination on the part of the organization to create a product of high artistic quality. Second, it could suggest to them that the organization lacks the capabilities required to create high-quality products. Finally, they might also be confused by the fact that products resulting from projects of great magnitude may be assigned to multiple categories (i.e., by category spanning).

The tension between artistic logic and economic logic exists not only in the creation process, but also can affect the image of organizations that try to achieve both artistic and economic success. Indeed, because of the uncertainty around what leads to success in creative industries (Creves, 2002), financial investors are reluctant to invest in creative firms of demonstrable artistic excellence before these firms have shown that they can achieve financial success as well. On the artists' side, economic success is viewed with similar suspicion. For example, the economist and artist Hans Abbing (2002) describes how artists have to appear to be uninterested in money and economic success in order to be perceived as credible. These individuals should presumably appear to be driven by their work, rather by a desire for money. Engaging in projects of large magnitude might signal exactly the opposite to target stakeholders. In such cases, these stakeholders might perceive that economic logic is prevailing over the artistic logic in that organization (Eikhof & Haunschild, 2007). As a consequence, they may be reluctant to believe that the high-status organization is aiming for true artistic excellence when it implements a project of great magnitude. As a result, stakeholders tend to assume that such product will have a lower quality than may actually be the case.

Magnitude can also be a sign that an organization lacks the capabilities needed to deliver artistic excellence. According to signalling theory, market actors infer some of the underlying characteristics of an organization from its actions (Spence, 2002)., Basuroy et al. (2003) found that, in the film industry, large budgets can offset the negative effect of negative reviews on box office performance, as they can be seen as a sign of quality to consumers, but large budgets have no effect when the reviews are positive. As such, "big budgets […] serve as an insurance policy" for films that might turn out to be low-quality (Basuroy et al., 2003: 116). In other words, increasing the magnitude of projects by increasing their budgets is an insurance policy that is needed only for those producers who are concerned with and also uncertain about the revenues their product will generate. On the one hand, high status gives the impression that an organization has the necessary capabilities to create very high-quality products without needing to spend a lot on developing a product. On the other hand, however, one could use signalling theory to argue that large budgets may indicate a lack of such capabilities, or at least a lack of absolute confidence on the part of product producers in those capabilities.[14] Thus, when a project is of large magnitude, this may offset the effect of status on market performance and the likelihood that the product will receive an award, irrespective of its actual quality.

Finally, when a high-status organization carries out projects of great magnitude, the quality of products that result from these projects might be evaluated lower by the

[14] Here we make an assumption regarding the extent to which target stakeholders are aware of the lack of necessity of large budgets in the creation of exceptional artistic excellence in creative industries. It should be acknowledged that this assumption is supported by previous research only in case of industry experts and the more art-oriented consumers (Kim & Jensen, 2014). However, even to more mainstream consumers, there is no reason to assume that high-status organizations signal the presence of even more capabilities required to produce exceptional artistic performance than it is already implied by their status when they implement a project of great magnitude. In other words, there is no reason to assume that magnitude increases the effect of status on recognition of performance based on signalling theory.

organization's target stakeholders: product consumers and industry experts. The reason is that such products can be rated high on both the artistic and economic dimensions (Eikhof & Haunschild, 2007). Hence, they might be assigned to both artistic and commercial product categories (i.e., brackets of products with similar characteristics). According to Hsu et al. (2009), products that fall into multiple categories are confusing for audiences. They argue that category memberships of products follow a zero-sum game: the more a product fits into an agent's schema for one category, the less it will fit in another category in the same schema. In line with their argument, previous research has demonstrated that category spanning tends to result in lower evaluations (Zuckerman, Kim, Ukanwa, & von Rittmann, 2003; Hsu, 2006; Hsu et al., 2009). Thus, the confusion from category spanning might result in projects of great magnitude getting less recognition from product consumers and industry experts for a given level of quality when they are implemented by high-status organizations. This is because the more a product fits into the category of commercial products (e.g., blockbusters), the less it will fit into that of artistic products, and vice versa. Our arguments above lead us to propose the following hypotheses.

Hypothesis 3a: Project magnitude negatively moderates the effect of an organization's status of on the market performance of its products; product quality being equal.

Hypothesis 3b: Project magnitude negatively moderates the effect of an organization's status of on the likelihood that its products will be given an award; product quality being equal.

METHOD

Sample and Setting

In order to test our hypotheses, we investigate projects in the video games industry. We chose this setting for several reasons. First, it is an example of a creative industry where there is a tension between the artistic logic and the economic logic (Tschang, 2007). Second, as a creative industry, it provides valuable opportunities to investigate signalling effects, product quality being equal, as the assessments made by many industry critics regarding product quality are readily available. Third, there are prestigious awards given to products and their contributors on the basis of outstanding quality both in specific genres (e.g., action games, racing games, etc.) and in the overall industry awards for a given year. Fourth, in the video games industry, organizational status is more important than individual status than is the case in other creative industries such as the book or film industries. Thus, it is an appropriate setting in which to investigate the dynamics of organizational status hierarchies.

To create our sample of video games projects, we combined data from three difference sources. First, we collected data from *MobyGames.com* on about 40,000 video games projects regarding their developer and publisher firms, the characteristics of the game (genre, year of release, project size, and licenses), and industry experts' ratings concerning the quality of each product. This enabled us to control for the underlying quality of the products. *MobyGames.com* contains information about most of the videogames developed from 1972 onwards. *MobyGames.com* lists its goal as: "*To*

meticulously catalog all relevant information about electronic games (computer, console, and arcade) on a game-by-game basis, and then offer up that information through flexible queries and data mining."[15] Second, from the market research company NPD Group we gathered information on the sales performance of 13,000 console video games released in the U.S. Finally, we obtained data from the Academy of Interactive Arts and Sciences on the number of awards received by each video game. The Academy of Interactive Arts and Sciences is a non-profit organization founded in 1996 to recognize *"outstanding achievements in the interactive arts and sciences"* through industry awards (D.I.C.E. awards) made each year to products that are judged to be of outstanding quality in that year.[16] This reduced our sample to games released in or after 1996. Similar to many other prestigious awards in the film industry (see Gemser, Leenders, & Wijnberg, 2008, for a review), the D.I.C.E. award is given by industry experts based on a secret ballot, but the voting process is also certified by an independent organization.[17] In other creative industries such as the film industry, there is a long tradition of using industry awards to reward creative performance – and this has been examined in several studies (e.g., see Cattani & Ferriani, 2008, for several examples).

Dependent Variables

Market performance. We used sales data obtained from NPD Group. In order to make the sales figures comparable, we aggregated the revenues received for each video game during the twelve-month period after its release (Mollick, 2012). Because the video

[15] *MobyGames.com* FAQ, retrieved from http://www.mobygames.com/info/faq (04/09/2015)
[16] D.I.C.E. awards (before 2013 known as Interactive Achievement Awards). Retrieved from http://www.interactive.org (10/01/2015)
[17] Retrieved from http://www.interactive.org/awards/index.asp (10/01/2015)

games industry is a hit-driven industry and the sales figures are therefore expected to be highly skewed, we then took the natural logarithm of sales figures (Mollick, 2012).

Industry award. Industry awards have been used extensively to measure recognition of exceptional quality in other creative industries, such as the film (e.g., Kim & Jensen, 2014) or book industry (e.g., Kovacs & Sharkey, 2014). We created a dummy variable for each video game, setting the value to 1 if the video game received the best "game of the year" award across the whole industry or in any genre (e.g., action games, strategy games, etc.), and 0 otherwise.

Independent Variables

Organizational status. We derive the status of an organization from the number of industry awards given to that organization in the past (Jensen, 2010). When a project involved multiple organizations, we took the average of organizational status scores. We also looked at the network position of each organization as an alternative measure of status (e.g., Rider, 2009). Following other network analytic studies on affiliation networks (e.g., Cattani & Ferriani, 2008), we constructed the affiliation networks of organizations for each year in such a way that there was a tie between two organizations when they had jointly released a game in the previous three years before a given year. We then used Bonacich's (1987) power centrality formula to calculate organizational status (Rider, 2009):

$$S_{it}(\alpha, \beta) = \sum_{j} (\alpha + \beta S_{jt}) d_{ijt},$$

where S_{it} denotes the status of actor i, at time t, t is the release year of the game in question, and d_{ijt} denotes whether nodes i and j have implemented a project together in the

three years prior to time t (i.e., the year in which the game was published). We selected the scaling parameter α, so that, in each year, actors with entries equal to 1 do not get disproportionally high or low status scores (Bonacich, 1987). β is a parameter that denotes the distance that communication can travel in the network, which is set to ¾ of the inverse of the highest normed eigenvalue of the corresponding affiliation matrix in line with prior network analytic studies (Podolny, 2005; Rider, 2009; Bothner, Kim, & Smith, 2012). As with our other measurement, we took the average of status scores when multiple organizations had participated in the development of a particular game.

Project magnitude. Creative industries are service-based industries in which the main and most important cost-component is human resources (Skaggs & Youndt, 2004). Thus, project magnitude, in terms of either size or budget, can best be captured by the number of contributors to a project.

Control Variables

Project controls. Our most important control variable is *product quality*, as our theoretical interest lies in the effect of status on the recognition of quality, regardless of actual product quality. Following Benjamin and Podolny (1999), we use industry critics' aggregated assessments of the quality of each product in our final sample to control for product quality. Furthermore, we control for the *year of release* of each video game, including 17 dummy variables for each year from 1997 to 2013, with 1996 being the reference year. *Product novelty* can be an important factor that affects the recognition of quality. From *MobyGames.com*, we collected information on whether each game fits into

one of the 62 categories on the website (e.g., action game, racing game, etc.). Following other researchers of the software industry, we used product categories (62 in our case) which signifies whether the organization in question needed to acquire new knowledge in order to implement the development project (Stettner & Lavie, 2014). We used these categories to create a 62-digit category code for each product. Product novelty was included in our model as a dummy variable, with 1 used to indicate that this type of product had not appeared on the market before the release of the game in question. We control for the *number of reviews* as a proxy for marketing budget. Also, whether the game is *licensed* can be an important factor that influences how a video game is received. A licensed game is an adaptation of a movie, comic book or television show. Hence, we included a dummy variable in our models, with 1 meaning that the game is licensed.

Organizational controls. The *number of organizations* can be an important indicator of resource availability independent from project magnitude. Therefore, we include the number of organizations participating in a development project. In addition, the size of the organization can be an important indicator of resource availability, and hence should be taken as constant. *Organizational size* is measured by the sum of individuals who contributed to any project undertaken by any of the participating organizations in the previous three years before the release of the video game in question. We also control for the artistic and economic reputations of the participating organizations, as these are important quality indicators that should be investigated separately from the effect of status (Washington & Zajac, 2005). *Artistic reputation* is the average of product quality scores for all products developed by the organization before the release of a given product (Ebbers & Wijnberg, 2012). *Economic reputation* is the average of sales of all products

released by the organization before a particular game (Ebbers & Wijnberg, 2012). Because these quality signals are incongruent, and hence they can create confusion in the minds of target stakeholders, when both are strongly present (Ebbers & Wijnberg, 2012), we also control for the interaction of these variables. When multiple organizations worked on the development of a game, we took the average of these scores. For these three variables, where there was no information about an organization before a given year, and no indication of its economic and artistic reputation or its size, we assumed that these values to be zero. We checked to see what happened when we deleted observations where we did not have any information on a participating organization, and this did not change our results substantially. It was also important to control for the *number of projects* in an organization's project portfolio, because it might correlate with the number of awards received in the past. As with other variables, we took the average score when several organizations were involved in the project.

RESULTS

Table 5 presents the descriptive statistics of our sample, and Table 6 contains the bivariate correlations between the variables. It is not surprising that high-status organizations tend to develop high-quality games ($r = 0.18$), which generate higher returns ($r = 0.36$). Also, high-status organizations tend to invest more in their development projects, and this is reflected in the correlation between organizational status and project magnitude ($r = 0.31$). Furthermore, as might be expected, there was a significant correlation between organizational status and the number of projects in an organization's

project portfolio (r = 0.73), as well as between organizational status and organization size (r = 0.74). Although there were important theoretical reasons for including these variables in our subsequent analyses, we checked our results when these were removed, and this did not lead to substantially different results from those reported in this study. For theoretical reasons, we report our results with the number of organizational projects and organization size included.

TABLE 5
Descriptive Statistics

	Variable	Mean	s.d.	Min	Max	n
1.	Ln(Market performance)	18.95	1.85	0.00	23.34	2,765
2.	Industry award	0.01	0.08	0	1	25,584
3.	Organizational status	0.82	2.17	0	31	24,223
4.	Project magnitude	101.53	176.82	1	4,998	15,190
5.	Product quality	69.14	13.46	7	97	7,416
6.	Product novelty	0.17	0.38	0	1	25,584
7.	Number of reviews	7.87	16.09	0	264	25,584
8.	Licensed	0.19	0.39	0	1	25,584
9.	Number of organizations	1.65	0.61	1	7	24,223
10.	Organization size	2,209.03	3,973	0	42,123	25,584
11.	Artistic reputation	42.67	31.16	0	93	24,223
12.	Economic reputation	237.28	438.09	0	7,613.27	24,223
13.	Number of projects	105.07	180.46	0	2,450.5	24,223

TABLE 6
Correlation Matrix

	Variable	1	2	3	4	5	6	7	8	9	10	11	12
1.	Ln(Market performance)												
2.	Industry award	0.19*											
3.	Organizational status	0.30*	0.10*										
4.	Project magnitude	0.25*	0.20*	0.31*									
5.	Product quality	0.36*	0.17*	0.18*	0.19*								
6.	Product novelty	-0.06*	0.00	-0.01	0.02	-0.01							
7.	Number of reviews	0.29*	0.25*	0.18*	0.46*	0.29*	0.01						
8.	Licensed	0.08*	0.01	0.05*	0.13*	-0.11*	-0.02*	0.10*					
9.	Number of organizations	-0.14*	0.01	-0.04*	0.08*	-0.15*	0.03*	0.11*	0.11*				
10.	Organization size	0.28*	0.08*	0.74*	0.49*	0.13*	-0.01	0.27*	0.17*	0.13*			
11.	Artistic reputation	0.27*	0.08*	0.32*	0.33*	0.24*	0.05*	0.30*	0.16*	0.11*	0.43*		
12.	Economic reputation	0.40*	0.11*	0.53*	0.27*	0.21*	0.00	0.25*	0.09*	0.02*	0.42*	0.44*	
13.	Number of projects	0.25*	0.07*	0.73*	0.34*	0.15*	0.00	0.22*	0.12*	-0.08*	0.81*	0.45*	0.43*

*$p < .05$

TABLE 7
Estimates for Ordinary Least Squares and Logistic Regression Models of the Natural Logarithm of Market Performance and the Binary Variable of Industry Awards[a]

	Ln(Market performance)			**Industry awards**		
	Ordinary least squares			Logistic regression		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	16.24***	16.25***	16.27***	-32.21	-31.61	-31.58
	(0.31)	(0.34)	(0.33)	(526.50)	(575.91)	(577.28)
Product quality	0.03***	0.02***	0.02***	0.15***	0.15***	0.14***
	(0.00)	(0.00)	(0.00)	(0.02)	(0.02)	(0.02)
Year dummies		Included			Included	
Product novelty	-0.09	-0.09	-0.08	-0.01	-0.03	0.01
	(0.08)	(0.09)	(0.09)	(0.25)	(0.26)	(0.26)
Number of reviews	0.01***	0.01***	0.01***	0.02***	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Licensed	0.33***	0.32***	0.30***	-0.21	-0.18	-0.16
	(0.07)	(0.08)	(0.08)	(0.24)	(0.25)	(0.25)
Number of organizations	-0.11+	0.02	0.03	-0.19	-0.16	-0.14
	(0.07)	(0.07)	(0.07)	(0.21)	(0.22)	(0.22)
Organization size	0.00***	0.00	0.00	0.00***	0.00	0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Artistic reputation	0.01***	0.01**	0.01**	0.01	0.01	0.01
	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)
Economic reputation	0.00***	0.00***	0.00***	0.00	0.00+	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Artistic reputation ×	-0.00***	-0.00*	-0.00*	-0.00	-0.00+	-0.00+
Economic reputation	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of projects	-0.00	0.00	0.00	-0.00	-0.00**	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Organizational status		0.06*	0.10***		0.24***	0.32***
		(0.02)	(0.03)		(0.06)	(0.07)
Project magnitude		0.00***	0.00***		0.00*	0.00**
		(0.00)	(0.00)		(0.00)	(0.00)
Status × Project magnitude			-0.00**			-0.00**
			(0.00)			(0.00)
Number of observations	1948	1640	1640	7399	6145	6145
AIC	1084.11	957.28	949.80	1019.98	936.95	930.69
Log likelihood	-3278.15	-2775.70	-2770.96	-481.99	-438.47	-434.35

[a] Two-tailed tests.
***p < 0.001
**p < 0.01
*p < 0.05
+p < 0.10

In order to investigate what effect status has on the recognition of quality, regardless of actual product quality, we conducted regression analyses that enables us to take product quality as constant. To predict market performance we used OLS regressions, whereas to predict industry awards we applied logistic regressions (see Table 7). As can be seen, regressing our variables on these dependent variables resulted in large differences in terms of sample size. This is because we had information on the sales performance of only 2,765 projects, whilst creating the industry award variable did not generate any missing value (see Table 5).

The results of our regression analyses are reported in Table 7. In line with our expectations, we found statistical support for the positive effect of organizational status on market performance, product quality being equal. The coefficient of organizational status is positive and significant (Model 2: $\beta = 0.06$, $p < .05$). Thus, high-status organizations tend to achieve higher revenues than low-status organizations for the same quality of product.

Our results also show support for our second hypothesis, which predicted that organizational status would have a positive effect on the likelihood of an organization's product receiving an award product quality being equal, as the coefficient of organizational status is positive and significant (Model 5: $\beta = 0.24$, $p < .001$). Hence, even when the level of quality is the same, high-status organizations are more likely to be given an award by industry experts than their low-status counterparts.

Finally, we found support for our moderation hypotheses. We predicted that project magnitude would negatively moderate the main effects of status. Since the coefficients of

the interaction terms are negative and statistically significant in both Model 3 (β = -0.00, p < .01) and Model 6 (β = -0.00, p < .01), we find statistical support for Hypotheses 3a and 3b. Therefore, we conclude that whilst high-status organizations can realize more benefits for a given level of quality compared to low-status actors, they benefit less from the signalling effect of status when they implement a project of great magnitude.

The moderating effects are depicted in Figures 6 and 7. The typical approach when depicting moderating effects is to illustrate the relationship between the independent and dependent variables when the moderating variable is one standard deviation above and below its mean value (Dawson, 2014). Since project magnitude is a skewed variable, one standard deviation below the mean would result in a negative value, which would not result in a meaningful plot. Therefore, we depicted the effect of status when project magnitude is equal to certain quantiles. Since one standard deviation below and above the mean is the closest to the first and the fifth sextile when a variable follows a normal distribution, we chose to depict the effect of status when project magnitude is equal to the first and the fifth sextile of project magnitude. We hypothesized that high-status organizations might fail to realize all the potential benefits of status when they invest in projects of great magnitude. Indeed, Figures 6 and 7 show that the effect of status on our dependent variables changes when the project magnitude changes, in line with our expectations.

FIGURE 6
The Moderating Effect of Project Magnitude on the Relationship between Organizational Status and the Natural Logarithm of Market Performance

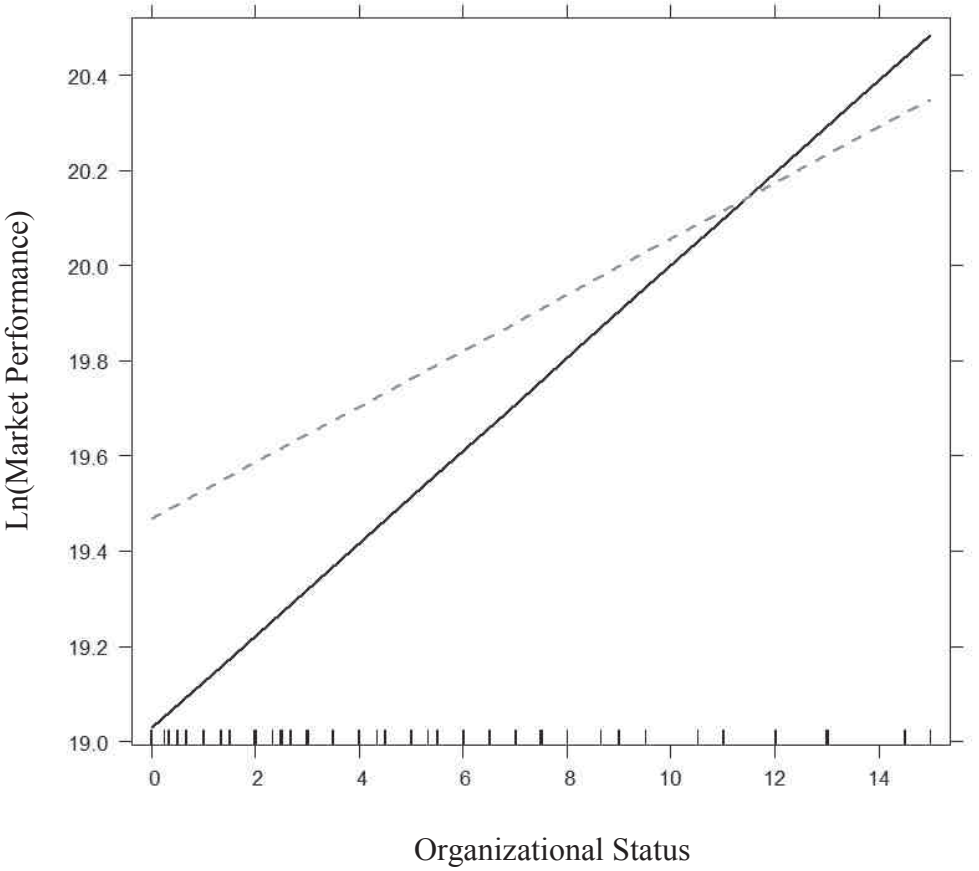
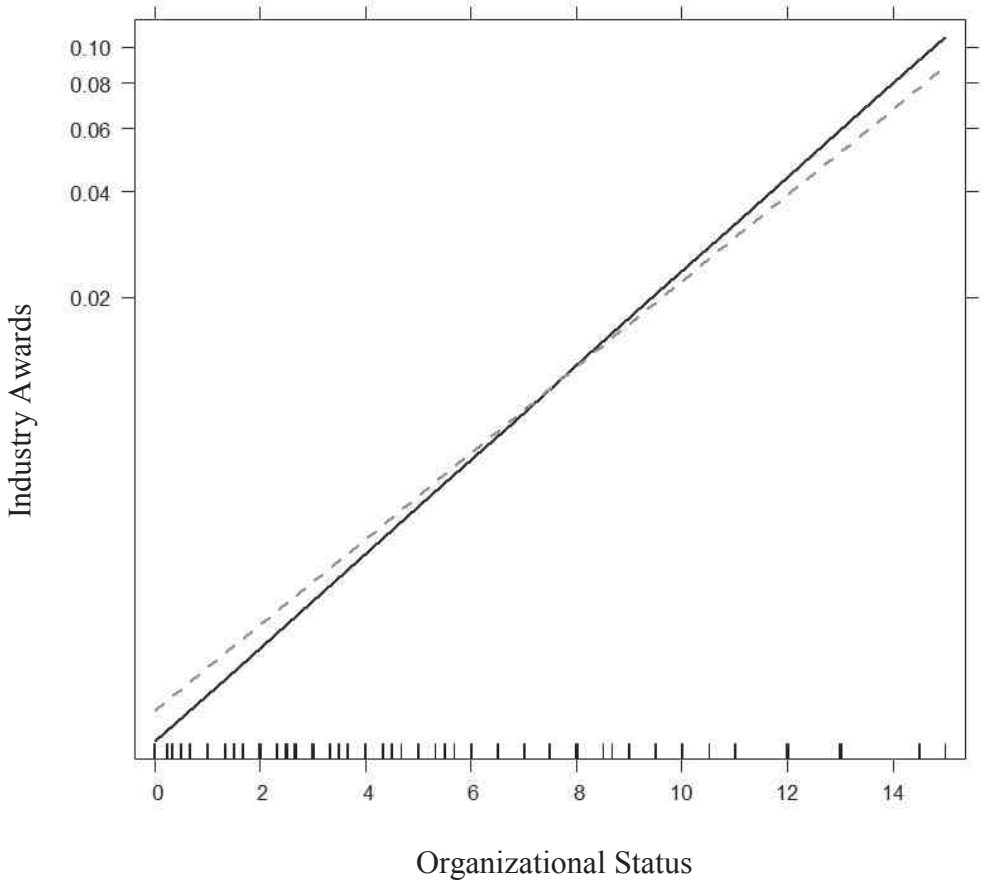


FIGURE 7
The Moderating Effect of Project Magnitude on the Relationship between Organizational Status and Industry Awards



Additional Results

As mentioned above, we also used an alternative measure for organizational status (see Table 8). When we measure status by the power centrality of an organization, we find additional support for Hypothesis 2 (Model 5: β = 0.07, p < .01) and Hypothesis 3b (Model 6: β = -0.00, p < .05). However, we find no statistical support for Hypothesis 1 (Model 2: β = 0.01, p > .10), and only limited support for Hypothesis 3a (Model 3: β = -0.00, p < .10). The main reason for this is that to consumers, power centrality might be a much less visible indicator than the number of awards. Thus, we argue that measuring status by the number of awards is a better choice. Status is an abstract construct that can be grasped in different ways, depending on the context and on what stakeholders value and perceive (Podolny, 2005; Call, Nyberg, & Thatcher, 2015). When the target stakeholders are industry experts, power centrality in the co-development network is a good alternative indicator of status, because they know the network, and they recognize the value it has when an organization is collaborating with many partners. However, product consumers are generally unaware of a firm's collaboration network and whether this has certain benefits for the firm and its products. Unlike collaborative ties between organizations, industry awards are usually highly visible to product consumers, because video game producers typically draw consumers' attention to product or organizational awards either through product packaging or commercials, or by re-releasing the game in a special "game of the year edition".

TABLE 8
Estimates for Ordinary Least Squares and Logistic Regression Models of the Natural Logarithm of Market Performance and the Binary Variable of Industry Awards Measuring Organizational Status by the Power Centrality of the Organization[a]

	Ln(Market performance)			**Industry awards**		
	Ordinary least squares			Logistic regression		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	16.24***	16.27***	16.27***	-32.21	-31.97	-32.11
	(0.31)	(0.34)	(0.34)	(526.50)	(563.24)	(557.02)
Product quality	0.03***	0.02***	0.02***	0.15***	0.14***	0.14***
	(0.00)	(0.00)	(0.00)	(0.02)	(0.02)	(0.02)
Year dummies		Included			Included	
Product novelty	-0.09	-0.09	-0.09	-0.01	0.03	0.03
	(0.08)	(0.09)	(0.09)	(0.25)	(0.26)	(0.26)
Number of reviews	0.01***	0.01***	0.01***	0.02***	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Licensed	0.33***	0.31***	0.29***	-0.21	-0.27	-0.29
	(0.07)	(0.08)	(0.08)	(0.24)	(0.25)	(0.25)
Number of organizations	-0.11+	0.00	-0.00	-0.19	-0.14	-0.13
	(0.07)	(0.07)	(0.07)	(0.21)	(0.22)	(0.22)
Organization size	0.00***	0.00+	0.00*	0.00***	0.00	0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Artistic reputation	0.01***	0.01**	0.01**	0.01	0.01	0.01
	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)
Economic reputation	0.00***	0.00***	0.00***	0.00	0.00+	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Artistic reputation ×	-0.00***	-0.00*	-0.00*	-0.00	-0.00	-0.00
Economic reputation	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of projects	-0.00	0.00	0.00	-0.00	-0.00+	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Organizational status		0.01	0.02		0.07**	0.10***
		(0.01)	(0.02)		(0.03)	(0.03)
Project magnitude		0.00***	0.00***		0.00	0.00*
		(0.00)	(0.00)		(0.00)	(0.00)
Status × Project magnitude			-0.00+			-0.00*
			(0.00)			(0.00)
Number of observations	1948	1640	1640	7399	6145	6145
AIC	1084.11	963.26	962.07	1019.98	947.69	944.81
Log likelihood	-3278.15	-2778.69	-2777.10	-481.99	-443.84	-441.40

[a] Two-tailed tests.
***p < 0.001
**p < 0.01
*p < 0.05
+p < 0.10

We checked the robustness of our results by normalizing the distribution of our predictors using logarithmic transformations. However, we had many zero values in many variables. In these cases, log-transformation is not advisable (O'Hara & Kotze, 2010). For this reason, we used log-transformation only for project magnitude, where it helped to normalize the distribution (Fisher & van Belle, 1993). The results provided additional support for Hypotheses 1, 2, and 3a, but the interaction term in the model predicting the likelihood of getting an industry award (Hypothesis 3b) was significant only at the 10% level. Furthermore, it made sense to check the results when projects implemented by firms without any prior experience were excluded. In this subset, log-transformation normalized the distribution of two additional skewed variables: economic reputation and number of firm projects. Applying log-transformation to these variables, and running additional regressions, provided further support for Hypotheses 1, 2, and 3a, but only limited support for Hypothesis 3b, because the interaction term predicting industry awards was significant only at the 10% level. Thus, these results provide further support for Hypothesis 1, 2, and 3a, but only limited additional support for Hypothesis 3b. Here, we present the models with non-transformed independent variables, because log-transforming the aforementioned variables did not result in models with a better fit (Fisher & van Belle, 1993).

DISCUSSION

The purpose of this study was to investigate the Matthew effect and the consequences of incongruence between the signalling effects of status and project magnitude in creative industries. Since our main theoretical interest lied in the signalling

effects of these constructs, product quality was taken as an exogenous factor in our model. We suggested that high-status organizations are able to realize more benefits for a given level of quality than their low-status counterparts. Specifically, we looked at market performance and the likelihood of an organization being given an industry award, and hypothesized that status would have a positive effect on these outcome variables, all other things being equal. We also predicted that high-status organizations will be less able to realize all the potential benefits of their position in the status hierarchy when they work on projects of great magnitude. We argue that status and project magnitude signals are incongruent, because when both are strongly present, they create confusion over the identities of market actors in the minds of target stakeholders. When we analysed a unique dataset of video game projects, we found support for our predictions. Thus, product quality being equal, status positively affects both sales revenues and the likelihood of getting an industry award. Furthermore, we also showed that project magnitude negatively moderates these positive effects of status. We now explain the theoretical and practical implications of our research.

Theoretical Implications

Our study provides several important implications for management research on the Matthew effect and status hierarchies. First, we contribute to the status literature by finding evidence for the Matthew effect in a creative industry even when uncertainty surrounding the offerings of producers is very low (in the case of assessment by award committees). It has long been recognized that the creative industries are distinctive on several counts (Bourdieu, 1993; Creves, 2002). The industry awards made in the creative industries can

serve as an indicator of status (Gemser et al., 2008; Jensen, 2010), and the selection process for these awards has interesting features that are relevant to this study. First, exceptional quality is recognized by awards from industry experts who have extensive experience in assessing the quality of products. Second, they need to make their final judgment only after they have considered many competing products. Thus, based on status theory, one may argue that status should have a very limited effect in the award selection process because of the lack of uncertainty that award committees experience (Podolny, 1994). This is very different to the selection process of consumers (Benjamin & Podolny, 1999). We find, however, that even award committees are affected by organizational status, and hence tend to allocate status to high-status actors, regardless of the quality of what they have produced.

We also contribute to status theory by showing that project magnitude negatively moderates the relationship between status and the recognition of quality. There has been an increasing focus on the congruence of various quality signals (Ebbers & Wijnberg, 2012; Stern et al., 2014). We offer further insights for this line of research, and show that status can be seen as a signal that is incongruent with magnitude. Although both of them are signals of quality (Basuroy et al., 2003), they are capable of offsetting each other's effect on performance. There are three main reasons for this. First, whereas status can signify that an organization has the necessary capabilities to create products of exceptional quality, large project magnitude might, at the same time, indicate that the organization lacks these capabilities, or at least lacks confidence in these capabilities. Second, large project magnitude may give the impression that a high-status organization has no intention of creating true artistic excellence. Third, since a product of great magnitude created by a

high-status organization can be assigned to multiple categories, there is confusion over the precise identity of the product in the minds of target stakeholders who then doubt whether the product is indeed appropriate for one or other product category.

Related to the previous point, we also contribute to status theory by offering further insights into the "burdens of celebrity" (e.g., Wade et al., 2006; Graffin et al., 2013; Kovacs & Sharkey, 2014). Specifically, our findings suggest that high-status organizations can realize all the potential benefits of their position in the status hierarchy, but only if they act in congruence with their status (Stern et al., 2014). When high-status organizations do not do so, they tend to get evaluated less favourably by their target stakeholders. While the Matthew effect predicts that high-status actors will realize important advantages because of their status, thus increasing their status (Sauder et al., 2012), we find that these dynamics are dependent on the signalling effect of market actors' actions (Spence, 2002). In other words, high-status actors fail to realize the positive effects of their higher status when they use the increased resources to undertake projects of great magnitude. Thus, based on our findings, one may argue that investing in projects of great magnitude slows down the dynamics of the Matthew effect.

Our findings also have implications for research aimed at understanding the dynamics of status hierarchies (Magee & Galinsky, 2008). Many researchers have argued that established status hierarchies are rigid and self-reinforcing in nature (e.g., Bourdieu, 1986; Halevy, Chou, & Galinsky, 2011; Keltner, Gruenfeld, & Anderson, 2003; Lazega, Mounier, Snijders, & Tubaro, 2012; Sutton and Hargadon, 1996). Others have challenged this view, arguing that status hierarchies are constantly being shaped by local dynamics, leaving aside any external effects (e.g., McGrath, Arrow, & Berdahl, 2000; Podolny and

Phillips, 1996; van Dijke and Poppe, 2003). Our theory bridges these two views by proposing that the rigidity of these hierarchies is due to the Matthew effect (Merton, 1968), but that their dynamic nature comes from the actions taken by market actors in order to secure a better position in the hierarchy. Thus, order in hierarchy is not predetermined, and market actors can shape these hierarchies by, for instance, acting in ways that are in line with their status, which affects their ability to secure their current position or even take a higher one.

Managerial Implications

Our findings also offer important insights for industry practice. Most importantly, we show that, if high-status actors want to realize all the potential benefits of their position in the status hierarchy, they should act in congruence with their current position in the social hierarchy. More specifically, we suggest that high-status organizations should not increase the magnitude of their development projects in order to earn more. This is because projects of great magnitude may create confusion in the minds of the organization's target stakeholders over the identity of the high-status organization and its product. When this happens, an organization can realize less revenues and receives less recognition for its products. Status can bring organizations a number of important advantages, such as admiration (Simcoe & Waguespack, 2011) or resources (Benjamin & Podolny, 1999). Whereas it would be intuitive for decision-makers to invest these resources in subsequent large-scale endeavours, our findings suggest that high-status actors should not do so in creative industries. Instead, they should either invest in an increasing number of projects or they should seek to improve quality in different ways, looking not at

products but at process innovations that will improve the production process. Second, our findings provide industry experts with evidence that in the selection process for these awards there is a systematic bias towards products from high-status organizations. Assuming that these awards should be based on true merit (i.e., actual quality), awards committees should try to reduce such biases in their selection process.

Limitations and Future Research

Although our study offers important insights for both managerial practice and theory, it is not without its limitations. Most importantly, the extent to which our results can be generalized to other contexts may be limited. We suggested three reasons why project magnitude may have a negative moderating effect. Although category spanning is a phenomenon that has its negative effect not only in creative industries (e.g., Hsu et al., 2009) but also in other industries (e.g., Carroll & Swaminathan, 2000), our other arguments were based on the tension between the economic logic and artistic logic in creative industries (e.g., Eikhof & Haunschild, 2007). We recognize that project magnitude and status may interact more positively in other industries. However, we believe the idea that incongruence of quality indicators has negative consequences is generally applicable. Future research should therefore also explore the consequences of the interaction between the quality indicators investigated in this paper – and between other indicators – in other industries. For instance, in the microbrewery segment, if a craft beer producer engages in a project aimed at realizing the capacity to start mass production, this might conflict with its image on the market (Carroll & Swaminathan, 2000). This may lead to smaller return on investment.

Another limitation of our study is that it is focused primarily on organizational status. In the video games industry, organizational status is the most significant form of status. In this sense, the video games industry is similar to the wine industry (Benjamin & Podolny, 1999). However, other forms of status might be more important in other settings, such as the individual status of authors in the book industry (Kovacs & Sharkey, 2014) or in research (Merton, 1968), or the status of the whole film crew in the film industry (Waguespack & Sorenson, 2011). We expect that status should have similar effects at every level of analysis. The strength of its effect may change, though, depending on which form of status is the most visible in any given context. However, previous research provides no empirical evidence to support or reject this assumption. Hence, future research should compare status effects at different levels of analysis, both in terms of direction and magnitude, in various contexts. Furthermore, future research should also investigate how status signals on different levels interact. Even if these effects prove to be similar, they can either strengthen or weaken each other's effects. For example, status signals on different levels may interact positively because of the congruency of these signals, but the interaction between them may in fact be negative, as when one signal is present, there is no need for the other.

Finally, it is important to note that we do not have information on the duration of projects. Although we believe the number of project contributors is a good indicator of project magnitude, multiplying the number of contributors by the project length might give us a somewhat better indicator. Even though it is reasonable to assume that projects with more participants generally take longer, future research should find ways to test our propositions empirically, using an indicator of magnitude which takes into account not

only the number of participants but also the time it takes organizations to implement each project.

Despite these limitations, we believe that our study is an important step forward in increasing our understanding of the dynamics of the Matthew effect and status hierarchies, particularly in the creative industries. To conclude, for organizations to realize all of the potential benefits of their position in the status hierarchy, they should be wary of the magnitude of projects that they engage in once they have a high status.

CHAPTER V

GENERAL DISCUSSION

The main purpose of this thesis has been to show that status has important effects in the implementation of innovation. In the introductory chapter, we started with the premise that, through their status, each actor takes on the role of passive champion by helping to sustain all the projects which he or she is taking part in. Status is a signal of quality (Podolny, 1993), which can be translated as a signal of an actor's perceived ability to create value and to overcome any unforeseen difficulties. Furthermore, status increases the perceived value of projects to a greater degree than would be explained by their actual quality (Reitzig & Sorenson, 2013; Kim & King, 2014), and, as such, reduces the likelihood that a project will be terminated. Since status can take effect without requiring any specific action (French & Raven, 1968), it can be argued that each individual fulfils the role of project champion in a passive way, without even realizing it.

People can often take pride in being a champion. As champions, project participants facilitate the implementation of great ideas, which often lead to great success (Schön, 1963; Achilladelis, Jervis, & Robertson, 1971; Tushman & Nadler, 1986). However, being a champion also has its dark side (Markham, Green, & Basu, 1991; Markham, 1998;

2000), and this is conspicuously absent from management research. In particular, champions' contribution to failures is something that is generally outside the scope of management researchers (e.g., Murray, 2001). In addition to increasing our theoretical understanding, these issues have practical implications, since one failure can often be enough to drive an organization into bankruptcy, as we could see from the case of Duke Nukem Forever in the opening chapter.

This thesis addressed these issues by looking at the positive effects, the negative side-effects, and the contingencies of status, ultimately arguing that everyone is a champion to the extent to which they have status. The three studies in this thesis investigated the consequences of status of individuals, project groups, and organizations in the development of innovations. This thesis therefore increases our understanding of how status contributes to both the success and failure of innovation efforts, and how it should be utilized in order to increase innovation performance. We now describe the main findings, outline where this thesis makes its most significant contribution to theory, and discuss the main managerial implications of the three studies in this PhD research.

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findings, outline where this thesis makes its most significant contribution to theory, and discuss the main managerial implications of the three studies in this PhD research.

SUMMARY OF THE MAIN FINDINGS

The three studies in this thesis investigated the effects of status in the implementation of innovations on three different levels: individuals, groups, and organizations. In *Study 1*, we showed that the status of the project leader provides innovation projects with important advantages that increase project quality, but only up to a certain point, after which status becomes a liability. This might well be because high-status (or "star") leaders have difficulty managing their projects because of the challenges they face as a result of the attention and admiration they receive from others in the organization. We also found that the projects managed by high-status leaders tend to deviate more from the expected level of quality than projects run by lower-status leaders. We argued that this is due to the fact that status provides project leaders with unconditional support, which contributes to projects being selected and then sustained, regardless of their quality.

In *Study 2*, we focused on how the innovativeness of the organization may alter the effect of project group status on innovation performance. We hypothesized that project group status has a positive effect on project performance, because status facilitates better access to resources that project groups can utilize to improve their projects. However, we also suggested that this positive relationship is contingent upon the extent to which the environment of the project group is supportive of innovations. More specifically, when the

environment provides a high level of support for innovation-related activities, high-status project groups might become more complacent and receive less valuable feedback on their activities, and this can then have a negative impact on their performance. Analyses of the network position of project groups in new product development provided support for our hypotheses.

The main focus of *Study 3* was on how organizational status affects the recognition of quality. We predicted that high-status organizations would be able to realize more benefits from producing a given level of quality than their low-status counterparts. Indeed, our findings revealed that organizational status has a positive effect on market performance and on the likelihood of a firm winning an industry award, when the product quality is the same as those of competitors. However, high-status organizations which engage in projects of great magnitude (i.e., large-scale projects that are regarded by target stakeholders as being monumental) fail to realize all the potential benefits from their status. We argued that undertaking projects of great magnitude might suggest that a high-status organization does not have either the will or capabilities required to create top-quality products without there being a very high level of investment. Furthermore, projects of great magnitude implemented by high-status organizations may do less well because their identity becomes somewhat unclear, and may seem confusing to their target audience. In line with our hypotheses, we found that project magnitude negatively moderates the main effects of organizational status.

MAIN THEORETICAL IMPLICATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Status Theory

The thesis makes several important theoretical contributions to management research. First, the three studies offer important insights for status scholars. In the socio-political dynamics of the innovation process, status leads to admiration (Simcoe & Waguespack, 2011) and provides greater access to resources (Bothner et al., 2012). Both of these should facilitate innovation implementation (Reitzig & Sorenson, 2013) and improve innovation performance (Podolny & Stuart, 1995). Our research has revealed, however, that the status of the project leader can lead not only to great successes, but also to great failures. While not denying that status can provide important advantages in the implementation of innovations, we have shown that it is only high-status project leaders who can be statistically associated with huge failures, which has negative implications for status theory regarding the effect of status on innovation performance.

Our second study focused on how environmental support can alter the effect of status on project performance. Status scholars refer to the advantages conferred on high-status actors by their favourable position in the social hierarchy as the Matthew effect (Sauder et al., 2012). In line with the Matthew effect, we proposed and found that project group status has positive effects on innovation performance (Podolny & Stuart, 1995; Stuart, Hoang, & Hybels, 1999). Furthermore, we also revealed that these positive effects are contingent upon the extent to which other members of the organization are supportive

of the innovation-related activities of high-status project groups. We contribute to the status literature by showing that where there is an environment that is highly supportive of innovation, this reduces the benefits for innovation performance of having greater social capital and better access to resources. This may be because the lack of challenge breeds complacency and means that potentially valuable feedback is not provided, thus offsetting the positive effects of status.

Our first two studies highlight the importance of further increasing our understanding of the effects of intraorganizational status in organizational dynamics. While our main focus in this thesis was on the performance effects of status, future research should explore the impact of intraorganizational status on other outcome variables, such as absorptive capacity (Cohen & Levinthal, 1990), entrepreneurial orientation (Lumpkin & Dess, 1996), or ambidexterity (March, 1991), because according to previous research, all of these constructs determine an individual's learning capabilities. The learning capabilities of individuals in turn affect their performance, which has important implications for organizational competitiveness as well. A highly relevant theory here is status conformity theory, which predicts that middle-status actors are the least likely to deviate from industry norms and to exhibit risk-taking behaviour (Phillips & Zuckerman, 2001). Based on this, one would predict that low- and high-status actors should exhibit the most innovative behaviour in organizations. However, if this is true, then low- and high-status actors could also be the least ambidextrous (i.e., have more imbalance in their explorative and exploitative learning processes), because innovative behaviour is associated with mostly explorative learning processes (Stettner & Lavie, 2014). This might have a negative effect on their learning abilities. On the other hand, it is

also possible that low- and high-status actors are in fact the most ambidextrous people, assuming that all individuals engage in a high amount of exploitative learning regardless of their status, because their inclination for exploration actually brings balance to their learning process. Future research should also investigate the antecedents of intraorganizational status. While some researchers have argued that a proven capability to provide high-quality work is the most important source of intraoganizational status (Groysberg & Lee, 2008; Oldroyd & Morris, 2012; Reitzig & Sorenson, 2013), others have argued that there may be other important sources as well (see Call, Nyberg, & Thatcher, 2015, for an extensive review). Future research should explore the extent to which social skills can compensate for a lack of demonstrable high performance in the attainment of intraorganizational status.

Our final study provides two important contributions to the status literature regarding the Matthew effect at the organizational level. First, status research suggest that, when confronted with a set of alternatives, actors rely on status to make their decision-making process easier – whether they are choosing a product (Benjamin & Podolny, 1999), a scientific study (Azoulay et al., 2014), technology (Podolny & Stuart, 1995), project (Reitzig & Sorenson, 2013), or partner (Stern et al., 2014) from a set of alternatives. A general notion that guides this line of research is that status only biases selection processes when there is uncertainty about the underlying quality of products or the ability of actors to create quality (e.g., Podolny, 1994). However, we show that status may bias a selection process also when the uncertainty is negligible (e.g., as in the case of industry award committees because of their excessive experience in the assessment of quality and the excessive amount of time they can interact with each product before a final decision is

made). Future research should explore whether there are other settings in which status has a strong biasing effect even when uncertainty is low, so that we have a better understanding of the effects of status beyond uncertainty reduction in the decision process of relevant stakeholders. For example, in the wine industry, Malter (2014) found that consumers choose the products of high-status producers not primarily to reduce uncertainty in their choice, but to increase their own status by consuming high-status products in front of their peers. Another example where researchers may identify similar effects is the automobile industry (e.g., see the example of Jaguar in Washington & Zajac, 2005).

Another contribution of Study 3 concerns the conditions under which the Matthew effect does not occur. We focus on one particular factor that has not yet been explored: project magnitude. Magnitude is generally seen in a positive light, not only because it increases economies of scale (Carroll & Swaminathan, 2000), but also because it signals a high level of technical sophistication in certain (e.g., creative) industries (Basuroy, Chatterjee, & Ravid, 2003). However, magnitude and status might be seen as factors that are incongruent with one another, and as such, they may decrease each other's effects on performance (Ebbers & Wijnberg, 2012). Thus, our third study contributes to the status literature by showing that acting in ways that are inconsistent with one's position in the social hierarchy might mean that one then fails to realize all the potential benefits of one's position in that hierarchy. This finding not only increases our understanding of the contingencies of the Matthew effect, but also the dynamics of status hierarchies (Magee & Galinsky, 2008). Specifically, our study sheds light on an important factor that shapes the

dynamics of status hierarchies: acting in ways that do not conform to one's status makes one's position in the hierarchy less secure, allowing other actors to take over.

Innovation Management Research

Both Study 1 and Study 2 question the benefits of having access to resources through social influence, defined as influence that originates not from one's formal position but from one's perceived image and social position (French & Raven, 1968; Brass & Burkhardt, 1993; Chattopadhyay, Finn, & Ashkanasy, 2010). An important aspect of the support that derives from status is that it is not conditional upon the quality produced (Reitzig & Sorenson, 2013). Innovation management scholars have repeatedly argued that resources provided by social influence are highly beneficial for innovations (e.g., Ancona & Caldwell, 1992; Dayan, Elbanna, & Di Benedetto, 2012; Sethi, Iqbal, & Sethi, 2012) and essential to put "creativity to work" (Baer, 2012: 1102). On the other hand, we show that unconditional access to resources due to social influence can in fact be highly detrimental to the implementation of innovations, because resources may then be allocated to very low-quality projects or may be used inefficiently by project groups. Although these low-quality projects might be improved partly because of social influence, the same projects would, without a high-status project leader, never get implemented in the first place. Thus, we show that, in the development of innovations, social influence can result not only in increased performance, but also in huge failures. Future research should thus investigate how the negative side-effects of social influence may be mitigated in the implementation of innovations. For example, innovation management scholars could investigate the moderating effect of decision flexibility in the project review process (Sethi

& Iqbal, 2008). Reduced flexibility may help decision-makers to uncover their biases in their decision-process, caused by for instance social influence, allowing them to reduce the negative effects of biases and to increase their decision-making effectiveness.

Study 3 gives the innovation management literature important insights concerning how to utilize resources in developing innovations and, subsequently, how to maximize innovation performance. The positive relationship between investing in innovations and project performance has been convincingly supported by previous research (Baysinger, Kosnik, & Turk, 1991; Lin & Chen, 2005). Previous research has also demonstrated that successful organizations tend to invest their increased resources in subsequent technologies and projects in order to maintain their position in the market (Benjamin & Podolny, 1999). Our study provides a better understanding of how firms should use the extra resources gained from previous successes in innovation. We show that acting in ways that are at odds with one's image in the market may offset the benefits of large expenditure on innovation projects. As such, we show that in certain circumstances (e.g., in the case of high-status actors in creative industries), decision-makers should spend less on projects to earn more. Future research should explore further conditions under which this rule may also apply. For example, if a microbrewery were to embark on a project of great magnitude, this activity would immediately conflict with its image as a small-scale operation (Carroll & Swaminathan, 2000). The relative return on investment might actually be smaller as a result.

This thesis also reveals promising research directions for innovation management scholars in the area of project championship. While the role of project champion is generally considered to be a highly active one (Achilladelis et al., 1971; Chakrabarti, 1974;

Markham, 2000), we distinguish between active and passive championship, pursuing the idea that everyone can be a champion. The central notion in passive championship is that the status of every project member plays a part in the selection and sustainment of innovation projects, regardless of the actual quality of the projects or of project members' actual involvement into the decision-making process (French & Raven, 1968; Reitzig & Sorenson, 2013). To take this idea further, future research should also investigate the effects of other quality signals at the individual, group, and organizational level. Two signals that are closely related to status are reputation and legitimacy (Washington & Zajac, 2005; Jensen & Roy, 2008; King & Whetten, 2008). It might be fruitful for innovation management scholars to dedicate more attention to the possible biasing effects of these factors in project-related decision-making, as well as to their interaction in the decision-making process. Furthermore, there is still insufficient research on when and why (active) project champions are successful in their activity. Drawing on our framework, we argue that project champions' ability to fulfil their goals depends on how they are perceived in the organization, which is a function of their status. Future research should test the hypothesis that individuals who lack status thus also lack the image of competence that might be required to steer the decision-making in their favour and maintain support for their projects.

Finally, we make two additional contributions to innovation research, particularly regarding social responsibility and support from top management. First, our research has implications for those looking at how to facilitate socially responsible innovations. We suggest that, irrespective of the financial expectations, projects are more likely to be implemented when decision-makers are biased by quality signals such as status. For this

reason, we believe these quality signals deserve more research attention, because they may be used consciously to implement innovations of significant societal value, as these quality signals may bias decision-makers in the positive direction even when the financial expectations are not promising enough themselves. Second, innovation management scholars have repeatedly shown that support from top management is important for innovation success (Barczak, Griffin, & Kahn, 2009; Baer, 2012; Markham & Lee, 2013). An important side-effect of involving top managers, however, is that the status of the project group as a whole increases as a result. Based on our findings, we argue that future research should also investigate carefully both the positive *and* negative side-effects of involving top management.

MANAGERIAL IMPLICATIONS

Our study also provides some important insights for practitioners. First, we reveal the importance of being aware of the biasing effect of status in the implementation of innovations. Decision-makers should make efforts to identify the biases that status may introduce to their decision-making processes, because this can result in resources being allocated to low-quality projects which fail to fulfil stakeholder expectations. Reducing flexibility in the project review process might be one way of dealing with the possible negative side-effects of status (Sethi & Iqbal, 2008). By increasing the formalization in project-related decision-making, especially for projects with high-status project leaders, decision-makers can be more effective in identifying possible overvaluation biases in their decision-making process (Kim & King, 2014). However, biases are not inherently good or

bad. For instance, when an innovation idea has some societal or symbolic value (Abrahamson, 1991), the biasing effect of status can be highly beneficial in overcoming organizational resistance to these innovation ideas within the organization (Dougherty & Heller, 1994; Sethi et al., 2012). Nevertheless, decision-makers should be aware of the presence of biases in their decision-making process to ensure that these are allowed only when symbolic considerations are important.

Second, we also provide some important insights for managers regarding when and how high-status individuals should be deployed within organizations. Managers often allocate high-status individuals to very important projects, thereby increasing the status of those project groups. This ensures the necessary resources and prevents these projects from being terminated prematurely. However, our findings suggest that projects benefit from increases in status only when the environment is challenging for innovation. On the other hand, in settings where the environment is highly supportive of innovation, high-status project groups do not benefit from their status and may perform worse than they would in conservative settings. Hence, in innovative organizations, managers should find ways of making the environment more challenging for high-status project groups in order to avoid providing excessive support that could offset the positive effects of project group status. One way of doing this is through blind-review evaluation and feedback mechanisms.

Finally, this thesis also has important implications for decision-makers in creative industries in terms of how their organizations may fail to realize all the benefits that can accrue from their position in the social hierarchy. We highlight the fact that organizations should act in a way that is congruent with their status in order to increase their competitiveness in the market. Otherwise, they may be regarded less positively by their

target stakeholders, who can be either consumers or industry experts (e.g., critics, analysts, investors, etc.). That may in turn have a negative impact on organizational performance. More specifically, we suggest that high-status organizations should refrain from implementing projects of great magnitude in order to earn more. Doing so provides more resources which can then be used to increase the number of projects they undertake or to improve their innovation process so that they can create higher quality products. In turn, they can secure a higher position in the social hierarchy, which allows them to realize more benefits than others lower down the same hierarchy.

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SUMMARY

This thesis explores the effects of status in the implementation of innovations in three empirical papers which investigate both the positive and negative impact of status – status of either the project leader, the project group, or the organization. We argue that every project member fulfils the role of champion in their project through their status even without their actual involvement into the project-related decision-making process, because their status plays a part in the selection and sustainment of innovation projects, regardless of the actual quality of the projects. By analysing a unique database of video game development projects compiled from three different sources, we uncover several important effects of status in the creation of innovations. In addition, we study several factors which moderate the relationship between status and innovation performance.

The first two studies focus on the position of social actors in the organizational status hierarchy. Study 1 provides insights into the effects of project leader status on project quality. We hypothesize and find that project leaders benefit from their status up to a certain point, after which their status has a negative effect on the quality of their projects. Furthermore, we show that high project leader status can be a contributory factor in terms of whether a project greatly deviates from the expected standard of quality – either by failing to meet that standard, or indeed by exceeding it. We suggest that this is because status helps project leaders to overcome irrational resistance to high-quality projects, while

their status can also generate irrational support for low-quality projects. In Study 2, we focus on the moderating effect of organizational innovativeness on the relationship between project group status and innovation performance. Since high-status project groups have more social capital and better access to organizational resources, they usually outperform their low-status counterparts. We show that organizational innovativeness may offset the positive effect of project group status on performance, as status leads to inefficient resource utilization in such environments due to less valuable feedback and more complacency. Study 3 investigates the Matthew effect in an interorganizational context. It reveals that, for the same level of quality, high-status organizations are able to realize more advantages in terms of revenues and recognition than their low-status counterparts. However, we also show that high-status organizations fail to realize all the potential benefits of their status when they invest in projects of great magnitude, because great project magnitude gives signals that are incongruent with high status.

Together, our studies provide important insights into the effects of status and the dynamics of social hierarchies in the creation of innovations. By gaining a better understanding of the social side of innovations, both researchers and practitioners will be able to form a more complete picture of the social components of organizational competitiveness.

SAMENVATTING (SUMMARY IN DUTCH)

Deze dissertatie verkent het effect van status op de prestaties van innovatieve projecten door middel van drie studies waarin de positieve en negatieve invloed van de status van de projectleider, de projectgroep en de organisatie onderzocht worden. Wij beargumenteren dat de status van de leden van de projectgroep van invloed is op het overleven van het project zonder dat deze leden daadwerkelijk bij de besluitvorming rondom het project betrokken hoeven te zijn, omdat los van de eigenlijke kwaliteit van het project hun status een belangrijke rol speelt bij het selecteren en continueren van hun project. Met behulp van unieke data van videogame-ontwikkelingsprojecten uit drie verschillende bronnen tonen wij dat status belangrijke effecten op het innovatieproces heeft. Daarnaast onderzoeken wij factoren die een modererende werking op de relatie tussen status en innovatieprestaties hebben.

De eerste twee studies focussen op de positie van sociale actoren in de organisationele status-hiërarchie. Studie 1 verschaft inzicht in het effect van de status van projectleiders op de kwaliteit van het projectresultaat. Wij veronderstellen en tonen aan dat projectleiders tot een bepaald niveau voordeel plukken van hun status, waarna status een negatief effect krijgt op de kwaliteit van hun projectresultaat. Daarnaast laten wij zien dat een hoge status van projectleiders de spreiding in de kwaliteit t.o.v. de verwachte kwaliteit verhoogt. In Studie 2 gaan we in op het modererende effect van organizationele

innovativiteit op de relatie tussen de status van een projectgroep en innovatieprestatie. Omdat projectgroepen met een hoge status over meer sociaal kapitaal beschikken en betere toegang hebben tot beschikbare middelen binnen de organisatie, presteren ze doorgaans beter dan hun lagere-status tegenhangers. We laten zien dat organisationele innovativiteit het positieve effect van projectgroep-status op prestatie kan neutraliseren. Studie 3 onderzoekt het Matthew effect binnen een interorganisationele context. De studie laat zien dat met eenzelfde kwaliteitsniveau van hun producten organisaties met een hoge status meer voordeel behalen dan hun lagere-status tegenhangers. Echter, wij laten tegelijkertijd zien dat organisaties met hoge status doorgaans niet van hun status profiteren wanneer zij in grootschalige projecten investeren.

Al met al verschaffen onze studies belangrijke inzichten in de effecten van status en de dynamiek van sociale hiërarchieën op de prestaties van innovaties. Door meer inzicht te verkrijgen in de sociale kant van innovaties kunnen zowel academici als beoefenaars een meer compleet beeld krijgen van de sociale component van organisationele competitiviteit.

ÖSSZEFOGLALÓ (SUMMARY IN HUNGARIAN)

Ezen disszertáció a státusz hatását vizsgálja az innováció kivitelezési folyamatban. Definiciónk szerint a státusz az egy olyan minőségszignál, mely azt jelzi, hogy egy szereplő mennyire képes minőséget létrehozni a legfontosabb érintetteknek. A disszertáció három empirikus tanulmányt tartalmaz, melyek feltérképezik mind a pozitiv és negativ hatásait a státusznak három különböző szinten: a személyek, projectcsoportok és a szervezetek szintjén. Az elméletünk kiindulópontja az, hogy minden egyes projektcsoport tag hozzájárul a saját projektjük életben tartásához a státuszukon keresztül tekintet nélkül a projekt minőségére, még akkor is, ha ezen projektcsoport tagok nem müködnek aktivan közre a projektekkel kapcsolatos döntéshozatal befolyásolához. Egy videójáték-szoftverek fejlesztéséről szóló adatbázist vizsgálva, melyet három különböző adatbázis kombinációjából hoztunk létre, bizonyitékot találtunk számos státusz hatásra, amelyek kihatással vannak az innovációs telljesitményre, illetve faktorokra, melyek módositják a kapcsolatot a státusz és az innovációs teljesitmény között.

Az első két tanulmány a szervezeten belüli státuszhierarchiában való poziciójukra fókuszál a szereplőknek. Az első tanulmány betekintést enged a projektvezetői státusz és a projektminőség köztti kapcsolatba. Az eredményeink azt mutatják, hogy a projektvezetői státusz hasznos a projektminőség szempontjából, azonban csak egy bizonyos pontig, amely után a projektvezetői státusz rontja a projektminőséget. Továbbá az is megállapitható az

eredményeink alapján, hogy a projektvezetői státusz növeli az eltérést az elvárt projektminőségtől, és mint ilyen, növeli a valószinüségét mindannak, hogy egy projekt vagy túlszárnyalja elvárásokat, vagy hogy a projekteredmények nagyban elmaradnak a várakozásoktól. A második tanulmány a szervezeti innovativitás hatását vizsgálja a projektcsoport státusza és az innovációs teljesitménye közötti kapcsolatra. Mivel a magas státuszú projektcsoportok több kapcsolati tőkével illetve szervezeti erőforrással rendelkeznek, jobban teljesitenek mint az alacsony státuszú projektcsoportok, azonban a szervezeti innovativitás semlegesitheti a státusz pozitiv hatását a teljesitményre, mert innovativ környezetben a státusz az erőforrásfelhasználás hatékonytalanságát is növeli. Ennek az oka a kevésbé értékes visszajelzésekben és a magas státuszú csoportok önelégültségében rejlik. A harmadik tanulmány „a gazdag gazdagabbá válik" folyamatát vizsgálja (amelyet a nemzetközi irodalom „Matthew effect"-ként ismer) szervezetek közötti szinten. Ebben a kutatásban rámutatunk, hogy ugyanazon minőség létrehozásáért a magas státuszú szervezetek több előnyt tudnak élvezni a bevételek és az elismertség szempontjából, mint az alacsony státuszú versenytársaik. Azt is feltárjuk azonban, hogy azon magas státuszú szervezetek, amelyek olyannyira túlinvesztálnak a projektjeikbe, hogy azok már a monumentalitás hatását keltik, képtelenek mindazokat a potenciális előnyöket realizálni, melyekre a magas státuszuk miatt hivatottak lennének, mert a monumentalitás hatása inkongruens a magas státusszal.

Ezen tanulmányok fontos betekintést engednek státusz szerepébe és a státusz hierarchiák dinamikájába az innovációk létrehozásában. A disszertáció hozzájárul ahhoz, hogy mind a kutatók mind a szakemberek jobban megértsék az innovációk emberi

kapcsolati oldalát, amely révén egy átfogóbb képet alkothatnak a versenyelőnyszerzés humán komponenseiről.

ABOUT THE AUTHOR

Balazs Szatmari was born in Miskolc, Hungary, in 1988. He obtained his Bachelor's degree in Business Administration and Management from Corvinus University of Budapest in 2010. During his undergraduate studies, Balazs was actively involved in voluntary work aimed at teaching Mathematics, Statistics, and History to financially disadvantaged students. In addition, he spent one semester on exchange at the University of Liège in Belgium with a scholarship. After gaining some industry experience at a major multinational publishing company, he moved to the Netherlands, where he was engaged in managing a start-up for a year and obtained his Master's degree in Management of Innovation from Rotterdam School of Management in 2012. Right after his graduation, he joined RSM's Technology and Operations Management Department as a PhD candidate. During his PhD studies, Balazs spent a research semester at Northwestern University in 2016.

Balazs's main research interest is in the role of status in uncertain activities. More specifically, he focuses on the dynamics and biasing effects of status hierarchies in the implementation of innovations. He has presented his research at various international conferences and his papers are currently under review at top-tier journals. Besides research, Balazs has taught on several courses on the topics of innovation management and

social networks. He also has mentored dozens of Master and Bachelor students in the completion of their thesis projects. Currently, Balazs is an assistant professor in the Entrepreneurship and Innovation Group at the University of Amsterdam, the Netherlands.

PORTFOLIO

Publications

Szatmari, B., Deichmann, D., van den Ende, J. 2014. *Irrational Resistance or Irrational Support? Performance Effects of Project Leader Status.* In *The Best Paper Proceedings of the Academy of Management Annual Meeting*, Philadelphia, PA, U.S.A.

Research visits

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Conference visits

Pride Cometh before a Fall: When High-status Actors Engage in Projects of Great Magnitude. Presented at:

- 3rd Research Seminar on Business and Management-related Questions in the Creative Industry (October 2016, Amsterdam)

Blinded by Status? How Organizational Innovativeness Moderates the Effect of Status. Presented at:

- SMS Conference (September 2016, Berlin)
- AOM Conference (August 2016, Anaheim)
- EGOS Conference (July 2016, Naples)

The Biasing Cycle of Status. Presented at:

- AMR-OMT Paper Development Workshop (January 2016, Rotterdam)
- SMS Conference (October 2015, Denver)
- AOM Conference (August 2015, Vancouver)

Irrational Resistance or Irrational Support? Performance Effects of Project Leader Status. Presented at:

- SMS Conference (September 2014, Madrid)
    - Nominated for the best conference paper award
- AOM Conference (August 2014, Philadelphia)
    - Selected for the AOM best paper proceedings
- EGOS Conference (July 2014, Rotterdam)

The Socio-political Dynamics of the Innovation Process. Presented at:

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Teaching activities

2013 – 2016: Supervision of M.Sc. theses (10 theses)

2015: Lecturer
Master course: Mastering Networks for Innovation
Lecture: Keep your friends close: Mobilizing networks for innovation (3 lecture hours)
Two workshops on learning UCINET for social network analysis (6 lecture hours)

2015: Lecturer
Bachelor course: Innovation Management Workshop (24 lecture hours)
Theme: Managing creative ideas

2014: Instructor
Bachelor Course: Bachelor Thesis Workshop (8 theses, 24 students)
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2012 – 2014: Teaching Assistant
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The ERIM PhD Series

The ERIM PhD Series contains PhD dissertations in the field of Research in Management defended at Erasmus University Rotterdam and supervised by senior researchers affiliated to the Erasmus Research Institute of Management (ERIM). All dissertations in the ERIM PhD Series are available in full text through the ERIM Electronic Series Portal: http://repub.eur.nl/pub. ERIM is the joint research institute of the Rotterdam School of Management (RSM) and the Erasmus School of Economics at the Erasmus University Rotterdam (EUR).

Dissertations in the last five years

Abbink, E.J., *Crew Management in Passenger Rail Transport*, Promotors: Prof. L.G. Kroon & Prof. A.P.M. Wagelmans, EPS-2014-325-LIS, http://repub.eur.nl/pub/76927

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This thesis explores the effects of status in the implementation of innovations in three empirical papers which investigate both the positive and negative impact of status –status of either the project leader, the project group, or the organization. We argue that every project member fulfills the role of champion in their project through their status. By analyzing a unique database of video game development projects compiled from three different sources, we uncover several important effects of status in the creation of innovations. In addition, we study several factors which moderate the relationship between status and innovation performance.

The first two studies focus on the position of social actors in the organizational status hierarchy. While these studies show that status provides several important advantages in the innovation process, they also uncover important negative-side effects of status which are more likely to occur in more innovative settings. The third study reveals that, for the same level of quality, high-status organizations are able to realize more advantages than their low-status counterparts. However, we also show that high-status organizations fail to realize all the potential benefits of their status when they invest in projects of great magnitude.

Together, our studies provide important insights into the effects of status and the dynamics of social hierarchies in the creation of innovations. By gaining a better understanding of the social side of innovations, both researchers and practitioners will be able to form a more complete picture of the social components of organizational competitiveness.

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