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# Tensions in University-Industry Relationship: Arbitrage for Knowledge Creating

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## 1.1 INTRODUCTION

The key groups in University-industry relationships are academics and practitioners. Both groups come into the relationship with distinct types of knowledge and diverse interests. The different standpoints of both groups create a gap between scholarship and practice which manifests as tensions. However, managing and not suppressing the tensions provides effective inquiry. Arbitrage provides the means to engage in such inquiry for knowledge creating in the innovation process. Therefore, addressing the gap brings academic engagement through arbitrage to fore. Exploring the tensions within the gap aims to explain how it aids innovation process by **addressing the question - What are the processual dynamics for tensions in knowledge creating?**

First section of the paper explains the rationale which lead on to the research question and objectives. The next section is the literature review which highlights why academic engagement and not transfer route. It follows up with arbitrage as proposition, highlights the tensions types and theoretical framework that guides the study. The paper concludes by extending the framework derived from Jing and Van de Ven (2016) to explain the dynamics of tensions in knowledge creating.

## 1.2 RATIONALE

The traditional view of university-industry relationship is transfer which suggests a one-way knowledge flow from university to industry. An alternative view is academic engagement which suggests a two-way knowledge flow between both groups. Both groups jointly provide the information for inquiry in the two-way flow of academic engagement. Here, knowledge flow is limitless as it is non-deterministic making the inevitable conflict more salient. However, the flow cumulates in ideas that either group would not have realised had each worked independent of the other. As a result, exploring inherent tensions present in the academic engagement provides a deeper understanding on how innovation process unfolds in such relationship. Understanding the dynamics of the tension is important because it showcases how tensions can be managed and analysed but not suppressed for effective inquiry for innovation process. Thus, its contribution is capturing intricacies inherent in dynamic tensions that aid innovation exhibited through plural approaches in the context of multiple stakeholders.

### 1.2.1 Research Question

Against the above rationale, this paper develops the following research question to understand the tension(s) in the gap and how it facilitates the innovation process - ***What are the processual dynamics for tensions in knowledge creating?***

### Research Objectives

It aims to describe how arbitrage accentuates knowledge flow and is sub-divided into the following:

1. How does the interplay of dualism/duality facilitate arbitrage?
2. How does contradiction facilitate knowledge flow in knowledge creating?
3. How does the non-reconciliation of tensions (paradox) facilitate innovation process?

### **1.3 LITERATURE REVIEW**

This section explores the main bodies of literature in academic engagement, transfer and hints at several constructs of tensions. It also discusses the theoretical framework proposed for the study.

#### **1.3.1 Academic Engagement**

Universities are under pressure for funding and creating new knowledge that impacts society - defend their relevance (Ankrah & AL-Tabbaa, 2015). Industries require built-in, rather than bolted-on innovation to continuously grow and survive. However, the challenge for academic engagement is conflict management due to pluralistic views. To overcome the double hurdles of rigor and relevance in the academic-practitioner divide, focus on inputs and not outputs is required – which implies academic engagement.

Academic engagement is a complex multi-dimensional process which is solely concerned about inputs (Pettigrew, 2001, Van de Ven & Johnson, 2006, Perkmann et al., 2013). It usually involves a person to person interaction within inter-organizational context of university and firm (Cohen et al., 2002 & Perkmann et al., 2013). The different standpoints of both groups often take dualism viewpoint or an anomaly to be corrected. However, such inevitable conflict provides an opportunity for effective inquiry in which is embedded knowledge creating.

#### **1.3.2 Why not Transfer?**

Although **the gap** is typically framed as transfer problem, the main problem lies in the absence of engagement (Van de Ven & Johnson, 2006). Hence, calls to address the gap through more accessible dissemination however, “dissemination is too late if the wrong questions have been asked” (Pettigrew, 2001). Therefore, the possibility of formulating research question that meets the demands of both rigor and relevance is often missed (Bartunek & Rynes, 2014). Moreover, transfer is explicit, codified and finite and mainly concerned about outcomes (Perkmann et al., 2013).

Unlike transfer knowledge flow is not restricted linear flow of academics to practitioners. The flow can be bi-directional, cyclical or continuum (Langley 1999). Hence, it takes into account the fluid and tacit nature of knowledge, and non-static nature of the social world.

#### **1.3.3 Arbitrage as Solution**

The social world is too complex for a single perspective thus an alternative representation in a world of fluidity (Van de Ven & Poole, 2005; Van de Ven & Johnson, 2006; Rescher, 1996). Also, “management is not a discipline, but represents a confluence of different fields of inquiry” (Pettigrew 2001: S63). Therefore, the multidisciplinary nature of management demands a plural outlook to address the gap. Although the applied nature of management research is its main characteristics (Van de Ven & Johnson, 2006), “research without scholarly quality will satisfy no one” (Pettigrew, 2001).

Arbitrage leverages on different competences and perspectives of scholars and practitioners (Van der & Johnson, 2006). Through the interaction of practice and scholarship, complex problems that exceed the capabilities of either group are pluralistically addressed (Van de Ven & Johnson, 2006). However, the interactions consist of inherent contradictory pulls and demands that manifests as tensions.

#### **1.3.4 Tensions**

It “refers to a wide variety of dichotomies, dualities, conflicts and inconsistencies, and contradictory pulls or demands experienced by those in a particular setting that appear to represent different and contradictory poles and, as such, seem to require a choice of one or

another” (Poole & Van de Ven, 1989; Seo et al., 2004; Smith & Lewis, 2011; Bartunek & Rynes, 2014:1183). Therefore, choices are usually not mutually exclusive as focus on one creates tension and difficulty for simultaneity (Bartunek & Rynes, 2014). However, understanding the tension types in the relationship brings with it an opportunity to unravel the dynamics of knowledge creating in the innovation process.

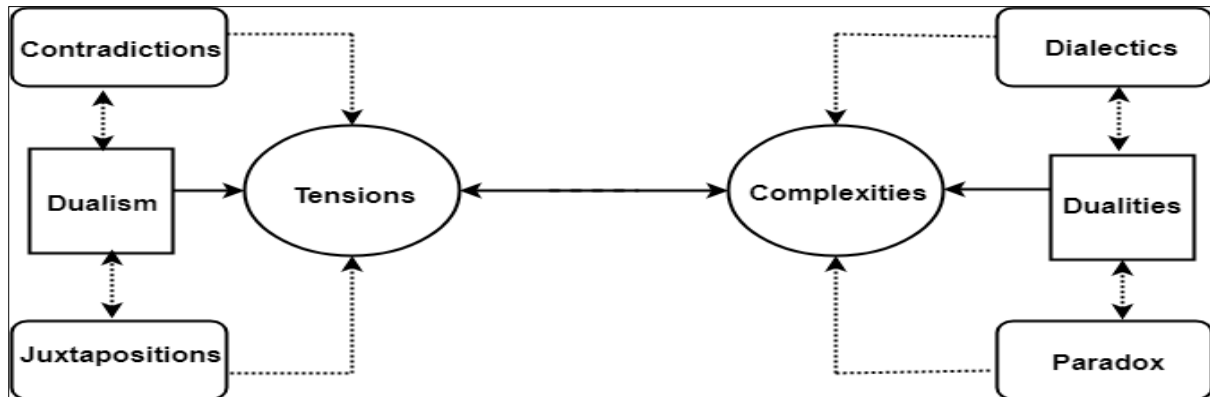


Figure 1: Represents tensions encompassed in rigor versus-relevance gap in academic engagement

#### 1.3.4.1 Dualism

It is depicted as an unambiguous and decisive contrast with precise boundary and no overlaps (Farjourn, 2010). The dualistic view has its place in management in retaining the idea of two contrasting elements (Farjourn, 2010). However, it is too limiting for the complexities of dynamism in management (Farjourn, 2010). It is important for understanding the unique perspective of each group when arbitrage is employed to embrace duality.

#### 1.3.4.2 Duality

According to Pettigrew (2001), the lens of duality has been rarely used to portray theory and practice in the social sciences and management. Duality retains the idea of its contradictory elements which are conceptually distinct yet mutually enabling and a constituent of one another (Farjourn, 2010). It emphasizes the mutual constitution and interplay between contradictory elements that are ontologically inseparable such that one cannot be described without the other (Smith & Graetz, 2006, Schad et al., 2016). It brings to light in real terms the mutual enabling of academics and practitioners in knowledge creating which aids the innovation process.

#### 1.3.4.3 Contradictions

The assumption is that contradictions persist within complex and dynamic systems (Smith & Lewis, 2011). “Contradictions are defined as dynamic tensions between opposite elements that together form a unity and logically presuppose each other for their very existence and meaning” (Werner & Baxter, 1994; Hargrave & Van de Ven, 2016:320). “Pulling toward one side or the other eventually intensifies the tension in a double bind” (Schad et al., 2016). Each element provides different nonetheless equally simultaneous lenses for understanding contradictions (Hargrave & Van de Ven, 2016).

#### 1.3.4.4 Paradox

A critical area where paradox literature is sparse is the rigor-relevance literature. “Small number of studies have explored possible relationships between rigor and relevance” (Bartunek & Rynes, 2014). Academics and practitioners sometimes find their different perspectives oppositional and unresponsive to resolution which heightens rigor versus relevance debate. Therefore, paradox questions assumptions and provides greater insight into phenomena of

elements that are distinct and oppositional (Scahd et al., 2016 Hargrave Van de Ven, 2016). Its core elements are unresponsive to resolutions thus, emphasis is simultaneously attending to competing demands whose relationship is dynamic and oscillate between the poles (Smith & Lewis, 2011; Schad et al., 2016).

### **1.3.5 Theoretical Framework**

Since academic engagement is concerned about inputs, attributes of process ontology will unfold. Moreover, embedded in academic engagement is knowledge creating which is an going that is dynamic and non-static thus, the paper takes a processual view. The core of process thinking is that social reality is a non-static but transient and dynamic (Pettigrew, 1997). It focuses on temporally evolving phenomena being investigated and elucidates process not as a reification but a perpetual state of being (Langley et al., 2013). As a result, the tensions expressed in the complexity of between life-as-experienced and life-as- scholastically represented is brought to the fore (Tsoukas, 2017).

### **1.4 DATA COLLECTION**

This paper proposes qualitative approach that is pluralistic to minimize undetected errors by juxtaposing and comparing multiple probable explanations of a phenomenon (Van der Ven and Johnson, 2006). Thus, research design will be ethnography, data collected from interviews and observations will be juxtaposed with literature. Data collection will be fragmented to capture different phases (inception, mid-way and end) of collaborative projects.

It proposes to collect data within the context of Campus Engage - an initiative for engaged research via collaborations between universities and enterprises in Ireland.

### **1.5 DATA ANALYSIS**

The frameworks identified in Jing and Van de Ven (2016) is proposed for analysis. Additional units of analysis (either/both; and/or) emerge from derived pictorial depiction (see figure 2) and will be incorporated into the analysis. Processual designs thrive on levels of analysis made up of a continuum rather than explicit categorizations (Langley 1999). Therefore, a macro-micro level of analysis will be employed to explain the processual dynamics and interactions of the tensions. QSR NVivo 12 will be employed to ease access and probe multiple sources of data collected across plural methods to identify evolving patterns. Using Iterative analysis, emergent findings will be compared with data collection, analysis and theoretical contentions in literature.

#### *Framework*

- Either/or - separates the opposites (Aristotelian)
- Both/or – tensions are temporary states and desirable but eventually problematic (Hegelian and dialectical)
- Both/and – refuses to recognize potential existence of contradictions (dialectical)
- Either/and - either indicates the existences of opposites, and indicates existence of unity (Eastern Yin-Yang balancing)

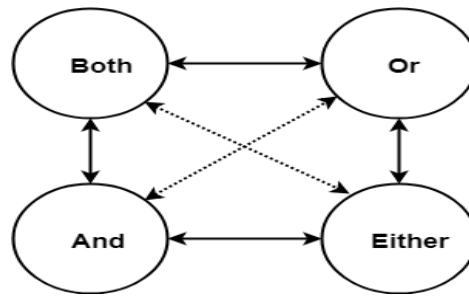


Figure 2: Pictorial depiction of framework showing emerging units of analysis

### 1.6 CONTRIBUTION

It extends the framework derived from Jing and Van de Ven (2016) to explain the dynamic nature of tensions and how knowledge creating aids the innovation process. It contributes to University-Industry relationship literature by examining processual concepts of tensions and plurality. It captures intricacies of less studied concepts of relationships, individual approaches and dynamics of tensions within academic engagement aiding the innovation process.

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