KNOWLEDGE, INNOVATION, AND SOCIAL NORMS IN CREATIVE INDUSTRIES*

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INTRODUCTION

In 1983, Allen, Hyman, and Pinckney studied the source of significant innovation in 102 manufacturing companies. "The most surprising result", they reported "is that so many of the firms supplying [innovative ideas] are apparent competitors. Nearly 23 percent of the messages were from firms in the same industry (Allen et al. 1983, p. 202)." Since then, many studies have noted that competitors often exchange knowledge among each other (Appleyard 1996; Carter 1989; Gans and Stern 2003; von Hippel 1987). Such knowledge transfer is not surprising when strong legal intellectual property protection prevents misuse of such information (Gans and Stern 2003). But without a central structure for administering and enforcing property rights, both invention and transfer of innovation should be suppressed (Appleyard 1996). Yet surprisingly, some recent studies have shown that, even when valuable ideas cannot be protected through legal means, possessors of these ideas often disclose and transfer them to possible competitors (Fauchart and von Hippel 2008; Raustiala and Sprigman 2006). These studies have proposed that social norms support the disclosure and transfer of innovative ideas, by giving rise to an informal protection system that is alternative to the formal one based on legal mechanisms (Fauchart and von Hippel 2008).

My dissertation focuses on the role social norms can play in regulating the disclosure and transfer of innovative ideas. In particular, I attempt to better understand when and how social norms protect the transfer and use of innovation-related knowledge, with a specific focus on their interplay with strategic explanations for knowledge transfer, their functioning under specific competitive conditions, and the factors behind their existence. Building on Ingram and Clay (2000), I define social norms as private decentralized institutions, i.e. institutions created within social groups and exerting social control without explicit recourse to a central rule-maker or enforcer. Scholars from disciplines as diverse as economics (North 1990), law (Ellickson 1991), political science (Ostrom 1990), and sociology (Coleman 1990), have argued that social norms can act as a critical lubricant for eco-

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nomic and social exchange. In keeping with this spirit, my dissertation targets specific areas of inquiry regarding the role of norms in fostering the exchange of innovation-related knowledge.

OVERVIEW OF THE DISSERTATION

What explains the transfer of unprotected information? In the first essay of my dissertation, I attempt to answer this question building on the recent suggestion that informal institutional structures (e.g. norms) substitute for missing regulatory institutions (e.g. patent laws) to prevent the misuse of another's ideas (Fauchart and von Hippel 2008). While these proposals are intriguing, many questions about the role of norms remain. In particular, norm-based explanations have so-far ignored the possibility that firms could leverage other protection mechanisms to prevent others from using valuable knowhow. Competitors may indeed not be able to expropriate any return from the transferred knowledge because of barriers to imitation, arising from the nature of knowledge itself (Zhao 2006) or complementary assets (Teece 1986). Before strong inferences about the role of norms can be reached, their influence must be evaluated under differing access to these alternative "strategic" protection mechanisms. In this essay, I investigate the extent to which normative or strategic protection mechanisms explain knowledge transfer. Results show that both normative and strategic protection play a role in governing the use of transferred information. I also show that the two types of protection interact with each other, as either substitutes or complements.

In the second essay of my dissertation, I turn my attention to a particular context, i.e. the one of geographical clusters. Scholars have argued that strong legal protection of intellectual property can be a valuable means of facilitating safe knowledge transfer among firms located in clusters (Porter 1990). However, not all industries are protected by strong intellectual property rights, not all firms can access them, and not all knowledge can be safely secured. When knowledge is not legally protected, its transfer is particularly surprising since it implies giving away secrecy – its only means of protection. In clusters, such voluntary revealing is even more remarkable since any information transferred from one party may diffuse rapidly to others. Once it has been transferred, proprietary knowledge may indeed easily flow "in the air". How do co-located firms protect themselves from such risk of knowledge depletion? In this essay, I argue that clusters actually contain the seeds of their own protection. I expect firms located in densely populated areas to be more prone to engage voluntarily in knowledge transfers, particularly with co-located firms, even when legal protection of the transferred knowledge is not available. Based on literature on social capital (Inkpen and Tsang 2005; Putnam 1993, 2000) and social networks (Allcott et al. 2007; Coleman 1988, 1990), I argue this is the case because clusters favor the formation of social norms regulating knowledge transfers. Results show that agglomeration increases the expectation that neighboring competitors will adhere to social norms. Also, when located in dense areas, neighboring competitors will be more likely to transfer knowledge. This effect is mediated by social norms, i.e. clusters promote adherence to social norms encouraging knowledge transfer.

Clusters favor the formation of social norms regulating the transfer and use of innovation related knowledge

In the third essay of my dissertation, I focus on a specific factor promoting the functioning of social norms, i.e. the sanctioning of norm violations. Sanctions give "norms their teeth", note Ingram and Clay (2000, p. 538), and make them effective in preventing free-riding at the expense of the collective good (Gürerk, Irlenbusch, and Rockenbach 2006). However, despite their effectiveness (Andreoni, Harbaugh, and Vesterlund 2003), sanctions create a "second-order" free-riding problem (Coleman 1990): they are costly to those who administer

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them, but benefit the community as a whole. In this essay, I extend existing research in this area by showing that the costs of sanctioning also depend on the fact it can be interpreted as itself a norm violation. Ironically, although sanctioning provides a social benefit, it can be seen as socially inappropriate. As a result, when determining whether to sanction, actors consider both the seriousness of the norm violation and expectations about whether the community will view sanctioning as legitimate. On the one hand, more serious violations are more likely to be sanctioned as they increase the benefit of stopping abuse and thus increase sanctioning. On the other hand, the social legitimacy of the sanctioning action depends on the reputation of the violator and on the visibility of the violation. More reputed violators are less likely sanctioned as reputation influences community interpretations about whether the presumed perpetrator is guilty of a violation. On the contrary, more visible violations are more easily sanctioned as visibility increases the community ability to accurately assess the appropriateness of a sanction.

EMPIRICAL SETTING AND METHOD

I conduct my research in the context of gourmet cuisine, i.e. fine dining, which provides an excellent setting for my study. It is an industry with rapid innovation (e.g., Durand, Rao, and Monin 2007; Rao, Monin, and Durand 2003, 2005), scarce legal protection of intellectual property and documented functioning of a system of norms (see Table 1). In analyzing this context, I rely on a mixed method approach, combining the richness of qualitative investigation, the reach, relevance, and real-world fidelity of a survey, with the inference power of a randomized experiment.

In the first phase of my study, I performed detailed, recorded, in-person interviews with chefs from top restaurants in the metropolitan areas around Milan and Boston. I started from these two metropolitan areas for financial and convenience reasons. Moreover, as they are among the more populated of the two countries, they guaranteed a heterogeneous culinary scene. In order to select my informants, in Italy, I relied on the Michelin Guide, a reference point for gourmet cuisine (Ferguson 1998). In the United States, where the coverage of the Michelin Guide is scarce, I turned to the Mobil Travel Guide and the Zagat™ guide, which are based on the judgment of, respectively, experts and consumers. Based on these guides and on the geographical scope of my search, I selected 11 informants, 8 in the Milan and 3 in the Boston metropolitan area. To ensure results were not based on regional characteristics, I also conducted a second round of interviews with chefs from 12 additional restaurants in locations throughout Italy and the United States, for a total of 23 informants. Interview data, triangulated with narratives, observation, and documents, were aimed at informing the second phase of my study, in which I relied on quantitative data, collected through a scenario-based field experiment (e.g., Florey and Harrison 2000; Gomez, Kirkman, and Shapiro 2000) administered to the

TABLE 1 EVIDENCE ON SOCIAL NORMS AS PER FAUCHART AND VON HIPPEL (2008)

Rules	Example Comment	Boundary Condition
1. Don't copy exactly	I think that any of us, even when he takes the recipe of another, does it for taking inspiration out of a detail, rather than replicating the entire recipe. He will never replicate the same recipe. That is, he will capture some ideas out of that recipe and will use them to do other things. Usually it works like this. It is difficult that you go and replicate the same dish. Usually you take an idea that may be interesting to create something else.	Except if citing, see rule #2
2. Cite the source	If you cook the same recipe, you should write in the menu. Otherwise you do not replicate it in the same way, you interpret in your own way, and cook it in your own way.	Unless making substantial modifications, see rule #1
3. Don't pass on	There is one recipe that I do not give away. I have never given that away. I inherited that recipe. I feel like I am carrying that recipe, it does not really belong to me but I am carrying it. So it is not a recipe that I would give out or ever, I do not think I would ever publish it. But I would publish any recipe that I have developed.	Except (for some individuals) if sufficient time (~5 years) has passed.

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TABLE 2 SAMPLE SCENARIO

Characteristics of restaurant	▸ Zagalin: cuisine rating 28*. Comments: "creative", "innovative", "unique style" ▸ Geographically very close to your restaurant ▸ Cuisine style and ambience similar to your restaurant ▸ Frequently reviewed by local media and customers (among the restaurants with more reviews)
Chef	▸ Chef has 20 years of experience in the industry

* THIS RATING IS EQUIVALENT TO A RATING FROM ZAGAT™. IT RANGES FROM 0 TO 30.

head chefs of all the 2,529 restaurants included in the 2009 Italian edition of the Michelin Guide. The response rate was 21.12%, with 534 surveys returned. In the scenario, I described a fictitious restaurant with which the respondent could interact (see Table 2). The characteristics of the restaurant described in the scenario constituted my five experimental manipulations. Each respondent was randomly assigned two scenarios out of thirty-two possible alternatives and asked to answer a set of questions about knowledge transfer. In order to account for unobservables at the individual level, when analyzing my data, I run both fixed- and random-effects analyses (Hausman, Hall, and Griliches 1984). I developed the scenarios, operationalized the constructs of interest, and provided face validity to the instrument through interaction with my qualitative informants. Also, I pre-tested the instrument on 224 restaurants that are not part of the final sample.

CONCLUSIONS

In my dissertation, I try to untangle the role of social norms in protecting the transfer and use of innovation-related knowledge. In particular, I tackle this issue from three different angles, i.e. looking at the interplay between normative and strategic protection, the functioning of norms under specific competitive conditions, and the factors supporting their effectiveness.

In the first essay, I provide a more complete validation of the role played by social norms in protecting transferred knowledge. In this respect, I show that firms are more willing to transfer knowledge if they expect their counterparts to use it properly. This holds even if firms have access to alternative mechanisms for protecting their intellectual capital. In other words, even when barriers to imitation help secure knowledge transfer, firms prefer to pass knowledge to counterparts they trust more.

In the second essay, I show that norms substitute for missing institutions and protect knowledge in clusters. In this respect, my study helps explain why creative firms can cluster. Despite the lack of formal protection of valuable knowledge, these firms can indeed benefit from the protection of social norms. Also, I show that clusters carry their own protection. Agglomeration has a positive effect on the expectation that competitors will adhere to social norms, and it increases the propensity to transfer information.

Finally, in the third essay, I show that the social legitimacy of the sanction is a critical determinant of willingness to sanction deviations from social norms. The community may suspect that the presumed victim of a norm violation might have fabricated or misinterpreted the actions of others. Two of the conditions highlighted by my analysis are particularly interesting in this respect, as they may be used as cues of how a sanctioning action will be interpreted. Sanctioning a reputed player is more difficult as it may raise the suspect that the violator has misinterpreted the actions of the counterpart. On the contrary, sanctioning should be eased when the violation is visible, because the veracity of the violation can be more easily assessed, hence leading to a more benevolent interpretation of the sanctioning action.

Overall, I believe my research has the potential to make a valuable contribution. A better understanding of how information flows when it cannot be legally protected is critical not only to theory but also to practice. Evidence that norms protect innovation from misappropriation could indeed help explain why some industries such as fashion, gourmet cuisine, and music maintain high levels of innovation despite operating in weak appropriability regimes. ■

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