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University technology transfer offices: The search for identity to build legitimacy

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ABSTRACT

Technology transfer offices (TTOs) are of strategic importance to universities committed to the commercialization of academic knowledge. Within the university, TTOs' relationship with academics and management is single agent-multiple principal. When two principals exist in an agency relationship, conflicting expectations can naturally arise. We explore how TTOs build legitimacy by shaping identity with university academics and management. In undertaking this research we draw on 63 interviews with TTO executives across 22 universities in the Ireland, New Zealand and the United States. We find that TTOs use identity-conformance and identity-manipulation to shape a dual identity, one scientific and the other business, with academics and management respectively. We show how this combination of identity strategies is ineffective for legitimizing the TTO. We propose that TTOs' identity shaping strategies are incomplete and need to incorporate a wholly distinctive identity to complement and reinforce preliminary legitimacy claims made through conformance and manipulation. We discuss the potential implications of these findings for scholars, TTO executives and university management.

1. Introduction

University TTOs are enigmatic actors in the academic entrepreneurship arena. Today TTOs' identity is loosely regarded as one of "boundary spanner" or "broker" between academia and industry (Phan and Siegel, 2006; Powers and McDougall, 2005; Rothaermel et al., 2007). TTOs help academics to understand the needs of industry and to access critical resources, expertise and support in the commercialization process (Clarysse and Moray, 2004; Colombo and Delmastro, 2002; Markman et al., 2005; Siegel et al., 2003).

How exactly TTOs go about legitimizing their role and shaping their identity within the university, however, remains unclear. Theory suggests that when shaping their identity, TTOs should capture what elements are central, distinctive, and enduring about their office (Albert and Whetten, 1985; Pratt and Foreman, 2000). They need to specify who they are, what they do and why they are successful (Livengood and Reger, 2010). However, with TTOs operating as a dual agent for university academics and management, this is not a straight forward task. When two principals exist in an agency relationship, conflicting expectations naturally arise. For TTOs, this conflict results in efforts to balance academic and commercial forces when shaping their identity. In order to improve our understanding of how TTOs manage this challenge we explore how TTOs build legitimacy by shaping identity with university academics and management.

Legitimacy is defined as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p. 574). It is acknowledged that an organization's identity work helps to build legitimacy (Brown and Toyoki, 2013; Navis and Glynn, 2011), particularly when attempting to shape identity with multiple stakeholders (Chermak and Weiss, 2005; Sillince and Brown, 2009). Establishing legitimacy within the university is fundamentally important for TTOs. Once legitimate, TTOs may have greater access to resources (Ashforth and Gibbs, 1990; Pfeffer and Salancik, 1978; Zimmerman and Zeitz, 2002) and encounter less contestation when promoting commercialization activities and practices within the university (Colyvas and Jonsson, 2011; Jepperson, 1991). In

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contrast, a failure to establish legitimacy may result in disengagement, the withdrawal of resources, and claims that its role is redundant. Of particular relevance to TTOs is Bishop Smith's (2011) suggestion that organizations must concentrate on building legitimacy before ever expecting to be profitable.

However, when building legitimacy within the university, TTOs must manage the challenging dilemma of sameness and uniqueness in their identities (Navis and Glynn, 2010). Specifically, akin to "optimal distinctiveness" (Brewer, 1991), TTOs must attempt to differentiate their office from the university environment so that they are "legitimately distinct" (Navis and Glynn, 2011), but also be careful that they are not so distinct that their office appears irrelevant to university academics and management. To address this research topic, we develop two legitimacy-building identity strategies. TTOs adjust their identity and promote sameness and homogeneousness with existing dominant norms and expectations within the university through *identity-conformance*. TTOs proactively sense what they believe is required in the university and then shape an identity that captures both their ability to meet these expectations and the unique or distinctive value of their role through *identity-manipulation*. Predicting a search for legitimacy through optimal distinctiveness, we explore to what extent TTOs use *identity-conformance* and *identity-manipulation* when shaping their identity with university academics and management.

The contributions from our study are as follows. First, when building legitimacy with two principals, we propose that shaping and blending two contradictory identities blurs identity and ultimately diminishes legitimacy with both principals. This is apparent in how TTOs in our study shape a dual identity, one scientific and the other business, with university academics and management respectively. We explain how this approach is proving ineffective for legitimizing the TTO. Second, we suggest that misinterpreting social cues, or the expectations and requirements of evaluating audiences, can lead to misaligned identity shaping strategies that also result in legitimacy discounts. Again, this is evident in the manner by which TTOs, despite acknowledging the value placed on commercial and business development skills by the academics, choose to prioritize and shape a scientific identity for this principal. Third, and most importantly, we propose that in order to build legitimacy within the university TTO executives need to shift their attention towards shaping a distinctive identity. Although we find that TTOs do conform to dominant academic norms (*identity-conformance*) and meet anticipated requirements from management (*identity-manipulation*); we suggest that these represent preliminary efforts by them to become a part of a shared university identity. However, because legitimacy is as dependent on being different as it is on being the same (Deephouse, 1999), we argue that TTOs' search for legitimacy, as illustrated in our findings, is incomplete. Our final propositions, therefore, encourage TTOs to fully *extend* their use of identity-manipulation in order to individuate their identity. In shaping their own distinctive identity, we suggest that TTOs could complement and reinforce preliminary legitimacy claims made through identity-conformance and (partial) identity-manipulation.

The remainder of this paper is organized as follows. Section 2 presents a brief background on the relationship of the TTO with its two key principals in the university environment. Section 3 outlines the theoretical grounding underpinning the study's research focus. In Sections 4 and 5, we detail the study's methodology and research findings respectively. Section 6 discusses the implications of these findings and presents a number of propositions. Finally, Section 7 brings the paper to a close with some concluding points and an overview of some limitations and avenues for future research.

2. Background – TTOs and the multi-stakeholder university environment

TTOs have two principal stakeholders within the university – academics and management.[1] Universities have traditionally focused on basic research (Nelson, 1959) which is characterized by scientific autonomy (Bush, 1945; Nelson, 2004) and guiding norms of skepticism, universalism, communism and disinterestedness (Merton, 1973). *University academics* who pursue a career in these institutions are, therefore, typically motivated by originality and discovery, and are rewarded through open dissemination, citation, professional awards (Dasgupta and David, 1994; Merton, 1973), scientific priority (Merton, 1957) and recognition (Latour and Woolgar, 1979). Commercially oriented research is not mutually exclusive from basic research, however (Daraio et al., 2010; Jensen et al., 2003; Stokes, 1997). Outcomes that eventually result in "higher standards of living" (Bush, 1945) must often be articulated to justify scientific exercises. Nevertheless, with a greater focus on market needs, knowledge exclusion, market share and economic returns, proprietary science and research commercialization can be misaligned with the research norms and reward structures of university academics (Haeussler and Colyvas, 2011; Nelson, 1959). Commercial research, for example, can increase the level of secrecy in science (Campbell et al., 2000), delay disclosure and publication (Blumenthal et al., 1996; Huang and Murray, 2009; Thursby and Thursby, 2003) and reduce technological breakthroughs (Jung and Lee, 2014) and the accumulation of public knowledge (Toole and Czarnitzki, 2010). The conflict between these trends and those norms that traditionally dominate a "scientific identity" means that university academics do not uniformly accept TTOs as legitimate entities.

University management is more likely to see TTO effectiveness as an issue of strategic importance. Universities are pivotal actors in increasingly knowledge-intensive economies and societies (Martin, 2012). Intellectual capital, emerging from public-private research projects and technology transfer activities, contributes to industry innovation, economic growth and social development in knowledge based economies (Etzkowitz, 2003; Feller, 1990; Mangematin et al., 2014; Rothaermel et al., 2007; Sörlin, 2007). University management, therefore, has an interest in ensuring their TTOs contribute to national competitiveness through the commercialization of university research (Bozeman, 2000; Mowery and Ziedonis, 2002). University contributions to local, regional and national communities show that public funding is worthwhile and provides a return to society. Furthermore, with an increasingly competitive and constrained public funding environment, management of both public and private universities realize that an efficient TTO can help generate earnings (e.g., licensing income) that can protect existing research activities and help pursue future research breakthroughs (Bozeman, 2000). Proficiency in technology transfer can enhance the reputation and prestige of the university, thus helping to recruit and retain leading researchers and increase student intake (Etzkowitz and Leydesdorff, 2000; Markman et al.,

[1] For our study university academics are those personnel who undertake academic research and university management are those personnel occupying positions of formal administration in the university structure. University academics incorporate such titles as professor, associate professor, assistant professor, lecturer, scientist, research leader, research director, principal investigator, or equivalent. University management incorporates such titles as the Council, Board of Trustees, Vice President (VP), Vice Chancellor (VC), Executive Vice President, Deputy Vice-Chancellor (DVC), Provost, Pro Vice Chancellor (PVC), Dean, Head of Department (HOD), Department Chair and equivalent personnel. Whilst neither principal can of course be definitively aligned with academic or commercial science, the dominant tasks and professional demands associated with both principals would suggest that management may be more supportive of the TTO.