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Performing and Experiencing Competing Categories:
A Study of Medical Acupuncture

by

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ABSTRACT

This qualitative case study develops our understanding about the micro-processes of change. Categories are socio-cognitive constructs that group similar things and concepts. We use and interpret categories to understand identity and the relationships between items and concepts. Categories help us understand both change and stability in fields. Change occurs when categories die out, are constructed, re-worked or interpreted in different ways. This research suggests that categories are experienced and performed in everyday work and passed on to others through our interactions. The analysis also highlights that we can gain new insights by examining bottom-up change at the micro-level.

Through examining western medical acupuncture (WMA) and Traditional Chinese Medicine medical acupuncture (TCM-MA) in western health care, this dissertation sheds light on how professionals sustain competing categories by performing and experiencing them in different ways. The mixed-methods analysis of interviews, journal articles and textbooks revealed seven micro-processes that best explain the sustaining of competing categories: 1. Describing medical acupuncture with different meaning systems, 2. Learning and teaching different approaches, 3. Conducting research in different ways, 4. Altering work processes, rationale and content, 5. Deepening relationships with clients, 6. Viewing their professional identity (dis)similarly and 7. (Re)Drawing the boundary between personal and professional identity. Together, these micro-processes highlight the different ways that different groups of professionals perform and experience

competing categories by: (re)assembling meaning systems, performing techniques and practices and (re)conceptualizing identity.

It is implicit in the categories literature that the existence of competing categories is a temporary state and that one category will become dominant. In contrast to the literature, my dissertation research found that competing categories are sustained by different groups who perform and experience their category in different ways. This research contributes to the growing literature about categories and the micro-processes of change.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1
INTRODUCTION

In my dissertation, I examined the sustaining of competing categories at the micro-level. Categories are socio-cognitive constructs that group similar things and concepts. We use and interpret categories to understand identity and the relationships between items and concepts. As such, categories help us understand both change and stability in fields. I conducted a qualitative case study and used a mixed-methods approach to analyze the data. I sought to understand the connection between the sustaining of competing categories and identity, meaning systems, practices and techniques. To better understand this at the micro-level, I conducted interviews. I also analyzed journal articles and textbooks. In addition, I conducted ethnographic observations to learn more generally about the empirical setting and gather background information.

The empirical setting for my qualitative case study is medical acupuncture within western health care. I first became interested in medical acupuncture when I was thinking about a dissertation topic. In general, I was interested in studying complementary and alternative medicine (CAM), but realized that I would need to find a narrower topic. When I thought further about this, I recalled that I had heard about a local medical acupuncture course. Given my work experience in health care, it seemed unusual to me that western health care professionals would be interested in medical acupuncture. I thought this might be worth investigating further. As a researcher I was intrigued as to why western health care professionals would be interested in non-western approaches to health such as medical acupuncture.

Medical acupuncture is administered by western health care professionals such as physicians and physical therapists. It has roots in Traditional Chinese Medicine which became popular in the west in the early 1970s when the United States and China reinstated their relationship. As I learned more about the empirical case through my ethnographic observations and background reading, I began to notice that one group of western professionals seemed to be interested in

a type of medical acupuncture that is based on western science (WMA) and another group appeared to be interested in another type of medical acupuncture that is based on both Traditional Chinese Medicine and medical science (TCM-MA). This was my first glimpse of the two categories which led me to explore how different groups of western health care professionals sustained these competing categories because they had different identities, meaning systems, practices and techniques.

RESEARCH QUESTION

My research question is: How are competing categories sustained?

INSTITUTIONAL THEORY AS A FRAMING APPROACH

Theoretically, I frame my dissertation research about the sustaining of competing categories with institutional theory. I endeavour to further understanding about this at the micro-level by drawing on the microfoundations of institutionalism (Powell & Colyvas, 2008). Using institutional theory as a framework enables me to build upon existing category research by focusing my contribution at the micro-level. In this section, I discuss how I utilize institutionalism to frame my research.

Since the 1970s, institutionalists have moved from viewing individuals as cultural dopes to active agents – within boundaries – in fields (Garfinkel, 1967; Hirsch & Lounsbury, 1997). Powell & Colyvas (2008) shifted our focus to the microfoundations of institutional theory and Lawrence & Suddaby (2006) draw our attention to the purposive role of individuals in maintaining institutions. Institutional researchers also illustrate how small changes by individuals at the local level bring about change on a broader scale (Reay, Golden-Biddle & Germann, 2006). The micro-level interests institutionalists because it enriches our understanding about how individuals actively interpret and shape their environment within its given constraints (e.g., Barley, 1986; Lawrence & Suddaby, 2006; Lok, 2010). These scholars remind us that attending to the "local

affairs" of individuals helps increase our knowledge about how individuals perform and "pull down" macro-orders as well as how they collectively "build up" micro-level activities and practices.

Categories are socially constructed cognitive concepts that group like items and things. The category literature tells us that different audiences and groups can interpret categories in different ways (Fleischer, 2009; Hogg & Abrams, 1988; Pontikes, 2012; Negro, Hannan & Rao, 2011; Zuckerman, 1999) and other research shows how an individual's identity is re-constituted at the micro-level when they take on a role category (Ibarra, 1999). Institutional scholars also shed light on the impact of different interpretations of a single category by competing groups (Jones et al., forthcoming; Negro, Hannan & Rao, 2011). Further, Loewenstein, Ocasio & Jones (2012) suggest that institutional logics provide the institutional materials for categories (see also Jones et al., forthcoming; Mohr & Duquenne, 1997). This means that when co-existing logics exist, this may be an opportunity for sustaining a category. However, category research lacks insight into how individuals experience and perform categories in their everyday activities and work. Institutional insight into the role of identity in micro-level change corresponds well with my research since I examine how groups with different identities sustain competing categories in different ways.

In my dissertation, I study small-scale change at the micro-level using an institutional framework. My research helps us learn how individuals draw on meaning systems, practices and techniques in different ways to sustain competing categories. I find that this occurs when different groups with different identities experience, perform and embody their category in different ways.

DISCOVERING COMPETING CATEGORIES THAT WERE SUSTAINED

I first began to realize that medical acupuncture was interpreted in different ways by individual professionals when I was conducting ethnographic observations in a continuing education medical acupuncture course. Given that the medical acupuncture class I observed is taught by a western physician, I initially thought that the course would be taught from the western scientific point

of view. A few months before I began my observations, I was given permission to go through the course archives. While the archives provided background information about the course, other than a few letters from the instructor that were signed “with loving kindness” and some examination questions about Traditional Chinese Medicine, there was little indication of the underlying approach of this particular medical acupuncture course.

Before I began the ethnographic observations in the medical acupuncture course, I conducted an interview with a graduate who informed me that this course combined Traditional Chinese Medicine and western science. This raised my awareness that the approach taken in this particular medical acupuncture course might be different from my initial expectations. This was confirmed during my first day of observations in the medical acupuncture course, when the instructor said that the goal of the class was to gain a “philosophical understanding of Chinese medicine.” The instructor also said “I don't expect you will agree with me” since his philosophy and theory about medical acupuncture was different from the western scientific training and background of the health professionals taking the course.

During the medical acupuncture course, several participants told me about their “profound personal experiences” with Traditional Chinese Medicine. I was intrigued by this because these unusual experiences somehow seemed to be connected to their identity. In my subsequent observations, conversations and interviews with these participants, some of them told me they had an interest in Traditional Chinese Medicine and other alternative approaches to medicine prior to taking the course. This interest in Traditional Chinese Medicine was the principal reason they had chosen to take this particular course. However, other students commented during their interviews or the observations that while Traditional Chinese Medicine was interesting to learn, they did not think it would play a role in how they administered medical acupuncture. This second group of students said that learning Traditional Chinese Medicine was quite complex and they did not have enough time to do so. Other students cited a lack of personal interest in Traditional Chinese Medicine or constraints in their workplace (e.g.,

not enough time, patients, administrators) as barriers for not incorporating Traditional Chinese Medicine. Many of the participants who were not interested in Traditional Chinese Medicine told me they took the course to learn medical acupuncture skills from a well-known, reputable instructor.

As my ethnographic observations in the continuing education course continued, I was also conducting interviews with course students and other medical acupuncture professionals. In addition, I was reading a great deal of background information about medical acupuncture and beginning to analyze the data from the journal articles and textbooks. As my observations, interviews, journal article and textbook analysis as well as reading about medical acupuncture continued, the potential existence of two competing categories seemed to be an important topic that I should further explore. I was beginning to postulate that these competing categories had some connections but were also different. I remembered that some of the professionals I observed and interviewed told me that they were not interested in Traditional Chinese Medicine; instead they viewed medical acupuncture only through a scientific lens. I also saw that some of the textbooks and journal articles discussed medical acupuncture along with Traditional Chinese Medicine while others discussed medical acupuncture solely from a western scientific point of view.

I decided to learn more about the differences I was seeing between the two groups. It seemed interesting to explore why some professionals interpreted medical acupuncture using the western scientific viewpoint while others incorporated both western science and Traditional Chinese Medicine. At this point, I began writing about the background and history about medical acupuncture in western health care to better understand the competing categories of medical acupuncture I had observed. To test what I was beginning to think of as two different categories of medical acupuncture, I developed criteria for classifying the textbooks and journal articles into "Traditional Chinese Medicine medical acupuncture" (TCM-MA) and "western medical acupuncture" (WMA). As well, I began to ask interviewees about their general interest in Traditional Chinese Medicine. In the later interviews, I also asked participants whether they

agreed with my interpretation of there being two different medical acupuncture categories.

During the 38 interviews, some participants discussed their long-standing interest in CAM, lending support to my emerging postulation about the connection between identity and the different interpretations of medical acupuncture I saw in the course and in the literature. After my observations in the continuing education course finished, I continued conducting participant observation and interviews with other medical acupuncture professionals. My aim in studying these other professionals was to see if and how they were different from the professionals I had previously observed. My speculation about there being two groups was supported by the next set of observations and interviews I conducted. In addition, I also identified the two approaches to medical acupuncture by coding the textbooks and journal articles. This finding led me to further explore the literature about categories, identity and practices.

THE LOGICS OF WESTERN SCIENCE AND TRADITIONAL CHINESE MEDICINE

I focus on the two categories of Traditional Chinese Medicine medical acupuncture (TCM-MA) and western medical acupuncture (WMA) in my dissertation. As such, it is helpful to provide contextual and background information about the empirical setting of the western health care field. To do this, I discuss the logics of western science and Traditional Chinese Medicine.

The logic of western science. The western health care field is an organized system of inter-related organizations, institutions and actors such as hospitals, patients and professionals (Scott et al., 2000). The cornerstone of the logic of western science is the ability to diagnose and treat illness with technological advances (e.g., magnetic resource imaging) and therapies such as pharmaceuticals or other manual treatments (e.g., physical therapy). Health professionals seek out physiological, biochemical or neurological explanations for corporeal phenomenon (Moser, 1974). That is, a scientifically-based explanation and/or research are often necessary for a practice to be accepted as legitimate in

western medicine. Western professionals have focused mainly upon corporeal phenomenon by separating the mind from the body (Baker & Morris, 1996). Approaches to patient care often follow established, standardized channels and protocols and most western health care providers are trained to manage physical concerns. For instance, a prescription is usually written to treat migraines while a patient who has gallbladder attacks will often be referred to a surgeon. Patients visit a western health care provider when they are ill and health professionals tend to focus upon fixing a patient's complaints according to their area of expertise (e.g., if a patient has a toothache, a physical therapist will focus upon muscular issues with the jaw, not the tooth).

The reliable reproduction of diagnostic test results as well as the standardization of symptoms and treatments has become the pinnacles of the way "modern" health care is practiced. For instance, health providers attempt to diagnose a patient's symptoms according to pre-established criteria. If a diagnosis cannot be made, a patient may be sent for further testing or to a specialist. A more contemporary trend is the increasing reliance upon "evidence" to develop standardized treatment options (McClellan et al., 2008; see also Oxford Centre for Evidence Based Medicine – Levels of Evidence). Health actors invest heavily in research and this logic is shaped by the results of randomized, controlled trials and the statistical pooling of data via meta-analysis (e.g., The Cochrane Library). Not only are scientific methods used to advance knowledge about the body, the logic of western science is also drawn upon in the attempt to improve health.

The logic of Traditional Chinese Medicine. Traditional Chinese Medicine was created by the communist party in the 1960s in an attempt to standardize and diffuse it internationally (Taylor, 2005). Traditional Chinese Medicine is rooted in time-honored traditions and cultural practices which have been passed down from master to novice over thousands of years; hence a wide variety of local interpretations have persisted (Taylor, 2005). As a stand-alone health system Traditional Chinese Medicine includes its own distinctive therapies, system of diagnosis and ways of assessing patients. It includes an array of techniques such as acupuncture, bloodletting (piercing small blood vessels,

usually in the ear, and allowing the blood to drain), moxibustion (the burning of herbs over acupuncture points), herbs and massage (Eckman, 1996; Omura, 2003). The mind and body are inseparable in Traditional Chinese Medicine; these practitioners view psychological, physiological and environmental conditions as interconnected. Thus, it is believed that environmental occurrences can have a significant impact upon an individual's physical and mental well-being.

In the west, Traditional Chinese Medicine is mainly connected to acupuncture (i.e., needling) since many of its other techniques are foreign to health professionals (Omura, 2003). For instance, in Traditional Chinese Medicine diagnosis the different pulses are taken on the wrist and the tongue is examined; some practitioners also inspect the ears, face, nails, smell and posture (Aung & Chen, 2007; Lewith, 1982; Omura, 2003). These assessments are combined with historical and philosophical theories such as yin/yang (the complementarity of opposites) and five elements (air, water, fire, earth, metal) to guide the diagnosis and treatment of patients. For example, a person may be diagnosed as having excess yin ("cold"), therefore they will likely be treated with "heat" (e.g., cupping or moxibustion) in order to re-balance their yang ("hot") deficiency. Unlike western medicine, there is an expectation of heterogeneity in Traditional Chinese Medicine since its treatments are not standardized and a wide variety of techniques can be used to treat patients. That is, the same patient may be treated with cupping and herbs by one Traditional Chinese Medicine practitioner while another may use a combination of needles and moxibustion.

THE HISTORY OF TRADITIONAL CHINESE MEDICINE MEDICAL ACUPUNCTURE AND WESTERN MEDICAL ACUPUNCTURE IN WESTERN HEALTH CARE

The beginnings of medical acupuncture in western health care. When U.S. President Richard Nixon formally re-established relations with China in 1971, Americans and the west in general became fascinated with the exotic and unknown Far East (Oakley, 1973). Chairman Mao actively promoted Traditional

Chinese Medicine and acupuncture to Nixon, his physicians and journalists during their historic visit to China (Hiddleston, 1972). James Reston, a journalist who received acupuncture after having emergency surgery in China, piqued the interest of western medical professionals across the world with front-page *New York Times* stories about acupuncture (Dimond, 1971; Reston, 1971a; 1971b). As a consequence, delegations of curious physicians from numerous western countries such as the United States, Australia and Denmark also began visiting China to learn acupuncture (Bonica, 1974; Dimond, 1971; Scheid, 2002). These western physicians watched Chinese practitioners conduct surgery and perform "miracles" on conscious patients using only acupuncture needles and sedatives (Gingras & Geekie, 1973). When these groups of physicians returned from studying in China, some began administering acupuncture to their patients and published reports in mainstream medical journals (Bonica, 1974; Dimond, 1971; Gingras & Geekie, 1973; Scheid, 2002; Taylor, 2005). Powerful organizations, such as the World Health Organization (1979; 1991; 1995) facilitated these training programs for physicians and also developed international standards for acupuncture.

Western visits to China in the 1970s gained acupuncture considerable international interest and many stories were published in mainstream western newspapers and medical journals. From the outset, acupuncture was publicly touted as a panacea that could be utilized to help alleviate western problems such as non-addictive pain relief (Bonica, 1974; Taylor, 2005; Wallace, 1975). But the rapid rise of acupuncture's popularity concerned mainstream health professionals since its Traditional Chinese Medicine philosophy and theories clashed with and challenged western medicine (Lewith, 1982; Ulett, 1978; Warren, 1976). Western physicians also voiced their concerns about the administration of acupuncture by non-medical laypersons, such as Traditional Chinese Medicine acupuncturists (Rich, 1975). At this time, acupuncture was classified as an experimental medical treatment, thus the American Medical Association advocated for the administration of acupuncture by or under the supervision of licensed physicians (Schwartz, 1981). Although influential health professionals such as physicians

were skeptical (e.g., Abgrall, 2001; Anderson, 2000; Mackay, 1984; Shapiro, 2008), small groups of physicians continued to advocate for the introduction of acupuncture into western health care (Whorton, 2002).

The term "medical acupuncture" was first coined by Felix Mann in 1959 when he founded the first Medical Acupuncture Society. However, medical acupuncture did not become popular until the early 1970s when the relationship between the United States and China was restored. At this time, discussions began in western medical journals as to how to incorporate acupuncture and conduct research (Davis, 1974; Lehrnbecher & Bischko, 1974). Many western physicians wondered how the acupuncture they learned in China could be incorporated, if at all, because its underlying philosophy and theories from Traditional Chinese Medicine clashed with western science. It was at this point that two groups began to form because not all physicians agreed that they should incorporate Traditional Chinese Medicine into medical acupuncture. One group of western professionals were interested in Traditional Chinese Medicine and sought to integrate the philosophies, theories and techniques from both the logics of Traditional Chinese Medicine and western science into medical acupuncture (TCM-MA). The other group of western professionals shaped their approach to medical acupuncture according to the logic of western science (WMA).

The literature about the history of "medical acupuncture" oversimplifies its intricacies at the micro-level (Dew, 2000; Saks, 1992). With the exception of Kotarba (1975: 165) who briefly mentions: "In spite of maintaining an essentially Western philosophy of medicine, [the physicians I observed] have incorporated an Eastern form of medical treatment into their practices," historians have generally ignored the influential role of Traditional Chinese Medicine in the development of medical acupuncture. In contrast to the dominant history about medical acupuncture, my findings illustrate that two different groups developed two different approaches to medical acupuncture from the early 1970s forward. One group was particularly interested in both Traditional Chinese Medicine and western science. The professionals in this group integrated philosophies, practices and techniques from Traditional Chinese Medicine and western science into their

approach to medical acupuncture, TCM-MA. A second group of western professionals shaped their approach to medical acupuncture according to the principles of western science (WMA) and did not incorporate Traditional Chinese Medicine. I next discuss these two groups in more detail.

Western medical acupuncture (WMA). This group was started in 1959 by Felix Mann. Western physicians labeled medical acupuncture as "modern acupuncture" (Macdonald, 1977[a]) and "scientific acupuncture" (Davis, 1975) to indicate that it is practiced by a western physician. These labels differentiated western acupuncture from Traditional Chinese Medicine acupuncture from China. Modern or scientific acupuncture is now widely accepted as "western medical acupuncture" (White, 2009). Western professionals interested in this approach have endeavored to research and theorize about medical acupuncture according to western scientific principles and methods (Ernst & White, 1999; Macdonald, 1977[b]). Although they include a few Traditional Chinese Medicine techniques (e.g., needling), WMAs have not incorporated the traditional, philosophical and cultural aspects of Traditional Chinese Medicine. Instead, this group developed and applied western theories (e.g., the Gate-control theory of pain) to explain medical acupuncture scientifically. WMAs also developed new needling techniques such as ear acupuncture and segmental acupuncture. Their interpretation of medical acupuncture also integrates existing western techniques such as trigger point acupuncture and transcutaneous electrical nerve stimulation.

Traditional Chinese Medicine medical acupuncture (TCM-MA). TCM-MA was constructed in the early 1970s when physicians from western countries traveled to China to learn acupuncture and then began integrating it into their regular work. From the beginning, TCM-MAs stressed the importance of incorporating both western science and Traditional Chinese Medicine theories, practices and techniques into medical acupuncture (Aung & Chen, 2007; Bowers, 1973; Lewith, 1982). In the interviews, some TCM-MAs discussed how they became interested in Traditional Chinese Medicine after visiting China while others mentioned they had a long-term interest in Chinese history and philosophy. The category TCM-MA includes a mix of Traditional Chinese Medicine

techniques and practices such as needling and cupping (suctioning glass jars to the skin and moving them to increase blood circulation) and western inventions such as ear acupuncture.

JUSTIFICATION OF EMPIRICAL CASE

I selected the case of medical acupuncture in western health care. Medical acupuncture is a fascinating contemporary case to study the sustaining of competing categories. While most non-western practices have been ignored or challenged by mainstream health professionals (Kelleher, Gabe & Williams, 1994; Ramey & Buell, 2004; Shapiro, 2008), medical acupuncture captured their interest for a number of reasons. First, Nixon sent teams of physicians to China in the early 1970s and these high-profile medical professionals introduced acupuncture into western health care (Bonica, 1974; Dimond, 1971). Second, different groups of health care professionals were seeking alternative ways to help their patients and identified medical acupuncture as an opportunity to do this. However, each group sustained medical acupuncture in a different way; both groups used the meaning system of western science but one group also drew upon the novel meaning system of Traditional Chinese Medicine. Thus, the empirical setting of medical acupuncture enables me to explore how western health care professionals sustained competing categories of medical acupuncture in different ways.

Categories are socio-cognitive constructs that group similar concepts and items. Categories are important to study as they are a central building block of social structure (Cebon, working paper). We use categories to group, order and compare similar items and understand their relationships (King, Clemens & Fry, 2011; Pontikes, 2012; Porac et al., 1995; Smith & Medin, 1981; Zerubavel, 1996). They shape what we do, who we are and how we think (Ashforth & Mael, 1989;

Tajfel, 1982). We use categories to group similar items and concepts which enables us to establish order and understand the relationships between items. Through our interactions with others we attempt to develop shared understanding and come to some sort of social agreement about the meaning of categories (Jones et al., forthcoming; Lakoff, 1987). Categories also invoke certain behaviors and activities (Lakoff, 1987; Mohr & Duquenne, 1997; Porac et al., 1995). One example is Mohr and Duquenne's (1997) study of social workers who classified the poor into different categories; the category the poor were classified into affected the type and degree of assistance they received from the organization. Categories help us understand both change and stability (Cebon, working paper; Jones et al., forthcoming; Negro, Hannan & Rao, 2011; Rao, Monin & Durand, 2005; Zuckerman, 2000). Change occurs when new categories are constructed, categories die out or are re-worked. As categories are used and performed in everyday work this also provides stability.

DISSERTATION OUTLINE

I divided my dissertation into chapters and it is presented in a traditional monograph format. I start my dissertation with the introduction in Chapter 1. This is followed by Chapter 2 which reviews the literature about categories, institutional logics, practices and identity. I then provide details about the methods, data sources and how these have been analyzed in Chapter 3. Chapter 4 presents the findings based upon the data analysis. I discuss the findings in light of the literature in Chapter 5 and Chapter 6 contains the conclusions. These chapters are followed by a list of References. The Appendices have been placed at the end of the dissertation. I have included tables and figures as they are referred to in each chapter.

CHAPTER 2
LITERATURE REVIEW

In this chapter, I review the literature about categories, practices and identity. I discuss the theory that I am building on to understand the construction and sustaining of categories at the micro-level. Categories are socio-cognitive constructs used to group like objects and concepts. They help us understand the relationships between similar items and concepts such as products (Fleischer, 2009; Kennedy, 2005; Rosa et al., 1999), organizations (Porac et al., 1995) and practices (Rao, Monin & Durand, 2005). We use categories to make sense of and group the wide variety of things and concepts in our environment; categories permeate our everyday lives (Zerubavel, 1996). Categories additionally help us understand how we see ourselves and others as well as our identity (e.g., mother, East Indian). Categories can be sustained through being embedding into classification systems and making use of these in our daily activities and behavior. In the literature, two assumptions underlie the current conceptualizations about categories. First, it is implicit that once a single category is constructed, it will be sustained. Second, the construction of competing categories is seen as a temporary state that will be resolved when one of the categories becomes dominant. Instead, researchers hint that that it will be difficult for competing categories to secure resources and support to continue their co-existence over time. Recent research shows that the sustaining of a single category is connected to the institutional logic(s) that are available in a field and hints that the identity of the groups involved in this process is also important (Jones et al., forthcoming). But we know little about the micro-processes involved in sustaining competing categories. Thus, it is important to learn more about the connection between competing categories, practices, meaning systems and identity. This chapter presents the theoretical foundation for my research question: How are competing categories sustained?

I begin the literature review with a general overview of categories and their history. I then highlight the organizational and institutional literatures about

categories. I also discuss practice and identity research because these provide insight into how categories are performed, experienced and help describe an individual's identity. Following this, I focus upon the sustaining of categories. I end the chapter by bringing identity, practices and categories together and laying out the theoretical gap that I address in my dissertation.

WHAT ARE CATEGORIES?

Categories are socio-cognitive constructs used to group things and understand relationships between items and concepts such as products (Fleischer, 2009; Kennedy, 2005; Rosa et al., 1999), organizations (Porac et al., 1995) and practices (Rao, Monin & Durand, 2005). Through their interactions and written or verbal communication, actors create shared understanding about how categories are "lumped" together and "split" (Douglas, 1986; Goldberg, 2012; Khaire & Wadhwani, 2010; Zerubavel, 1996). For example, retailers can be classified into descriptive categories such as "low profit margins" and "being expensive" (Porac & Thomas, 1994). Categories also enable individuals to distinguish between those things that are similar and dissimilar (Binning, Zaba & Whattam, 1986; Zerubavel, 1996). Lakoff's (1987) work additionally demonstrates that categories invoke action through our behaviors and activities. Because our attention to issues is limited by how much information can be absorbed, accessed and retained (e.g., March & Simon, 1958; Ocasio, 1997), categories help us to sort, order and make sense of our environment as well as target those things we should attend to.

In the literature, there are three main types of categories, "natural," "social" and "cultural." Natural categories are more commonly associated with the hierarchical and vertical classification of physical and visible items found in nature such as stars, plants and animals (Snowdon, 1987). Hence, oranges are classified as citrus fruit but oranges are also sub-divided into different types such as navel, blood and Clementine. Social categories characterize how individuals interpret and define social items and concepts (e.g., male/female) and are primarily expressed through spoken and written language (Ashforth & Mael,

1989; Hogg & Terry, 2000; Smith & Medin, 1981). Social categories include, for example, ethnicity, religion and class as well as more abstract concepts like truth and freedom (Harnad, 1987; Yanow, 2003). We use social categories to navigate our social world through inter-personal exchanges and relationships with others; these interactions shape how we interact with and classify each other as well as our identity. Goldberg (2012: 5) argues that individuals construct social categories through "patterns of interaction … [that] have a bearing on the underlying cognitive schemas that structure their behaviors." Cultural categories provide us with the building materials of culture, such as common and shared beliefs, behaviors, symbols and artifacts that are transmitted from one generation to another (e.g., Douglas, 1986; Mohr & Duquenne, 1997; Steensland, 2006). Loewenstein, Ocasio & Jones (2012) further argue that cultural categories are associated with a particular vocabulary which enables and constrains social practices. As such, cultural categories bring together meanings with examples that are collectively understood, such as, pop and classical are types of music.

It is important to study how categories are shaped by the dis/agreements, compromises and negotiations between different audiences (e.g., Khaire & Wadhwani, 2010) because this helps us to understand how different audiences attempt to make sense of categories (Schatzki, 2001[b]). Different audiences may act in different ways when utilizing categories. Zuckerman & Kim's (2003) study found that critics' reviews help "mass market" films be successful at the box office. However, "independent" films that are reviewed by critics do not do well in independent venues. As a consequence, producers may behave differently based upon the category into which a film is classified. For example, mass market film producers may attempt to attract the attention of critics while independent filmmakers may not. This tells us that categories also influence the behavior and activities of individuals, such as what we buy and how we associate similar and dissimilar items (e.g., a professor is less likely to buy a "beater" car than a university student). Social categories such as ethnicity and gender can influence our relationships and, for instance, the behavior of employees within organizations. Categories additionally can help us to determine the social and

market value of items such as art (Khaire & Wadhwani, 2010) and products (Rosa et al., 1999). Thus, categories are used by actors to understand and relate to their environment and, as I explore below, to others.

THE HISTORY OF CATEGORIES

There is a rich history of categories that is rooted in disciplines such as philosophy (Gorman & Sanford, 2004), biology (von Linné, 1776), linguistics (Lakoff, 1987; Levy, Schlesinger & Braine, 1988), social psychology (Smith & Medin, 1981) and mathematics (Stokes, Davis & Koch, 2000). Most scholars connect the initial development of categories back to the philosopher Aristotle – who described ten categories of being and developed a classification scheme for animals – and Plato who grouped objects by their similar properties (Aristotle, 1938; Cooper, 1997; Gorman & Sanford, 2004). Other philosophers such as Kant shifted our thinking about categories by reflecting upon how we make judgments about the appearance of objects (Kant, 2007). Building upon Kant's work and bringing together Aristotle and Plato's ideas, Husserl further developed categories of meanings to help us understand how individuals think about and regard items (Smith, 2007).

Taxonomy is the hierarchical classification of items (e.g., places, events, vegetables) based upon their similarities (and differences) and is rooted in biology (Blackwelder, [1967]). The ability to arrange categories hierarchically or vertically enables us, for example, to recognize that a flower is a member of the category "plant" but that it does not have similar qualities to a "mammal." As well, since we can see that a flower has petals, it is not a "conifer" (Gorman & Sanford, 2004). Carl von Linné is a well-known botanist who re-developed Aristotle's original classification system for animals by assigning a genus and species to both animals and plants according to their visible characteristics (von Linné, 1830-31). According to this "classical approach" – whereby members of categories share certain common visible properties – categories are clearly defined, mutually exclusive and collectively exhaustive (Cappelli & Keller, forthcoming; Smith & Medin, 1981). As well, individual objects – such as an animal – are classified into one category according to their characteristics and

similarity to other like objects in the category. For instance, when we see an object that has white petals, a green stem and green leaves, this cognitively invokes some of the typical attributes that we associate with the category "flower." This helps us to classify this object as something familiar, even if we have not seen a particular type of flower before. These classical hierarchical and historically-based classification systems developed by authoritative individuals have long been institutionalized.

Market and product categories. Marketing scholars focus on two major aspects of categories: 1. how individuals categorize new or unfamiliar products and 2. how products can be positioned in relation to other (competing) products (e.g., Loken, 2006). In the first stream of research, marketing scholars have highlighted the individually-based processes behind the classification of items into categories. Because promoting (and ultimately selling) goods and services are vital to marketing, investigators have focused upon uncertainty about novel items that do not fit into existing categorical schemes (Currim, Imran & Sarin, 1983). This uncertainty can be about the product itself or the organization that is producing or promoting the product (Vergne, forthcoming). In addition, the individuals to whom the product is being marketed may be confused by products that they cannot fit into established categories. For example, Lajos et al. (2009) studied how consumers decide where to place an ambiguous product that could be classified into two categories. These researchers could better predict which category the consumer would select by measuring the strength of the consumer's connections between the parent category and the sub-categories about which they were asked to brainstorm.

The second stream of marketing research investigates how organizations attempt to favorably position (new) products into specific categories by promoting their similar attributes. The experience of consumers with product categories helps to create insight into why consumers purchase some products and not others (Viswanathan & Childers, 1999) and also sheds light upon the relationship between consumers and products. In general, marketing research can help us to understand how individuals make sense of competing product categories. As well,

we can learn more about how organizations seek to define categories. Marketing research increased understanding about how individuals and organizations classify (i.e., position or brand) a product so that it can be purchased. An example is the minivan which illustrates that having membership within a specific category can influence its value as well as its perceived features in relation to other like products (Rosa et al., 1999). In sum, the marketing literature provides us with insight into individual and organizational behavior and experience with product categories.

Categories in organizational behavior. Organizational behavioralists (OB) who study categorization processes focus upon understanding individuals in organizational settings using social psychological approaches. In particular, social identity theorists (SIT) have studied how individuals are classified into common social categories or groups by attributes such as ethnicity, religion, gender and age to help explain group behavior (Ashforth & Mael, 1989; Tajfel, 1982). This not only tells us about an individual's personal identity but also how they view themselves and others as organizational and societal members. SIT examines individuals within a social context that contains different categories and groups. According to SIT, each individual has their own personal and social identity which helps to explain why individuals may identify with different groups in different environments (e.g., a person can identify with being part of the in-group as "we" and classify out-groups as "they"). Research found that the categories with which individuals are associated can impact their degree of cooperation with co-workers as well as the motivation, commitment, performance, turnover, etc. of organizational employees (Chatman & Spataro, 2005; Meyer, Becker & Van Dick, 2006; Tsui, Egan & O'Reilly, 1992). For instance, the individuals in Binning, Zaba & Whattam's (1986) study observed negative and ineffective behaviors more often than positive behaviors for groups classified as "poor performance," even though the simulation video in the research experiment exhibited the same number of positive and negative behaviors. In short, social identity theory examines how an individual relates to and fits in with (dis)similar

others, thus helping individuals to define themselves and other within the social sphere.

Self-categorization, which seeks to understand how individuals classify themselves into existing social categories, is another key area that is prevalent in OB (Hogg & Abrams, 1988; Turner, 1987). This perspective helps us understand the cognitive aspects of how individuals classify themselves and others into different groups and social categories; that is, how individuals compare themselves to dis/similar others. Self-categorization is linked with positive self-identity because individuals self-categorize into different social groups according to how they view themselves and their work (Tajfel & Turner, 1986; Tsui, Egan & O'Reilly, 1992). As Elsbach (2003) highlights, employees in non-territorial work environments attempt to assert and retain their role identity through emphasizing their distinctiveness (e.g., displaying physical objects). Tsui, Egan & O'Reilly (1992) have found that gender and race affect an individual's commitment to the organization. Self-categorization researchers have mainly used surveys that contain established social categories such as age, ethnicity and religious affiliation (Tajfel & Turner, 1986). Consequently, there is less focus upon how individuals use, process and interpret categories as part of their identity. There also is less focus upon how categories influence how individuals self-categorize and interpret their social identity in different ways.

OB SIT researchers have additionally provided insight into the link between a person's identity and social categories (Hogg & Terry, 2000). Since individuals classify themselves and others into a variety of social categories, social identity and self-categorization theorists seek to understand the relationship between the personal self and the social self (Hogg & Terry, 2000). Since there is less OB research about how competing categories, such as transgender, are created, interpreted and sustained, it would be interesting to gain further insight into how individuals self-categorize and categorize others when presented with the options of male, female and transgender. Undoubtedly, the identity and ability of a transgender individual to self-categorize will be problematic if only the categories of male and female are available. Because OB researchers concentrate

mainly upon individual and group-level phenomenon in organizational settings, we need to know more about how social categories arise and why individuals and groups prioritize, legitimize and utilize certain categories over others (but see Goldberg, 2012).

Social categories (e.g., race, gender, profession) can influence the behavior and identity of individuals (Smith & Medin, 1981; Bodenhausen & Peery, 2009). Social psychology researchers highlight that categories are used to group concepts and ideas by their perceived common attributes or prototypical characteristics (Hogg & Terry, 2000; Lakoff, 1987; Porac & Thomas, 1994; Rosch, 1978; Zerubavel, 1996). In particular, Rosch (1973) drew attention to categorical prototypes and how we regard the defining features of categories. Rosch's work also hints that different groups may develop different prototypes for a category and think differently about the features that represent a category. That is, individuals will seek to define the "necessary features" or "prototypes" of a category (Smith & Medin, 1981), although these prototypical features may vary according to how the category is perceived by any given individual (Fleischer, 2009; Porac et al., 1995; Porac & Thomas, 1990). Taking Rosch's work further, Lakoff (1987) finds how a person uses categories depends on their experience and "imaginative processes" (i.e., mental imagery, metaphor). This hints that individuals may experience categories in different ways. While much of the classical approach to categories focused upon our perceptions and classifications of visible objects, studies of social categories help us to understand the social and cognitive connections between categories and individuals. In general, social psychologists have paid less attention to the influence of identity and broader meaning systems upon how individuals think about and utilize social categories.

An institutional perspective about categories. Due to their common roots in social psychology, categories have been introduced into the business literature by researchers in marketing (Loken, 2006; Rosa et al., 1999) and organizational behavior (Binning, Zaba & Whattam, 1986). Although there are reservations about its utility, the classical approach – whereby objects and concepts are classified into a categorical system according to their similar (and

perhaps visible) characteristics – shaped how institutionalists theorized about categories (Fleischer, 2009; Lounsbury & Rao, 2004; Porac et al., 1995; Rao, Monin & Durand, 2005). Our attention to the classical approach raises the concern that items may be classified in numerous ways, for instance, by their color, shape or distinct features. In contrast to the classical approach which places one item in a single category and confers an identity in relationship to other like items, organizational researchers have also studied the role of heuristics and cognition in the utilization and perception of categories (Porac & Thomas, 1990; 1994). Consequently, we have learned that what is associated with a category (e.g., organizations) may not be as important as how different audiences such as individuals, professionals, organizations and customers perceive a category (Fleischer, 2009; Hsu, Hannan & Koçak, 2009). This more recent turn of examining the elasticity and ambiguity of categories attempts to account for how a variety of audiences may differentially interpret the same category.

Institutional scholars have studied a variety of categories in industry, markets (e.g., products), and finance (e.g., stocks, mutual funds) since these widely accepted classification systems are readily identifiable and quantifiable (Lounsbury & Rao, 2004; Porac, Wade & Pollock, 1999; Rosa et al., 1999; Ruef & Patterson, 2009). As an example, market categories offer "salient characteristics (e.g., attributes, offerings) that define membership of a category" (Kahl, Kim & Phillips, 2010: 82). This research found that grouping similar items into categories helps actors to, for instance, assign value to and compare items such as Indian modern art (Khaire & Wadhwani, 2010) and stocks (Benner, 2007; Zuckerman, 1999). The category an item or concept is assigned to also sends out signals about its identity. Wineries, for example, that successfully affiliate themselves with wineries identified as "high-status" are perceived to have better quality wine, even if this is not the case (Benjamin & Podolny, 1999). Zuckerman's (2000) study also finds that firms who straddle categories confuse audiences about their identity.

Researchers have recently begun to explore the politics involved in shaping categories (Jones et al., forthcoming; Lounsbury & Rao, 2004).

Institutionalists have found that different audiences (e.g., critics, rating systems, media) may endeavor to shape a category in different ways (Fleischer, 2009; Glynn & Lounsbury, 2005; Porac & Thomas, 1994; Porac, Wade & Pollock, 1999) which can spur innovation and change. As Lounsbury & Rao (2004) demonstrate, a mutual fund category is reconstituted to form another category while the other mutual fund categories are sustained as is. This signals that uncertainty about the identity of a particular mutual fund may increase as variation within a category increases, in turn spawning change through the re-ordering of the classification system by creating another category. As a result, a unique identity can be established for each of the categories. In opposition, both Negro, Hannan & Rao (2011) and Jones et al., (forthcoming) find that instead of category splitting, the boundaries of a category are flexible enough to enable opposing features and interpretations to co-exist. The different responses of audiences to a category may also result in contestation (Jones et al., forthcoming). Rivalry and competition between different categories of organizations may alter how they are perceived by different audiences or even change the landscape of a field (Porac & Thomas, 1990; Porac et al., 1995). Thus when organizations exit or change categories by closing, merging, expanding or divesting this may alter relationships, provide opportunities and prompt change. Rao, Monin & Durand (2005) illustrate how professionals generate change within fields through combining, for example, cooking techniques and ingredients from different categories in novel ways. The institutional perspective provides us with insight into how categories are interpreted in different ways by different audiences to help bring about change in fields.

The interpretation of categories. Scholars demonstrate that practices are guided and shaped by interactions, experiences, knowledge and meaning systems (Lounsbury & Crumley, 2007). Practices are performed through activities, behavior and interactions. In comparison, enacting categories involves invoking one's experience, imagination, knowledge and presuppositions (Bowker & Star, 1999; Goldberg, 2012; Schatzki, 2001[a]). As Lakoff observes, the enactment of categories depends on the way individuals "perceive them, image them, organize

information about them, and behave toward them with their bodies" (51). This tells us that individuals can have different types of interactions with categories. The social identity theory literature also tells us that categories are an important part of our social identity and thus guide our behavior in our interactions with others.

Research about how categories are practiced highlights the activities, tools and interactions that are enacted to perform and sustain categories (e.g., Hannan, Pólos & Carroll, 2007; Latour & Woolgar, 1979; Mol, 2002; Mol & Law, 2004). As an illustration, Goldberg (2012) finds that individuals who bridge different social groups also interact with multiple categories. Thus, Goldberg's research indicates that whether a category is interpreted in different ways by different individuals depends upon their position in the network, that is, whether they are part of a clique or interact with a variety of others (see also Negro, Hannan & Rao, 2011). Mol (2002) discusses how the disease atherosclerosis is interpreted by different groups of medical professionals in different ways. Her study shows us the multiple ways that a disease category is enacted in everyday practice and the different tools that each group of professionals uses. As well, Barley (1986) shows how interactions between different groups of professionals and technicians structure their respective occupational categories and ways of practicing.

When examining categories in practice, research illustrates that categories invoke action and behavior. For instance, when a child sees a ball, they know (or learn) it can be bounced, thrown or kicked (Brown, 1965). Lakoff (1987) also points out that our activities and behavior help define the features of a category. As an example, not all chairs have legs (e.g., beanbag chair) but we all know to "sit" in a chair. Mervis (1986) additionally explains how categories are culturally interpreted and mediated. Her research with toddlers illustrates that 2-year olds may not realize the cultural significance of a round piggy bank that stores money, instead, mistaking it for a ball or toy because of its shape. In practice, Porac and colleagues (Porac & Thomas, 1990, 1994; Porac et al., 1995) discovered that knitwear organizations behave in certain ways (i.e., pursuing differentiation)

because they share a common understanding about which other organizations they compete with in their category.

Scholars have demonstrated that categories can have unclear boundaries and be open to broader interpretation by different audiences (Fleischer, 2009; Godderis, 2011; Pickering, 1995; Rao, Monin & Durand, 2005). Researchers also indicate that our behavior and activities can be limited by interactions, context, individual skills and knowledge and available tools. Studies of the classification process (e.g., deciding which categories to place items into, how to manage categorical misfits) highlight the nuances and negotiations involved when different groups interpret categories in different ways (Bowker & Star, 1999; Fleischer, 2009; Mol & Berg, 1994). The interpretation of categories additionally brings to light the issues of politics. This is demonstrated by Negro, Hannan & Rao (2011) who examine the politics underlying the incorporation of novel practices and tools from different groups of winemakers into an existing category (see also Jones et al., forthcoming; Latour & Woolgar, 1979; Mol, 2002).

Researchers suggest that interpersonal relationships and interactions shape how we behave and interpret categories. As Goldberg (2012) finds, individuals may utilize a range of different categories in their social circles, especially if they have a broader range of interactions and occupy a central place in their social network. Barnes (2001) and Turner (1994) draw attention to the capable individual who performs practices in different conditions and under different circumstances (see also Lok, 2010). Category research also tells us that objects and social activities also play a role in the performing of categories (e.g., Callon, Méadel & Rabeharisoa, 2002; Czarniawska & Sevón, 2005; Engeström & Blackler, 2005; Latour, 2005). Barnes points out that we learn practices from others; thus practices and objects are passed on and then enacted by individuals who are participants in a larger community (e.g., Brown & Duguid, 1991; Duguid, 2005; Wenger, 2000). These researchers remind us that there is intention and purpose in performing practices to sustain categories. However, the categories that individuals perform are often perceived as external, as having an existence outside of the individual; they are there to be taken up when needed. We invoke

our own assumptions and experiences when we perform categories, however, categorization theorists have argued that we mold our behavior according to the expectations, knowledge and interactions associated with categories (Bowker & Star, 1999; Goldberg, 2012; Lakoff, 1987). In the process of gaining knowledge and experience, we may embody practices and express them through our activity (Schatzki, 2001[a]). Because we interact with others and think about our identity in terms of categories, we may also embody categories. As an illustration, Mol's (2002) research indicates that patients might embody their disease category and express this embodiment through their words, actions, behavior and interactions with physicians and health care practitioners (see also Swidler, 2001).

Our understanding about how humans, objects and knowledge come together in practice is mainly informed by social studies of science (Barley, 1986; Knorr-Cetina & Mulkay, 1983; Latour, 1988; Latour & Woolgar, 1979; Orlikowski, 2007) whose researchers discuss how objects both constrain and enable practice. These studies also draw our attention to the appropriateness of using certain objects, performing certain activities and behaving in certain ways to accomplish practice (Bechky, 2003[b]; Knorr, Krohn & Whitley, 1981). In our practice and everyday lives, we come into contact with, use and modify objects and technologies (Barley, 1986; Orlikowski, 1992). In fact, much of our modern-day work activities could not be performed without technological objects such as computers and tools such as hammers and saws. This tells us that categories may be sustained through the objects we use in practice and that the interactions we have with and about objects also affect our behavior (Barley, 1986; Latour & Woolgar, 1979).

IDENTITY AND CATEGORIES

Scholars have discussed categories and identity in two different ways. First, categories themselves have an identity which is encapsulated by its features and how audiences perceive it. Second, categories, such as social categories, describe a person's or organization's identity. In this section, I discuss category

identity and in the next section I discuss how individuals and organizations use categories to portray their identity.

Identity is a common thread in organizational research about categories since it is closely linked to how categories are perceived, valued and legitimated by audiences (Khaire & Wadhwani, 2010; Vergne, forthcoming; Zuckerman, 1999; 2000). As Mohr & Duquenne (1997) point out, social work professionals classify the poor into social categories like destitute, homeless and needy. This classification can occur differently depending on how each professional perceives their budding identity as a social worker and the identity of the person they are classifying. Studying categories also helped organizational scholars to understand the way items such as organizational forms, practices and products are classified, conceived and organized in relation to their identity (Cooper et al., 1996; Oakes et al., 1998; Porac & Rosa, 1996; Suddaby & Greenwood, 2005; Zerubavel, 1986). The identity of a category is formed when similar items and concepts are grouped together, helping audiences to distinguish the boundaries between like and unlike items and concepts. Although linking identity with categories is not always the primary purpose of researchers, we can see that category identity played a key role in how objects and concepts are classified (e.g., Cooper, Gulen & Rau, 2005; Mohr & Duquenne, 1997; Smith & Medin, 1981). For instance, investors make decisions based upon whether a company receives a positive rating of "strong buy" or a negative rating of "hold"; this rating can affect how audiences view the identity of a company and the category(ies) it is associated with (Fleischer, 2009). The category into which a company is classified can also affect its ability to survive (Hannan, Pólos & Carroll, 2007; Porac et al., 1995; Zuckerman, 1999; 2000).

Curiosity about which attributes or features of a category form its identity led to the exploration of category ambiguity and fuzziness (Rosa et al., 1999; Porac et al., 1995; Porac, Wade & Pollock, 1999). To address this issue, Fleischer (2009) drew attention to the relationship between ambiguous classification systems and the formation of audience perceptions about the identity of a category. From this research we have learned how different audiences can form

their own perceptions about the identity of an organization that is associated with a particular category. The categories that an organization is affiliated with also send out signals about its identity (e.g., Negro, Hannan & Rao, 2011). This means that different audiences may classify the same organization into different categories, depending upon which of the category's identity attributes are most salient to them (e.g., Pontikes, 2012). Because perceptions may differ between audiences, scholars have begun to problematize the identity of categories.

The understanding that the same item may be classified differently by different audiences depending upon which of its identity characteristics are most salient led to research about how items can be affiliated with multiple and possibly competing categories. Scholars have found that spanning multiple categories can be both detrimental and beneficial for an item's identity. On the one hand, researchers have found that multiple category membership and category-spanning can have negative effects upon an item's identity (Hannan, Pólos & Carroll, 2007; Ruef & Patterson, 2009; Zuckerman, 1999; Zuckerman et al., 2003). As Zuckerman (2000) discovered, securities analysts who lower the stock prices of companies with a diverse portfolio pressure these companies to divest businesses that do not fit within their industry category. This signals that the identity of organizations in certain industry categories can be ambiguous. As well, Hsu, Hannan & Koçak (2009) have established that products assigned to multiple, perhaps competing, categories decrease in revenue since their identity confuses potential consumers who will not purchase these products. On the other hand, Zuckerman et al., (2003) find that experienced actors are more likely to be typecast into different film genre categories because they are already a known quantity to casting directors, while inexperienced actors are not. Fleischer (2009) also discusses the advantages of ambiguous classification schemes for brokerage firms that have the advantage of classifying their stock according to how they view themselves. And, organizations that straddle numerous stigmatized and non-stigmatized categories deflect negative attention away from the stigmatized category because straddling confuses audiences (Vergne, forthcoming). Thus, in

some cases, ambiguity about identity and straddling can result in penalties while in others it can be an advantage.

Personal and professional identity. A person's identity is individually-centered but can also be dependent upon their situation and context. Researchers have found that individuals behave differently according to environmental cues and commonly held beliefs, for instance, about their identity and that of their organization (Ashforth, 2001). Individual behavior is shaped by their relationships and interactions with others, including their friends, clients and colleagues (Ashforth, 2001; Goldberg, 2012; Lakoff, 1987). Behavior is also influenced by the categories into which a person classifies themselves and others. For instance, an individual may behave as a *manager* when dealing with a difficult customer and later on may function as a *mentor* during a discussion with a colleague. It is by performing activities and behaviors, invoking certain categories and having interactions with others that we acquire our identity as "someone" (Hogg & Terry, 2000; Schatzki, 2001[b]).

Individuals may even alter their behavior and enact different identities according to the social and cultural categories with which they are associated (e.g., female pop singer). Consequently, a person may enact different behaviors according to whether their identity is aligned or discrepant with the categories with which they are associated (e.g., Foreman & Whetten, 2002; Goffman, 1959; Ibarra, 1999). But there may be conflict between how others classify an individual and how an individual views themselves. That is, individuals may experience dissonance between the categories they are associated with and the categories they would associate themselves with. Ibarra's (1999) focus upon behavioral adaptations during the transition to a new role category helps shed light upon how individuals shift their identity during this process. Ibarra found that individuals not only changed their image, but also their behavior and judgments as they adapted to their new role category.

Professional identity involves questions such as "Who am I as a professional?" and "What is my role as a professional?" (Chreim, Williams & Hinings, 2007). Professional identity theorists have sought to understand the

intersection between the self and one's profession. Given their individual identity and how they desire to present themselves, professionals may identify more with certain roles and categories than others (Ashforth, 2001; Roberts, 2005). For instance, Lounsbury & Crumley (2007) illustrated how different field logics and categories of mutual funds were sustained by professionals with different identities. Thornton (2004) and Lounsbury (2002) demonstrated how professional institutional logics provide guidance about which practices, roles and activities are acceptable and available to groups of professionals. This professional institutional logic, then, serves as a tool to link professionals who have a similar identity (i.e., Roman Catholic priests may work in isolated rural areas yet all have a similar identity as a priest).

Professionals have socially accepted identities and behaviors that are activated by expectations, contexts or social cues (Ashforth, 2001; Freidson, 1970; Pratt, Rockmann & Kauffman, 2006). Professional identity is influenced by individual, environmental and social mechanisms which shape a professional's behavior and performing of activities (Goffman, 1959; Roberts, 2005). In addition to their personal identity, the workplace, the work itself, categories, institutional logics, professional associations and other external audiences (e.g., clients, government) may also shape how professionals view and enact their identity. Scholars have noted the tension between professional and organizational identity in relation to how professionals perceive themselves (Greenwood, Suddaby & Hinings, 2002; Pratt, Rockmann & Kaufmann, 2006). For example, professionals working in hospitals may bring out different aspects of their identity in light of hospital policies, their patients as well as the other professions with whom they work (e.g., nurses, pharmacists). In sum, research provides signals that both personal and professional identity are linked to the categories with which a person is associated.

THE SUSTAINING OF CATEGORIES

Until recently, researchers have taken for granted the processes involved

in sustaining (e.g., Lawrence & Suddaby, 2006; Scott, 2001). As a consequence, our comprehension about categories is grounded in knowledge about how these are constructed, not about how these are sustained. To inform my dissertation research about how categories are sustained, it is helpful to look more generally at the literature about this process. Bartel & Garud (2009) emphasize the key role of narratives in sustaining knowledge and experiences about organizational innovation over time. Lenox (2006) explores how the voluntary industry self-regulation program 'Responsible Care' is sustained by powerful firms who feel that the social and legal benefits from self-regulation outweigh its costs. More broadly, Fox-Wolfgramm, Boal & Hunt (1998) find that if a change initiative fits with an organization's current or envisioned identity and image, then the organization is better positioned to sustain the change. These studies about sustaining direct our attention to the structures and relationships that underlie the sustaining process. The last study highlights the importance of identity in sustaining which suggests that managing the identity of categories is also important for these to be sustained.

Two streams of institutional research provide additional insight into the sustaining of categories: institutional maintenance and institutional logics. Institutional maintenance (Lawrence & Suddaby, 2006) suggests that ongoing and shared efforts involving work such as "policing" as well as "embedding and routinizing" are required to maintain institutions (see also Jarzabkowski, Matthiesen & Van De Ven, 2009; Trank & Washington, 2009; Zilber, 2009). This research emphasizes the micro-level activities and practices involved in this process (Zietsma & Lawrence, 2010). It is important to note, however, that categories may be sustained through different practices, activities and processes. As an illustration, Anteby (2010) shows that academically-housed professionals sustain moral legitimacy for a category in a contested market through enacting certain practices such as only requesting reimbursement for procuring cadavers (as opposed to making a profit by requesting reimbursement for additional costs) and not supplying cadavers to for-profit companies. Studies highlighting the uptake of institutional logics in different ways can also help us understand how

categories can be sustained (Purdy & Gray, 2009; Reay & Hinings, 2009). Loewenstein, Ocasio & Jones (2012) put forth that institutional logics provide the cultural material for categories (see also Jones et al., forthcoming; Thornton & Ocasio, 2008). These authors imply that as long as institutional logics co-exist, the categories associated with these will be sustained.

Other research demonstrates that categories may be sustained by being associated with existing classification schemas which already organize familiar items and concepts (Bowker & Star, 1999; Lounsbury & Rao, 2004; Rao, Monin & Durand, 2003). This is because stand-alone categories "make little sense unless they are informed by field-level categorical knowledge and nomenclatures" (Porac, Wade & Pollock, 1999: 137; see also Cappelli & Keller, forthcoming). For instance, Rosa et al. (1999) document how minivans needed to became part of the automobile classification system so that customers and salespersons "know what to do with new products … because already categorized product models … share some attributes with the new ones" (Rosa et al., 1999: 68). One example is the category "desktop computer workstations" (Kennedy, 2008) which caused confusion in the market; its identity and survival were dependent upon its placement within the existing classification system for computers.

Social identity theory tells us that individuals associate their identity with certain categories; once a category becomes part of an individual's identity, this can help it be sustained. Mohr and Duquenne's (1997) work suggests the connection between the emerging identity of social workers and the changes in the meaning of poverty categories (e.g., destitute, homeless). In Lounsbury's 2002 study, sustaining the new identity of financial academics would have been more difficult to achieve if it had not been supported by the category of finance.

Researchers hint at the potential challenges that may be involved in sustaining categories (Kennedy, 2005; Lounsbury & Rao, 2004) and provides insight into how actors attempt to generate shared understandings about categories (Jones et al., forthcoming; Porac & Rosa, 1996; Porac & Thomas, 1990). Thus, it is important to ask why some categories might be challenging to sustain. For example, scholars hint that a category may be problematic to sustain if it is

ambiguous, if it straddles multiple categories, if its identity is unclear or if it is opposed by some audiences. Ambiguity about the identity, attributes or features of a category can result in higher costs, misunderstanding or even a lack of interest from important audiences (Negro, Hannan & Rao, 2011). Categories might be difficult to sustain if they are not institutionalized and continue to be questioned by different groups. This suggests that not all actors will agree upon the interpretation of a category and that this disagreement could affect whether it is sustained or not. As well, it may be difficult to classify items into existing categories depending on how they are defined. For a category to be sustained, it may need to be labeled in a certain way or even be re-named. This occurred in Canada when the less socially acceptable terms of "Indian" and "Eskimo" were relabeled as "Aboriginal." Institutional scholars find that influential parties such as high-status individuals, critics, government, professionals and the media can play an important role in sanctioning (and rejecting) categories (Kennedy, 2008; Lounsbury & Rao, 2004; Mohr & Duquenne, 1997; Rao, Monin & Durand, 2005; Zuckerman, 1999) which also suggests that these actors may also play a role in sustaining categories. For categories to be sustained, then, it is important for them to be associated with an existing classification system, institutional logic, identity or supported by an influential actor.

Sustaining competing categories. Scholars postulate that the co-existence of competing categories is temporary. As a result, it is thought that one of the categories will become dominant. Since we know that competing institutional logics can be sustained together (Goodrick & Reay, 2011; Purdy & Gray, 2009; Reay & Hinings, 2005; Thornton, 2004; Thornton, Jones & Kury, 2005), the sustaining of competing categories that are connected with different institutional logics is also possible. We learn from research about how competing interpretations of a field are developed because actors draw upon different co-existing institutional logics (Goodrick & Reay, 2011; Purdy & Gray, 2009). These institutional studies about logics alert us to the possibility that competing categories may be sustained if actors draw on co-existing logics in different ways. Competing categories may also be sustained if they become part of an individual

or group's identity. As Lounsbury (2002) illustrates, two sets of actors with different identities, sustain two competing mutual fund categories based on their identity as passive or active money managers.

Practice researchers also tell us that different groups of professionals who associate different practices and objects with a category may be able to sustain competing categories by performing these in different ways and embedding these into work routines and work content. Although existing researchers studied those cases where category boundaries expand to incorporate novel interpretations (Jones et al., forthcoming; Negro, Hannan & Rao, 2011), when different groups perform categories differently and associate their category with different practices, objects, activities and behavior, there is a possibility that this may help sustain competing categories. As well, there may be ongoing disagreement about the features or content of a category. One possible outcome of this could be the sustaining of competing categories by the different groups that disagree.

ADDRESSING THE THEORETICAL GAP

Although we know categories help us understand how we think about ourselves/others and that the sustaining of categories is a social process involving different audiences, we still know little about what happens with competing categories. Some of the literature suggests that rivalry between competing categories will result in the survival of a single category due to the resources and support required to sustain a category. Other scholars suggest that individual perceptions about categories lead to variation in how they are used and interpreted. Further, practice research hints that we can experience and perform categories and also pass them on to others through our interactions. I draw together these different threads in the current literature to provide insight into my research question: How are competing categories sustained? I seek to provide insight into this research question by increasing our understanding in three areas: 1. Sustaining competing categories at the micro-level, 2. Performing competing

categories, 3. Experiencing and embodying competing categories. I next discuss each of these contributions in turn.

1. Sustaining competing categories. Scholars provide insight into how ideas, programs and organizational change can be sustained through narratives and the efforts of powerful firms (Bartel & Garud, 2009; Fox-Wolfgramm, Boal & Hunt, 1998; Lenox, 2006). The category research assumes that a category will be sustained and that the existence of competing categories is a temporary stage. There is insight into how a single category is sustained by macro-mechanisms such as classification systems, institutional logics and third party actors (e.g., the media). Anteby (2010) provides additional insight into how groups perform certain practices and not others to sustain legitimacy for a single contested category. In turn, specific practices help sustain the category. In general, the research on sustaining hints at the different ways in which this process occurs but does not shed light on the sustaining of competing categories. I build upon this research by seeking to uncover the micro-processes and groups that underlie and support the sustaining of competing categories. I seek to address this gap to bring insight into the everyday and often invisible work that different groups perform at the micro-level to sustain competing categories.

2. Performing competing categories. Our knowledge about how we perform categories signifies that there is some flexibility in how categories are used and interpreted by different audiences. Our behavior, use of objects and activities are guided by the categories we use and perform. Category researchers also found that performing categories involves interaction and negotiation between individuals and groups. We learn behaviors by interpreting categories and through our interactions with others and objects but we also bring our own experience, imagination and knowledge to this process. It may be that the activities and behaviors that categories invoke amongst different groups are more salient to the groups than features of the category. This raises the question about how categories can become part of our work, behaviors and activities. My research aims to shed light on the activities, behavior and interactions involved in the sustaining of competing categories by different groups.

The institutional literature focuses on single categories at the macro-level, but less on how competing categories are performed through the daily work of individuals and groups. In addition, there is little study of the activities, behaviors and interactions of different groups who may perform a category in different ways. The literature also hints that objects are involved in this process and that knowledge and objects are passed on from generation to generation. Thus, it would be helpful to study the performance and passing on of competing categories through examining how different groups interact with each other and utilize objects. In my case, I seek to understand which interactions, behaviors, activities and objects are part of the passing on and performing of competing categories. I aim to study the activities and behaviors (i.e., practices) and objects (i.e., tools) of individuals at the micro-level to increase our understanding about the sustaining of competing categories through the performance of everyday work and activities.

3. Experiencing and embodying competing categories. To better understand the micro-processes involved in sustaining, it would be helpful to know more about how categories are experienced and embodied by individuals as part of their identity. There is a gap in our knowledge about the role of identity, emotions and imagination in experiencing categories. In the literature, there is little discussion about embodying categories even though social identity theory reveals the connection between categories and a person's identity. This means that categories may be embodied as part of an individual's identity (e.g., Hogg & Abrams, 1988). This further suggests that individuals and groups may experience competing categories in different ways. Perhaps the process of experiencing categories involves identity, emotions and embodiment. That is, individuals may embody categories as part of their identity; who they are and how they see themselves may be related to the categories they use. The categories that an individual experiences and embodies may then be sustained as part of their identity. In my dissertation research, I endeavor to shed more light on how different groups experience and embody competing categories.

The puzzle about how different groups sustain competing categories is theoretically interesting because we know less about what underlies this process. There is also less insight into the micro-processes that underlie the sustaining of competing categories. Part of this process may involve emotional investment in certain categories and not others. The literature hints that the sustaining of competing categories may be related to the emotions, experiences and interactions of different groups. That is, shared experience that is passed on to group members through interaction may help sustain competing categories.

CONCLUSION

We know that a category can be sustained when it is embedded in a classification system or attached to an institutional logic. Our current understanding about how categories are sustained is limited. Thus, we need general insight into the sustaining processes of categories. As well, there is a general gap in our knowledge about the sustaining of competing categories because researchers assume this is a temporary state that will be resolved when one category becomes dominant. We also lack insight into how competing categories are experienced and performed by different groups with different identities. This also opens up space for theorizing about the sustaining of competing categories at the micro-level. Researchers also do not raise the issue of how competing categories can be sustained by different groups with different identities. I seek to address these gaps in our knowledge in my dissertation.

CHAPTER 3
DATA AND METHODS

I conducted a qualitative case study (Merriam, 2009; Yin, 2003) to better understand the sustaining of Traditional Chinese Medicine medical acupuncture (TCM-MA) and western medical acupuncture (WMA) in western health care. The research question guiding my methods and data collection is: How are competing categories sustained? "How" questions help researchers to explain processes over time and within a specific context (Yin, 2003). My primary data source is the 38 interviews. The journal articles and textbooks provided background information about WMA and TCM-MA. I analyzed the interview, journal article and textbook data using mixed-methods to better understand the sustaining of competing medical acupuncture categories at the micro-level. I analyzed the interview data using an inductive, grounded theory approach guided by insights from the literature (Nag & Gioia, 2012; Strauss & Corbin, 1990; Walsh & Bartunek, 2011). I analyzed the journal article and textbook data using a content analysis (Krippendorff, 2013) and, where appropriate, also conducted chi square and binomial statistical tests.

This chapter is organized as follows. I first provide information about ethics approval for my dissertation research. Following this, I explain why medical acupuncture is a key empirical setting to study the sustaining of competing categories. I next discuss the research design of the qualitative case study. Then, I provide the details about my data sources and how I analyzed the data. Following this, I discuss the limitations, reliability and validity of the different sets of data.

ETHICS

Ethical approval for the interviews and participant observations was obtained from the School of Business Research Ethics Board at the University of Alberta. Ethical approval was renewed as needed throughout the dissertation

process. All individuals participating in my research were informed that I am a PhD student conducting my dissertation research. I received written consent from each participant interviewed or observed (Appendix 1). All participants were also informed that that they provided consent of their own free will and that they could withdraw their interview data without penalty. No participants withdrew from my study.

RESEARCH DESIGN

In my dissertation, I undertook a qualitative case study to examine the sustaining of competing medical acupuncture categories. Qualitative analysis enabled me to use a naturalistic approach (Hammersley & Atkinson, 2007) when I collected the interview and ethnographic data. The chi-square calculations informed me whether there were statistically significant differences between the sets of professional knowledge developed by the two groups. I used constant comparison techniques to analyze the interview data (Lincoln & Guba, 1985; Strauss & Corbin, 1990). As well, a qualitative approach to data collection and analysis helped me to understand how change occurs at the micro-level (Walsh & Bartunek, 2011). I did this by closely examining the relationship between context, case and individuals (Yin, 2003). That is, is there something about professionals in western health care that made the sustaining of competing categories possible? In addition, using a qualitative case study enables me to conduct an in-depth, thick description (Geertz, 1975) at the micro-level of how western health care professionals sustained the two medical acupuncture categories.

I used the findings from interviews, journal articles and textbooks to understand the sustaining of WMA and TCM-MA in western health care. The journals and textbooks provided me with information about the background and history of WMA and TCM-MA. The interviews provided insight into WMA and TCM-MA at the micro-level. As it can be challenging to generalize the results of a case beyond the narrower phenomena under study (Eisenhardt, 1989; Feagin, Orum & Sjoberg, 1991), I sought to increase the reliability and validity of my

qualitative case study by analyzing multiple data sources, including interviews, journal articles and textbooks.

The strength of a qualitative case lies in the researcher's ability to conduct a detailed study of a phenomenon by providing an in-depth account of a narrowly defined topic (Yin, 2003; Zietsma & Lawrence, 2010). As Yin (2003) suggests, situating an empirical case within a theoretical framework strengthens its generalizability. Hence, I positioned my study within institutional theory. I studied western health care professionals, mainly physicians and physical therapists. Thus, in using a qualitative case study, I aimed to capture insider perspectives, striving to understand how the two groups of professionals shape, utilize and interpret WMA and TCM-MA at the micro-level. As outsiders, researchers may not pick up on nuances, specialized language and that which is taken-for-granted, resulting in "thin descriptions" (Denzin, 1989), difficulty translating language and culture (Phillips, 1960) and, ultimately, under- or over-representation of the phenomenon being studied. For my qualitative case study, I interviewed individuals in different professions who work in different settings (e.g., private clinics, hospitals) and analyzed journal articles and textbooks to gain broader comprehension of medical acupuncture. I also spent over 200 hours conducting ethnographic observations of medical acupuncture professionals in the classroom and the workplace.

DATA

I gathered background information and data from the following sources: ethnographic observations, semi-structured interviews, journal articles and textbooks. To assemble background information and better understand the context of medical acupuncture professionals, I first conducted ethnographic observations in a variety of settings (e.g., hospitals, clinics, university classroom) from September 2007-November 2009. I also interviewed 38 medical acupuncture professionals, 25 from the TCM-MA (Traditional Chinese Medicine medical acupuncture) group and 13 from the WMA (western medical acupuncture) group.

The interviews were my primary source of data. To track the creation and sustaining of WMA and TCM-MA as categories in western health care, I also analyzed 11 textbooks and 6100 journal articles. The data from journal articles and textbooks were used to gain additional insight and background into my research question.

I analyzed interviews, journal articles and textbooks to generate theoretical insights about how competing categories were sustained. Below I first discuss how I conducted ethnographic observations in order to gain insider and background information about medical acupuncture. The process of observing medical acupuncture professionals raised a number of questions which then led me to conduct interviews as well as analyze journal articles and textbooks. Following the information about the ethnographic observations, I detail how the interviews were conducted and as well as how I selected the journal articles and textbooks.

1. Background information: Participant observations. I conducted ethnographic observations of health care professionals to learn more about medical acupuncture. Observing professionals helped me to understand how they sustained competing medical acupuncture categories. Because western health care professionals have generally not been receptive to non-orthodox approaches to health such as acupuncture and because of my experience working in health care, I speculated that an interest in medical acupuncture was unusual. This inspired me to learn more about these western professionals and why they might be interested in non-western approaches to health. During my observations I employed a naturalistic approach which involves observing participants without disturbing the natural flow of events – although it cannot be assumed that a researcher's presence is not disruptive to some degree (Hammersley & Atkinson, 2007; Lincoln & Guba, 1985). This approach helped me to understand the unacknowledged, unknown, unwritten and insider-related aspects of medical acupuncture (Smith, 2007) and also raised questions for further investigation, such as how the competing categories of medical acupuncture have been sustained? I next explain how I became aware of the competing medical

acupuncture categories through observing western health care professionals in two settings: a continuing education course and in the workplace.

I conducted ethnographic observations of two sets of medical acupuncture professionals. During the first set of observations, I spent 192 hours observing 23 western health care professionals in an 8-month continuing education class in medical acupuncture. This medical acupuncture course is rooted in both Traditional Chinese Medicine and western science. I initially selected this course to observe because I wanted to better understand why western-trained professionals would take medical acupuncture training. During this course I learned that some of the western health care professionals enrolled were not really interested in Traditional Chinese Medicine, rather they wanted to learn medical acupuncture from a reputable instructor. In contrast, I also discovered that some professionals already had an interest in Traditional Chinese Medicine before taking the course and had specifically selected this course – instead of other medical acupuncture courses – to learn more about the Traditional Chinese Medicine approach to medical acupuncture. Accordingly, through these observations I learned that some professionals were interested in learning medical acupuncture practices and techniques while others were interested in the history and philosophy of Traditional Chinese Medicine as well as medical acupuncture practices and techniques.

Throughout my observations of the continuing education course, I noticed that individual professionals were interpreting medical acupuncture in different ways; some were incorporating Traditional Chinese Medicine and medical science while others viewed medical acupuncture from a scientific viewpoint. Because I had observed the differences amongst western health care professionals in one continuing education course, I wanted to conduct more observations to investigate if my speculation about the two different groups of professionals extended beyond the course. Hence, I thought that observing more medical acupuncture professionals in their workplace would help me learn more about their different approaches. In addition, I thought that having data from a variety of professionals could potentially enable me to compare and contrast my

observations and theorize about why professionals approached medical acupuncture in different ways (Spradley, 1979).

During the second set of ethnographic observations, I spent another 20 hours observing 5 medical acupuncture professionals who work in hospitals, private practice and clinics. I saw through my observations that some of these professionals used Traditional Chinese Medicine when they practiced medical acupuncture while others viewed medical acupuncture as scientific. Thus, through my additional observations I saw that different professionals had different approaches to medical acupuncture.

During the process of observing the 28 medical acupuncture professionals, the two categories of medical acupuncture became more apparent. I discovered that all of the western health care professionals I had observed were interested in the scientific approach to medical acupuncture but that only some had an interest in Traditional Chinese Medicine. This led me to develop the idea about their being two categories: TCM-MA which incorporates Traditional Chinese Medicine and western science and WMA which incorporates medical science and does not incorporate Traditional Chinese Medicine. When I had completed my ethnographic observations, I began to gather more information about these two categories from the journal articles, textbooks and through interviews. I then analyzed the journal articles and textbooks to determine if the differences between the two groups that I saw in the ethnographic observations could also be found.

2. Journal articles. Scholars can learn about how actors view themselves and their environment through analyzing their discourse (Phillips, Lawrence & Hardy, 2004). All-in all, publishing is a structured process during which many submitted articles are rejected, with a smaller percentage being selected for publication (e.g., during a 2008 talk at the School of Business, University of Alberta, (past) *Administrative Science Quarterly* editor Donald Palmer indicated that approximately 8% of submitted articles are published; Pratt, 2008). Information in journal articles is reviewed by editors and reviewers before it is published. I analyzed journal articles because they provide useful information about WMAs and TCM-MAs. In the journal articles, I was also looking to see

whether there were differences in the knowledge that the two groups of medical acupuncture professionals produced.

Published research is a medium through which health care professionals "communicate" with each other, change practices and publicize medical advancements (Coomarasamy, Gee, Publicover & Khan, 2001). Medicine and science have been foremost in making rapid technological advancements to help quickly disseminate research to professionals (Committee on Electronic Scientific, Technical, and Medical Journal Publishing and its Implications, 2004; Tenopir, King & Bush, 2004). Journals, especially electronic ones, provide a rapid means for health professionals to publish and access current research. Journals provide a way for professionals to not only critique the research of their peers but also exchange ideas about the direction in which health care is heading. In the field of western health care, the publishing of peer-reviewed journal articles became central to the way medicine is currently practiced (Tenopir, King, Clarke, Na & Zhou, 2007). Due to the importance of journals to western health care professionals, I tracked the two medical acupuncture categories through the journal articles to assess if there are differences are between them. The journal article data provides background and historical information about the existence of WMA and TCM-MA in western health care. Through analyzing the articles, I am able to track and document the two medical acupuncture categories. The growth of medical acupuncture can be shown by graphing the number of articles published over time.

Putting together the journal articles. To build the set of 6100 journal articles, I conducted comprehensive searches for medical acupuncture articles in the OVID biomedical databases MEDLINE® and EMBASE® from 1959-2005. I put together the set of articles by searching for variations of the term "medical acupuncture" in both databases (e.g., I searched using the terms "medical adj1 acupunctur*" which retrieves articles where these two words are located within one word of each other). I searched from 1959-2005 since the term "medical acupuncture" was introduced into western health care in 1959. As the searches were conducted in 2006, 2005 was a natural cut-off point. The articles about

medical acupuncture are published in mainstream medical journals such as *Journal of the American Medical Association* and the *British Medical Journal* as well as specialty journals such as *Medical Acupuncture* and *Acupuncture in Medicine*.

The initial number of articles retrieved about medical acupuncture from MEDLINE® and EMBASE® (after removing duplicates) was 11000. These 11000 articles were then exported to an excel file. From this larger data set, I identified 6100 articles about medical acupuncture that are authored by western health care professionals. The other 4900 articles were excluded for one of the following reasons: they are not about medical acupuncture, they are published in journals with non-western titles, they are written in a non-western language or the journals are published in non-western countries such as China, Japan and India. The final set consists of 6100 articles spanning from 1959-2005.

Albeit useful for understanding the general emergence and growth of attention to WMA and TCM-MA, the journal article data left some questions unanswered and raised others. From the journal articles, I collected systematic data to track the existence of WMA and TCM-MA and some of the differences between the knowledge of each category but this data does not help me to answer questions about how these categories were sustained. The information from journal articles is also helpful to track the sustaining of WMA and TCM-MA over time, but these cannot provide insight into the mechanisms underlying their sustaining at the micro-level. While the ethnographic data helped me to understand how different sets of professionals learn and interpret medical acupuncture and the journal articles gave me insight into the differences between the professional knowledge sets of two categories, to help answer the questions about the identity of professionals I conducted interviews. I next discuss the interview data and participants that were interviewed for my dissertation research.

3. Interview data. Interviews are a way to examine the lives and experiences of individuals from their own perspective (e.g., Fontana & Frey, 1994; Spradley, 1979; Van Maanen, 1988). Interviews allow investigators insights into what participants say and do (Fontana & Frey, 1994) and obtain specific

information from respondents (Blee & Taylor, 2002; Nunkoosing, 2005). As a researcher, I utilized interviews to learn about the experiences of medical acupuncture professionals in their own words. The interviews also helped me to find out how individuals make sense of their experiences and work as a western health care professional who also administers medical acupuncture. Conducting interviews made it possible to subjectively understand WMA and TCM-MA from professionals who work in the context of western health care (Schutz, 1967; Seidman, 2006). In keeping with the ethnographic approach, I utilized open-ended questions in the interviews (Fontana & Frey, 2005). Using open-ended questions allowed interviewees to tell me about their experiences and opinions in their own words and for them to be able to elaborate, dis/agree with and otherwise speak to the question from their point of view. This format also enabled me to build on and probe interviewees' responses to my questions. Each interview was transcribed and placed in its own password-protected Word file. All of the interview transcripts have been imported into a password-protected NVivo 8 project. During or after each interview, I recorded my own notes and thoughts in a separate password-protected word file and used these to prepare for other interviews. I next discuss the two sets of interviews that I have conducted.

The two sets of interviews. I conducted the first set of interviews in 2007-8 with a wide variety of individuals including the continuing education course administrators, government officials, acupuncture historians, medical acupuncture professionals, Traditional Chinese Medicine acupuncturists and opponents of acupuncture. These interviews were unstructured and broad as I was trying to obtain general information about medical acupuncture. I asked open-ended questions to encourage participants to speak at length about their experience with medical acupuncture. I asked participants questions about their position, their clinical practice, their patients and their work. I also asked interviewees about how they became involved with medical acupuncture, about their background and why they thought medical acupuncture had been sustained in western health care. While I learned a lot about the politics of acupuncture and how respondents thought about Traditional Chinese Medicine and medical acupuncture, some of

the interviews did not help me to generate understanding about the different categories of medical acupuncture I was seeing in the ethnographic observations. While analyzing this broader set of interviews, I created an interview guide to include questions about identity and the two categories. I then turned my focus to the analysis of the journal articles and textbooks to learn more about WMA and TCM-MA.

Two years later, from 2010-11, I conducted the second set of interviews. Building on what I had learned from the first set of interviews and the analysis of journal articles and textbooks, I decided to focus my interviews on medical acupuncture practitioners since they could help me to better understand the creation and sustaining of the competing categories. I used a semi-structured interview guide (Appendix 2) and asked open-ended questions to encourage participants to talk freely and explore a narrower range of topics in-depth. The questions in the interview guide are divided into four sections: 1. Background, 2. Identity, 3. The two types of medical acupuncture and 4. Patients. I will discuss each of these in order. 1. Background questions asked about their professional history, their practice of medical acupuncture, where they learned medical acupuncture and how they became interested in medical acupuncture. 2. Questions about identity asked professionals their thoughts about their profession, who they are and the role that medical acupuncture plays in their clinical practice as well as their personal life. 3. In the third section, I asked participants for their feedback and thoughts about the "two kinds of medical acupuncture" (i.e., TCM-MA and WMA) I was seeing in my data. 4. As there had been many discussions about patients in the first set of interviews, I asked questions about their patients, including how often they administered medical acupuncture, if their relationship with patients had changed since they learned medical acupuncture and to tell me about their experiences with patients. Based on their responses to questions from the interview guide, I also asked participants other questions (and incorporated some of these questions into the guide where appropriate). I also invited respondents to discuss other topics which had not been brought up during the interview or which they desired to discuss further.

The interviews were conducted in-person, via email and on the telephone. The average interview was one hour, ranging from 40 minutes to over 2 hours. I used an interview guide for the second set of interviews. All but 2 of the 38 interviews have been recorded and transcribed. One participant requested that I not record their interview (but allowed me to write detailed notes) and in one instance the batteries on the digital recorder died at the beginning of the interview. In these two instances, I took extensive notes during the interviews (verbatim where possible) and expanded the notes after the interview had finished. The other 36 interviews have been recorded and transcribed verbatim. A professional transcriber who signed a confidentiality agreement transcribed 33 interviews and I transcribed 3 interviews in order to gain an in-depth familiarity with their content (Seidman, 2006).

Interview participants. In total, I interviewed 38 medical acupuncture professionals; 24 of these are from the TCM-MA group and 14 are from the WMA group. Most respondents self-classified into WMA and TCM-MA when I asked them which group they would put themselves in. Most of the interviews have been with licensed physicians. As high-status actors within the western health care field, physicians are an influential group that are generally resistant to non-western practices such as Traditional Chinese Medicine (Scott et al., 2000). Hence, it is surprizing that some western physicians would be interested in medical acupuncture as well as Traditional Chinese Medicine. Because physicians tend to publish significantly more than other health professionals and have their own websites or public listings (e.g., yellow pages), I have been able to identify more physicians who practice medical acupuncture. Physicians also are more likely to take up leadership roles in local, national and international associations and their contact information is more readily available in these places. Although I attempted to contact three major groups of medical acupuncture practitioners: physicians, physical therapists and dentists, I discovered that physicians are more readily found; consequently, my sample is weighted more heavily towards physicians. Part-way through the second set of interviews I became aware of this potential bias in my data sample and asked interviewees if they could recommend

any physical therapists, occupational therapists or dentists that administer medical acupuncture. Some interviewees put me in touch with physical therapists, a few of whom I was able to interview. I also interviewed 6 physical therapists from the medical acupuncture continuing education course which I observed.

Gaining access to interview participants. For the first set of interviews, I requested interviews with the teaching assistants (TA's) and students from the medical acupuncture educational course in which I conducted participant observation. I then used a snowball technique and asked participants to refer me to colleagues who might be interested in speaking with me (Goodman, 1961; Heckathorn, 1997). Following this, I also emailed a list of medical acupuncture practitioners I had compiled from searching the internet and requested an interview for my doctoral dissertation. Some of this set of medical acupuncture professionals also referred me to their colleagues. In addition, several of my own colleagues who know about my research gave me information to contact other medical acupuncture practitioners.

To find participants for the second set of interviews, I searched the internet. I also examined the authors of journal articles and textbooks and developed a contact list of potential interviewees. I began contacting potential interviewees via email or sent them letters requesting their participation. As I was conducting the second set of interviews, I also employed the snowball technique (Goodman, 1961; Heckathorn, 1997) by asking interviewees if they knew any other medical acupuncture professionals who would be interested in talking with me.

Convenience (or non-probability) sampling is used by researchers to facilitate the recruitment of participants due to their proximity and where a representative sample is not needed (Gillham, 2008). At the beginning of the interview process, I used convenience sampling from the medical acupuncture course I was observing in order to begin building my interview contacts. Since participants had a choice to accept or not accept my request for an interview, convenience sampling was employed throughout the interview process. I also utilized snowball sampling since I asked participants to refer me to their

colleagues and also invited them to pass on my contact information to other medical acupuncture professionals (Goodman, 1961; Heckathorn, 1997).

As the interviews continued and I developed the idea about competing medical acupuncture categories, I then used theoretical sampling to ensure I was actively soliciting participants from both the WMA and TCM-MA groups (Glaser & Strauss, 1967; Locke, 2005). Theoretical sampling is used to focus the data collection process on gathering information from participants that will support the development of theory (Locke, 2001). In my case, theoretical sampling helped me understand the WMA and TCM-MA professionals and highlighted areas which could allow for comparison and contrast of the data from the two groups. Based on the numbers in each group, I tailored my requests and sought to increase the number of WMA interviews at the later stages of the interview process.

4. Textbooks. I chose to analyze textbooks because these help me to understand how professionals have interpreted and learned medical acupuncture in different ways. I selected 11 medical acupuncture textbooks (Aung & Chen, 2007; Ernst & White, 1999; Filshie & White, 1998; Helms, 1995; Lewith, 1982; Mann, 1992, 2000; Omura, 2003; Ulett, 1992; Warren, 1976; White, Cummings & Filshie, 2008) based on three criteria: 1. written by a western health care professional (e.g., physician, dentist), 2. included a table of contents and index (to facilitate analysis) and 3. local availability (i.e., available through the University of Alberta Library). Four of the textbooks have also been endorsed by medical acupuncture associations and/or used in medical acupuncture educational courses (Aung & Chen, 2007; Filshie & White, 1998; Helms, 1995; White, Cummings & Filshie, 2008). Consequently these four textbooks are more widely distributed and are therefore likely to be utilized by more professionals.

Classification of medical acupuncture textbooks. The textbooks were classified according to whether they are written from a TCM-MA or WMA perspective. Another PhD student independently classified the textbooks according to the criteria below. Any discrepancies between the PhD student and me about which category a textbook is classified into have been discussed and resolved. The TCM-MA textbooks discuss Chinese philosophy and theory as well

as western science. TCM-MA textbooks also discuss more Traditional Chinese Medicine techniques (e.g., needling, herbs, Traditional Chinese Medicine diagnosis, moxibustion) than do WMA textbooks. TCM-MA textbooks tend to cite research less often, instead emphasizing the history, philosophy and techniques associated with medical acupuncture. The 5 TCM-MA textbooks are: Aung & Chen, 2007; Helms, 1995; Lewith, 1982; Mann, 1992; and Omura, 2003. WMA textbooks focused more on needling and integrate information about western inventions such as laser therapy and transcutaneous electrical nerve stimulation. Western medical acupuncture textbooks tend to portray Traditional Chinese Medicine as historical, outdated or non-essential (e.g., White, Cummings & Filshie, 2008) and some WMA textbooks do not discuss Traditional Chinese Medicine at all. WMA textbooks also emphasize scientific explanations of acupuncture (e.g., neuronal, anatomical, musculo-skeletal) and are more likely to reference western research evidence (e.g., randomized controlled trials, systematic reviews). The six medical acupuncture textbooks analyzed are: Ernst & White, 1999; Filshie & White, 1998; Mann, 2000; Ulett, 1992; Warren, 1976 and White, Cummings & Filshie, 2008.

DATA ANALYSIS

I analyzed three sources of data, interviews, journal articles and textbooks, using a mixed-methods approach. The interviews are my primary data source and I used the journal articles and textbooks to provide historical and background information about the two categories. These three data sources help me to better understand the sustaining of Traditional Chinese Medicine medical acupuncture (TCM-MA) and western medical acupuncture (WMA). Below, I indicate how I analyzed each source of data to help answer my research question: How are competing categories sustained? For the interview data, I used the management approach to grounded theory to help me develop "empirically grounded theory" and also to link empirical processes with "formal theory" (Locke, 2005: 34-5; Miles & Huberman, 1994; Suddaby, 2006). Since my case is centered around

interview data, a grounded theory approach to this analysis was fitting. In management and other disciplines, a grounded theory method is used to build theory through examining what people are thinking and doing in complex social situations (Strauss & Corbin, 1998; Suddaby, 2006) which also melds nicely with how I approached my research by conducting interviews and ethnographic observations. I conducted a content analysis of the journal articles and textbooks.

Interview analysis. I analyzed the 38 interviews in NVivo8 using inductive analysis and constant comparison consistent with a grounded theory approach (Glaser & Strauss, 1967; Locke, 2005; Suddaby, 2006). Using grounded theory enables me "to get at *emic* points-of-view, or insider meanings, that are attached to social phenomena" (Oliver, Serovich & Mason, 2005: 5). To get at these meanings, I employed an iterative approach by going back and forth between the data and theory throughout the analysis and theoretically sampling the categories of analysis that were emerging (Miles & Huberman, 1994; Strauss & Corbin, 1990).

I first created folders for the two sets of interviewees (TCM-MA and WMAs) so that I could analyze the data separately. I then developed codes for the content of six key interviews in NVivo 8, 3 from the WMAs and 3 from the TCM-MAs (Table 1). To do this, I open-coded (Locke, 2001) segments in the 6 key interviews about how interviewees view themselves and medical acupuncture. I further used a category card approach (Turner, 1981) to synthesize and summarize the data from the open-coded segments. The category card codes were then used to develop preliminary first-order codes. Following Miles and Huberman (1994), I recorded the emerging first-order codes (Gioia & Chittipeddi, 1991) and then looked for common accounts amongst the 6 interviews from WMAs and TCM-MAs. I also compared codes across the two groups and began to develop contrasting dimensions between the first-order codes for each group. I did this to learn about the different types of answers from participants in their own words. This also helped me to get a better sense of the provisional first-order codes. I followed this same process to code the other 32 interviews, revising and refining the first-order codes as necessary. As well, I employed theoretical

sampling to develop and test the first-order codes (Glaser & Strauss, 1967; Locke, 2001) by searching the interviews and looking for additional data that would support or refute the codes as I was developing them.

As I went through the coding process, I compared and contrasted the first-order codes for each group and also between the WMAs and TCM-MAs. I marked interview segments and themes that contradicted, supported or helped to clarify my emerging theoretical argument. To improve and revise the first-order codes, I examined the similarities and differences between the two groups (Eisenhardt, 1989; Yin, 2003). While the first-order and category card coding was occurring, I drew a diagram of the contrasting dimensions of the first-order codes for each group. In this diagram, I began to develop my ideas about the preliminary micro-processes as well as the broader theoretical dimensions from the data I was analyzing for each group. To build the theoretical dimensions I also consulted theory, moving back and forth between the data and theory. As I was reading theory, I saw that the literature about categories, institutional logics, practices and identity seemed to fit with what I was seeing in the data analysis. As I moved between the data and theory and continued to code the interviews, I tested, refined and achieved theoretical saturation for the first-order codes, micro-processes and theoretical dimensions, altering or removing them as necessary (Spradley, 1979). The micro-processes and theoretical dimensions I developed best described the sustaining of competing categories at the micro-level.

Once I mapped out a preliminary diagram of first-order codes, micro-processes and theoretical dimensions, I then created tables of quotes for each of the first order codes. I did this so that the data could be grouped thematically and so that I could illustrate the contrasting dimensions between the two groups. Throughout the coding process for the interviews, I focused on data and categories that helped me answer my research question: How are competing categories sustained?

Table 1. Interview coding process

Interviewee	Text segment	Category card	First-order concept	Micro-process	Theoretical dimension
WMA 21	And these things about the chi sensation radiating here and there, for me of course it's when you hit nerves or come close to nerves and so on. And so… the chi sensation, Chinese way, energy … western thinking, nerve sensation.	chi sensation, Chinese way western thinking, nerve sensation	Rejecting the TCM meaning system and describing medical acupuncture with the western science meaning system	Describing medical acupuncture with different meaning systems	(Re)Assembling meaning systems
WMA 27	the [scientific] medical acupuncture approach began in 1985, '86. 'Til then, all acupuncture teachers and schools were traditional. From 1985 then there was a movement [towards learning] the biological action for acupuncture and neural theories about acupuncture. There were big discussions about endorphins, about cortisol, about the biological aspect.	[scientific] acupuncture began in 1985, acupuncture teachers and schools were traditional [learning] the biological action, neural theories, endorphins, cortisol, the biological aspect	Learning and teaching the western approach to medical acupuncture	Learning and teaching different approaches	(Re)Assembling meaning systems

Journal article analysis. I conducted a content analysis (Krippendorff, 2013) of the 6100 medical acupuncture articles in order to track trends and develop insight into medical acupuncture in western health care from 1959-2005. I first classified each article in excel by WMA or TCM-MA (Table 1). To help me determine if an article was WMA or TCM-MA, I used a list of keywords (i.e., institutional vocabulary) I developed for both categories from analyzing the 11 textbooks (see below for details about the institutional vocabulary analysis). I then read the abstract and title of each article and looked for the presence of this

institutional vocabulary to code each article as TCM-MA or WMA. Where appropriate, I added, enhanced and deleted keywords for each group. For instance, when coding the journal articles I discovered that the term qi (energy) was also spelled as chhi in the early 1970s. I had already discovered two other spellings, chi and c'hi, but I had not come across chhi when analyzing the vocabulary in the textbooks. So I added the words chhi and c'hi to the list of TCM-MA institutional vocabulary for qi. My classification of the journal articles was double-checked by another PhD student who independently coded a random sample of 200 journal articles. Cohen's Kappa was used to calculate our interrater agreement of 0.8 (Fleiss, 1981).

I also coded the name of the journal each article is published in and then classified each journal as a "medical journal" or a "Traditional Chinese Medicine journal." I obtained the information about journal type (medical or Traditional Chinese Medicine) by looking at its online record in MEDLINE. For example, a journal with the title *Archives of Internal Medicine,* published by the American Medical Association in the United States and has a subject heading "Medicine" was coded as "medical." In MEDLINE, the subject heading "medical" is defined as "The art and science of studying, performing research on, preventing, diagnosing, and treating disease, as well as the maintenance of health." A journal with the title *BMC Complementary and Alternative Medicine,* published in London and having a subject heading "Complementary Therapies" was classified as Traditional Chinese Medicine. MEDLINE defines "Complementary Therapies" as "Therapeutic practices which are not currently considered an integral part of conventional allopathic medical practice." Tracking the information at the article and journal level helped me understand where WMA and TCM-MA articles were published (e.g., most WMA articles have been published in medical journals, not Traditional Chinese Medicine journals).

Table 2. Coding of journal articles

Date	Article Title	Abstract	TCM -MA	WMA	Medical journal	TCM journal	Journal Name
2005	Management of xerostomia related to radiotherapy for head and neck cancer	Xerostomia is a permanent and devastating sequela of head and neck irradiation, and its consequences are numerous. Pharmaceutical therapy attempts to preserve or salvage salivary gland function through systemic administration of various protective compounds, most commonly amifostine (Ethyol) or pilocarpine. When these agents are ineffective or the side effects too bothersome, patients often resort to palliative care, for example, with tap water, saline, bicarbonate solutions, mouthwashes, or saliva substitutes. A promising surgical option is the Seikaly-Jha procedure, a method of preserving a single submandibular gland by surgically transferring it to the submental space before radiotherapy. Improved radiation techniques, including intensity-modulated radiotherapy and tomotherapy, allow more selective delivery of radiation to defined targets in the head and neck, preserving normal tissue and the salivary glands. Acupuncture may be another option for patients with xerostomia. All of these therapies need to be further studied to establish the most effective protocol to present to patients before radiotherapy has begun	0	1	1	0	Oncology (Williston Park)
2005	Advancing acupuncture research	Since the early 1970s, acupuncture has been the subject of multiple animal experiments and randomized clinical trials. Our understanding of acupuncture from both the clinical and mechanistic perspectives has, as a result, grown tremendously. Yet the final word on acupuncture as a therapy remains mixed, largely due to the contradictory nature of the evidence. With some exception, what clinical conditions would benefit and how acupuncture physiologically operates remains unclear. The impediment to progress is found in three disjunctions in acupuncture research: (1) the biomedical need to standardize treatments creates uncertainty about whether we are studying acupuncture appropriately; (2) the variability in acupuncture styles creates ambiguity about whether we are studying the right style; and (3) the discrepancy between animal and human studies creates questions about whether we truly understand the underlying mechanism responsible for acupuncture's therapeutic effect. We propose that these disjunctions are best addressed with the use of	0	1	0	1	Alternative Therapies in Health and Medicine

		'manualized' protocols in clinical trials that are linked with mechanistic studies. Through this approach, we can create a healthy dialogue between the medical and acupuncture communities and recognize the unique physiologic properties that may be found in each acupuncture style. To illustrate how this proposal may fundamentally change acupuncture research, we present diabetic neuropathy as a particularly interesting model because of its complex heterogeneous pathophysiology					

To better understand if there were differences in the way that knowledge was produced between the two groups, I coded the study type (e.g., review, clinical trial) and topic (e.g., acupressure) of each journal article. The study type was obtained from the MEDLINE record of each article. I combined the study type data into 4 key groups: Clinical trial, Historical article, Review and Other. These 4 groups were based on the hierarchical way that health professionals think about medical research, with systematic reviews and clinical trials being regarded as more rigorous than reviews (see www.cebm.net/index.aspx?o=1025). I chose these 4 categories because I wanted to test if there was a difference between the professional knowledge that each group developed. "Clinical trial" represents the gold standard for medical research study types and includes clinical trials, meta-analysis and guidelines. I analyzed the study type "Historical article" since through my ethnographic observations and I learned that TCM-MAs were very interested in the history of history Traditional Chinese Medicine. I wanted to test if there was a statistically significant difference between TCM-MAs and WMAs for publishing "Historical articles." The category "Review" study types that health professionals consider to be lower-status such as review articles and case reports. "Other" includes additional types of articles that did not fit into the other categories such as bibliography.

I also coded a topic for each journal article. I then aggregated similar codes into six broader groups: Credibility and acceptance (e.g., surveys of physician acceptance of acupuncture), Disease or condition (e.g., articles discussing asthma or diabetes), Health care & system (e.g., articles about health in

general or the health care system), Clinical practice and profession (e.g., articles pertaining to the practice of medicine or health care professions), Traditional Chinese Medicine and alternative medicine (e.g., articles discussing the history or philosophy of Traditional Chinese Medicine) and Other (e.g., articles with information about electrical currents for electroacupuncture). As an example, I aggregated articles coded with the topic "acupressure" into the broader group "Traditional Chinese Medicine and alternative medicine." To understand the differences between the study types and topics that WMAs and TCM-MAs published, I calculated the chi square to see if the percentage of the study types and topics published by each group were statistically different. I developed figures and tables to display the analysis of the study types and topics for each group. Where appropriate, I also conducted a binomial statistical analysis of the data. These analyses helped me assess the different topics that both groups have discussed in journal articles as well as to better understand their different approaches to knowledge.

Textbook analysis. I qualitatively analyzed the content of eleven medical acupuncture textbooks authored by medical acupuncture professionals (Elo & Kyngäs, 2008; Hsieh & Shannon, 2005). The 11 textbooks I analyzed were: Aung & Chen, 2007; Ernst & White, 1999; Filshie & White, 1998; Helms, 1995; Lewith, 1982; Mann, 1992, 2000; Omura, 2003; Ulett, 1992; Warren, 1976; White, Cummings & Filshie, 2008. I primarily used the textbooks to develop keywords for the journal article analysis and to gather background information about the two types of medical acupuncture. I developed a list of key words and phrases (i.e., institutional vocabulary, Suddaby & Greenwood, 2005) for both categories from analyzing the indices and tables of contents of the 6 WMA and 5 TCM-MA textbooks. For instance, I first developed a general list of Traditional Chinese Medicine terms in excel from reading the index and the table of contents of the TCM-MA textbooks. I then counted the number of mentions of the keywords (e.g., traditional, five element, meridian, China) in the index of each of the 5 Traditional Chinese Medicine textbooks. I completed this process for both

the WMA and TCM-MA textbooks and developed a list of core institutional vocabulary that was frequently used by each group.

I also compiled a list of 40 Traditional Chinese Medicine and medical techniques from analyzing the index and table of contents of the 6 WMA and 5 TCM-MA textbooks. I further classified these techniques as Traditional Chinese Medicine or medical by reading about their origins in the textbooks. If none of the textbooks had this information, I looked up the technique on the internet to determine if it had been created in China or the west. For example, auricular acupuncture (medical technique) was created by a physician in France and needling was created in China (Traditional Chinese Medicine technique). I developed this from analyzing the indices of the 11 textbooks. I asked interviewees if they used these techniques and used this information to better understand the how the categories of WMA and TCM-MA are performed.

LIMITATIONS OF THE RESEARCH DESIGN AND DATA

Case study and qualitative research limitations. It can be challenging to generalize the results of a case beyond the narrower phenomena under study (Eisenhardt, 1989; Feagin, Orum & Sjoberg, 1991). Common problems arising from case research are understanding when theoretical saturation was reached (Glaser & Strauss, 1967) and being able to situate more localized, idiosyncratic and/or contextualized findings within the larger landscape (Eisenhardt, 1989). More generally, qualitative, iterative research is used to generate rich descriptions of phenomena that are based upon observations and information from insiders who have assumptions and take certain things for granted (Richards & Morse, 2013). As well, researcher bias is a concern in qualitative studies since the researcher designs the questions, takes notes during observations and then puts the data together to tell a convincing story (Chenail, 2011).

Interview limitations. Because interviewers rely on what people tell them, depending on the relationship between interviewer and participant, what is told may be highly selective, ambiguous and biased (Fontana & Frey, 1994;

Williams, 1964). Scholars can also influence interviewee responses by, for instance, asking leading questions or attempting to manipulate informants or their responses (Fontana & Frey, 2005). And, interviewers may not be able to distinguish what is central from that which is less important, thus missing opportunities to follow-up on particular comments. There can also be unexpected time restrictions that come up during interviews. For instance, at the beginning of one interview, the participant told me that they had 30 minutes to talk when I had requested an hour, making having an in-depth discussion more challenging. Hence, I strived to keep these potential problems and biases in mind by requesting clarification from participants and interviewing numerous professionals. As well, the study participants that I interviewed have been the result of both convenience and theoretical sampling. By interviewing internationally-located medical acupuncture professionals with an assortment of backgrounds and different medical acupuncture training, I sought to mitigate potential source and response biases.

Journal article and textbook limitations. There are several limitations to analyzing articles and textbooks. Data from articles and textbooks may not capture the entire landscape of a phenomenon, only that information which is deemed acceptable enough to make it through the publication and editing processes. Scholars need to be mindful that many submitted articles are never published and that there is a high likelihood that more information about a phenomenon may be available in other formats (e.g., websites, brochures, conversations, interviews, meetings, archival material); this grey literature may tell a different story or enhance the one being told.

RELIABILITY AND VALIDITY

To help ensure reliability (i.e., reproducibility) in my research procedures, I detailed all of the steps that have been taken in the collection and analysis of the data. To ensure long-term retrieval, all of the data was securely stored and labeled according to the same scheme. As per the School of Business Research Ethics

Board requirements, all electronic files and documents were password protected. I sought transparency in my explanation of how the methods and methodologies have been employed in my research. Because undertaking a qualitative case study approach may not result in findings that are generalizable beyond the empirical setting, I utilized multiple sources of data to help understand the case from different perspectives. I also interviewed multiple persons to help increase the within-group validity.

To help ensure validity in my investigation, I correlated the results from each data set and sought out explanations for discrepancies and unusual occurrences. I also used multiple data sources to inform my analysis and conclusions. When collecting observational and interview data, I requested clarification on items I did not understand (either during or after the interview) and also (re)probed subjects as I gained insights from the interviews. In addition, I tested my ideas on some medical acupuncture professionals who provided feedback and additional insights into this phenomenon (Miles & Huberman, 1994). I also spent extensive time in the field learning about medical acupuncture and engaging with actors which can also reinforce the validity of my research outcomes (Creswell & Miller, 2000). Finally, by providing a thick description (Geertz, 1975) and relying on multiple sources of data, I aimed to reduce bias in my explanation of how competing categories can be sustained.

CONCLUSION

In my study, I analyzed and compared information from the interviews I conducted with both groups of medical acupuncture professionals. I also analyzed the journal and textbook to develop a more complete picture of the development of TCM-MA and WMA. Analyzing different data about medical acupuncture enabled me to acquire a more rounded representation of how competing medical acupuncture categories have been sustained.

CHAPTER 4
FINDINGS

In this chapter, I present the results of my findings from the analysis of the 38 interviews. The 6100 journal articles and 11 textbooks provide valuable background information to support my initial hunches about there being two competing medical acupuncture categories. In the introduction, I discussed the logics of western science and Traditional Chinese Medicine to provide background information about my empirical setting. In the findings, I discuss the existence of Traditional Chinese Medicine medical acupuncture (TCM-MA) and western medical acupuncture (WMA). I then discuss the findings about the sustaining of medical acupuncture. Where appropriate, I supplement the interview analysis with information from the textbooks and journal articles. Following the analysis, I discuss the general findings from all three data sources. The research question guiding the analysis is: How are competing categories sustained?

A COMPARISON OF WMA AND TCM-MA

Through analyzing the journal articles and textbooks, I discovered that the different ways of performing and experiencing medical acupuncture that I saw in the ethnographic observations also had deeper historical roots. In reading broadly about medical acupuncture, I discovered that the scientific approach of WMA was constructed in 1959 by Mann who founded the Medical Acupuncture Society while the way of performing that incorporated Traditional Chinese Medicine and medical science, TCM-MA, was created in the early 1960s shortly before the United States re-established relations with China. I analyzed the journal articles to track the existence of WMA and TCM-MA. My analysis found that journal articles from both of these categories were published in both western science and Traditional Chinese Medicine journals. This signified that these two competing categories have been sustained as separate yet overlapping categories. Figure 1 illustrates that WMAs are more prolific publishers, having produced over two-

thirds of the 6100 journal articles. Figure 2 and Table 3 demonstrate that there is significantly greater general publishing activities by WMA in both the medical journals ($p<0.001$) and the Traditional Chinese Medicine journals ($p<0.001$) across the decades. This indicates that both WMA and TCM-MA articles were accepted for publication in mainstream medical journals and Traditional Chinese Medicine journals by peer reviewers and editors.

Figure 1. WMA and TCM-MA journal articles published by year

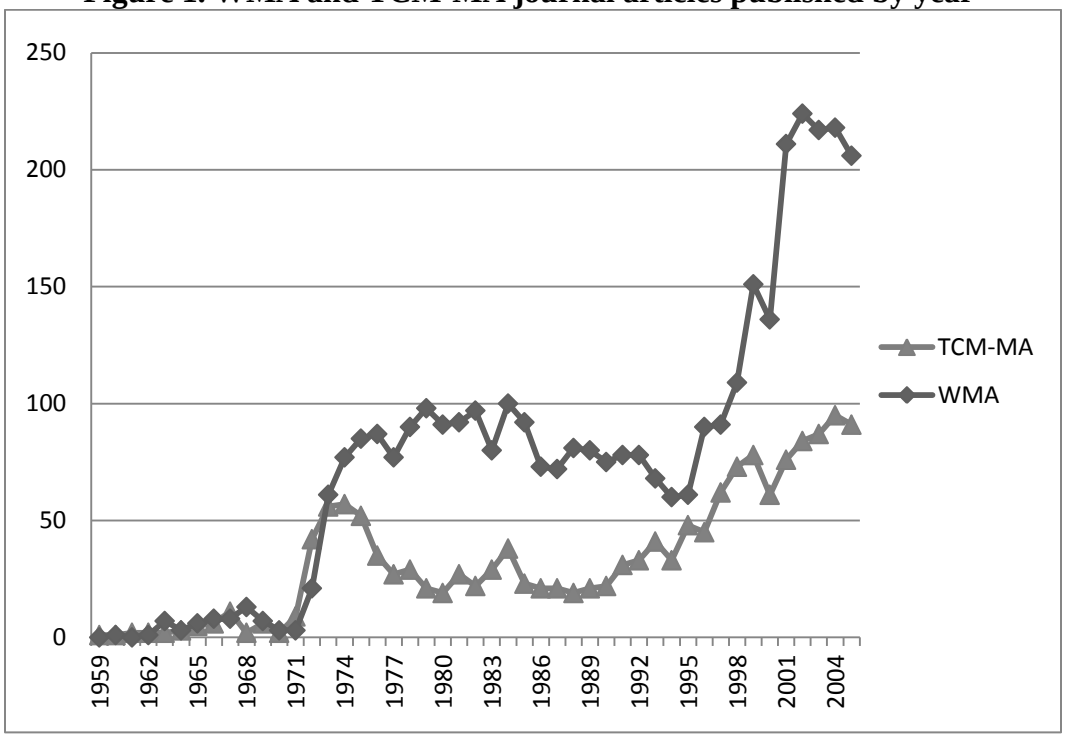


Figure 2. WMA and TCM-MA journal articles published in medical and Traditional Chinese Medicine journals

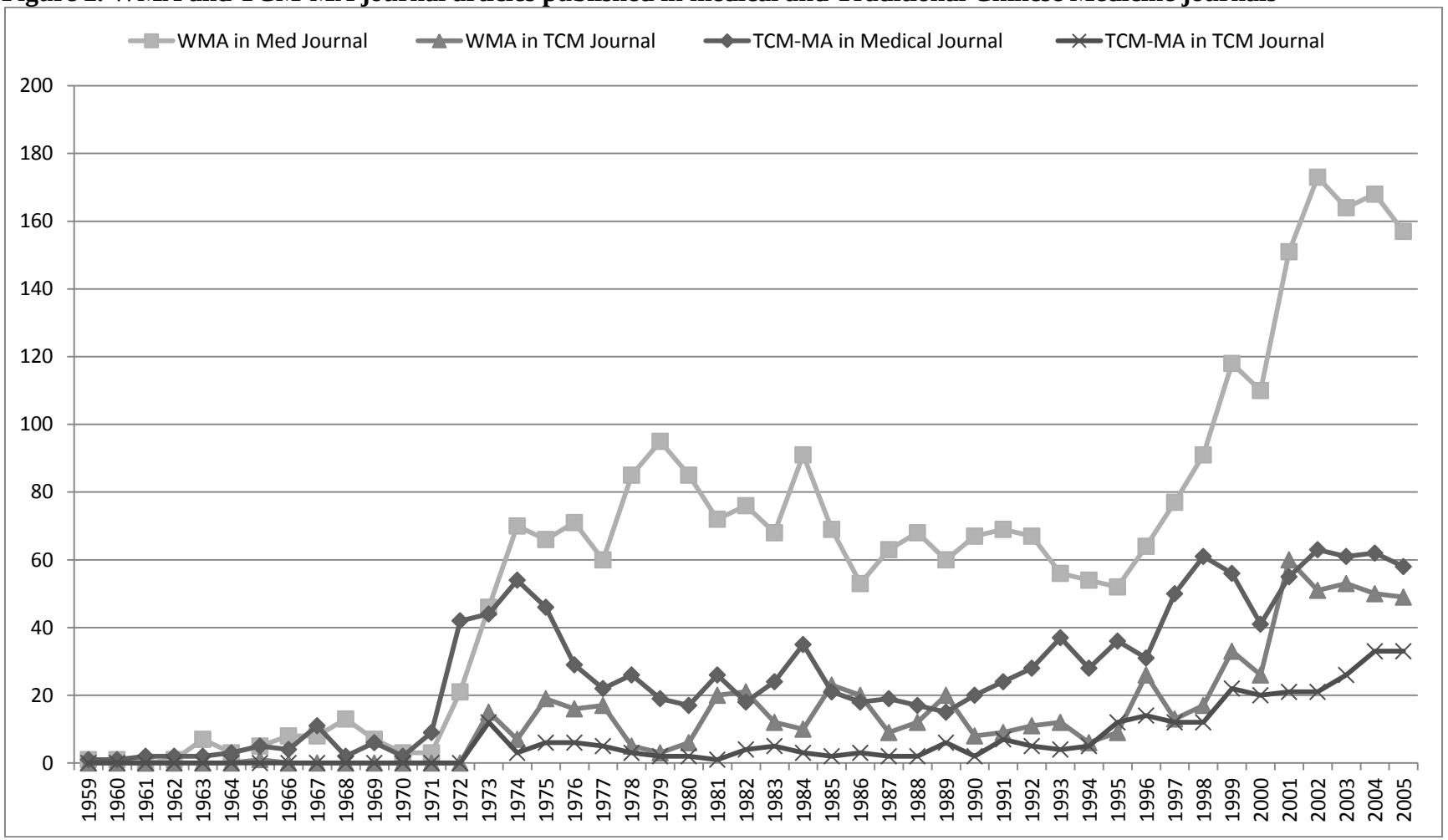


Table 3. WMA and TCM-MA articles in medical and Traditional Chinese Medicine journals**

	Medical journal: TCM-MA articles (%)	Medical journal: WMA articles (%)	x^2 test (p-value)	TCM journal: TCM-MA articles (%)	TCM journal: WMA articles (%)	x^2 test (p-value)
1959-69#	—	—	—	—	—	—
1970-9	31.1	55.8	–	4.0	8.8	—
1980-9	19.1	64.2	–	2.7	13.9	—
1990-9	28.0	54.0	–	7.2	10.9	—
2000-5	19.9	54.1	< .001*	10.9	16.9	< .001*

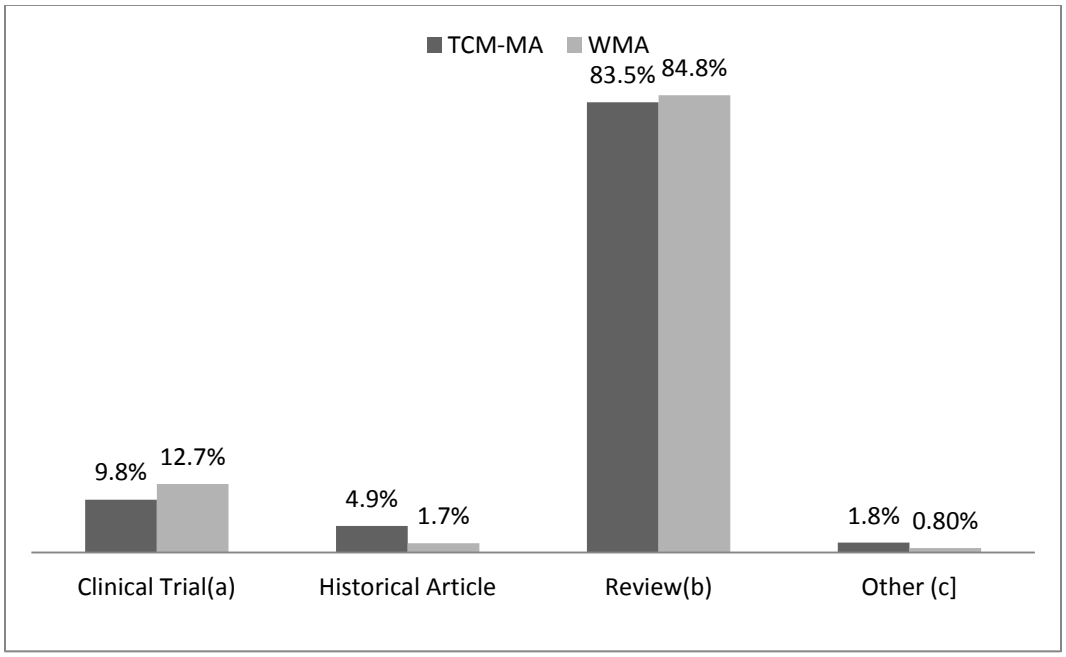
The data for 1959-69 was not included in the chi-square test because some cells contained numbers below 5
* $p < .05$
** Each percentage is the percent of articles published in that decade by category and journal type.

I also examined the journal articles to better understand the different ways each group developed their professional knowledge. To do this, I coded the study type and topic of each article that TCM-MAs and WMAs published. I first discuss the analysis of study type. I analyzed the study type of each journal article within the context of how research is perceived in the western health care field. That is, medical professionals have come up with a list of research study types grouped by their degree of bias (www.cebm.net/index.aspx?o=1025). For instance, clinical trials, guidelines and meta-analyses are considered by most rigorous types of research and are the gold standard of medical research while case reports and editorials are regarded as less rigorous. As a whole, medical professionals advocate for gold standard research because these study types are regarded as highly rigorous since there is less room for bias. In comparison, case reports and editorials are viewed as being more prone to bias than are gold standard research methods. This organization of study types strongly influences how health professionals think about research.

In general, WMAs published 74% of the clinical trial and meta-analysis in the journal articles. Figures 4 and 5 as well as Table 4 also show that WMAs conduct more gold standard medical research (i.e., clinical trial and meta-analysis) than do TCM-MAs (12.7% vs. 9.8%, $p < .002$). In addition, there is a

statistical difference between the two groups for historical articles, with TCM-MAs publishing a higher proportion (4.9% vs. 1.7%, $p < .001$). In the interviews, TCM-MAs told me they are interested in the history of Traditional Chinese Medicine and the analysis of the journal articles shows that they also published more historical articles. There is no statistical difference between the publishing of review articles for WMAs and TCM-MAs. With the exception of review articles, there is a statistical difference between the two groups with respect to the types of studies they published.

Figure 3. Study types of WMA and TCM-MA journal articles



(a) Includes clinical trial, guideline, meta-analysis, randomized controlled trial, and systematic review.
(b) Includes biography, case report, conference, editorial, evaluation study, interview, letter, news and newspaper article.
(c) Includes address, bibliography, corrected and republished article, directory, duplicate publication, lecture and legal case.

Figure 4. Study types published by WMAs and TCM-MAs by year

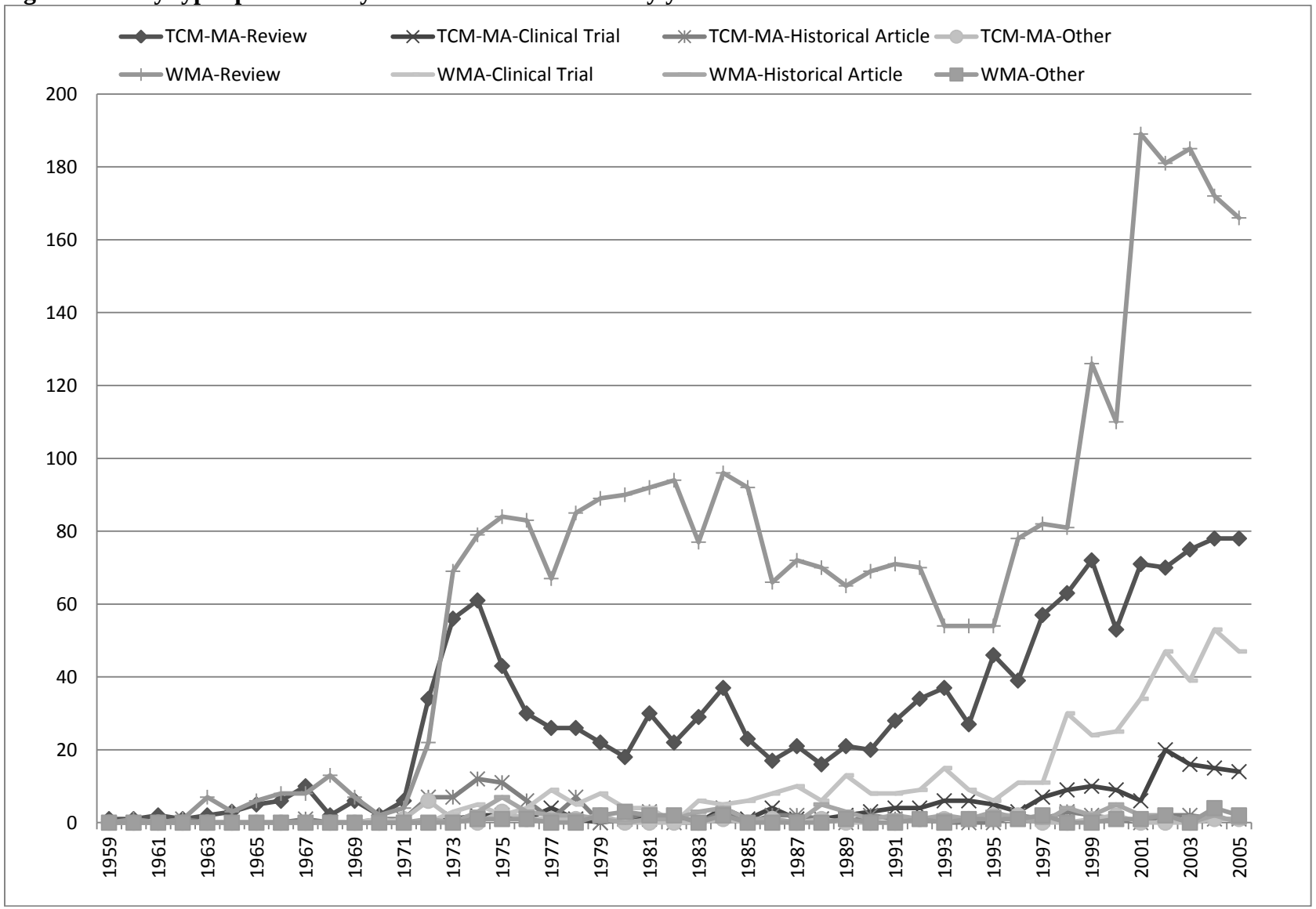


Table 4. Study types of WMA and TCM-MA journal articles**

	Clinical Trial & Meta-analysis (%)	Historical Article (%)	Review (%)	Other[a] (%)
TCM-MA	9.8	4.9	83.5	1.8
WMA	12.7	1.7	84.8	.8
x^2 test (p-value)	.002*	<.001*	.2	<.001*

[a] Includes Addresses, Bibliography, Corrected and Republished Article, Directory, Duplicate Publication, Lectures, Legal Cases

* $p < .05$

** Each percentage is the percent of articles published in that decade by category and journal type.

I also analyzed the content of WMA and TCM-MA publications by coding each journal article for its topic (e.g., anemia, alternative medicine). I aggregated these topics into broader categories (Table 5). The chi-square analysis shows there are significant differences between most WMA and TCM-MA journal article topics except their interest in health care and "other" more general articles. Topics that TCM-MAs have been more concerned about include credibility and acceptance of medical acupuncture (10.3% vs. 1.8%, $p < .001$) as well as clinical practice and professional issues (10.2% vs. 3.7%, $p < .001$). As a result of their interest in alternative medicine in general TCM-MAs have published significantly more of the articles in this area (27% vs. 4.9%, $p < .001$). WMAs have published significantly more journal articles about diseases and conditions (76.1% vs. 39.1%, $p < .001$). This analysis provides further support that WMAs and TCM-MAs produced different knowledge by discussing different topics and publishing different study types in the journal articles.

Table 5. Topics of WMA and TCM-MA journal articles**

	Credibility and acceptance (%)	Disease or condition (%)	Health care & system (%)	Clinical practice and professional issues (%)	Traditional Chinese Medicine and alternative medicine (%)	Other[a] (%)
TCM-MA	10.3	39.1	2.8	10.2	27	10.6
WMA	1.8	76.1	2.7	3.7	4.9	10.9
x^2 test (p-value)	<.001*	<.001*	.8	<.001*	<.001*	.75

[a] Includes topics that did not fall into the other 5 categories.
* $p < .05$
** Each percentage is the percent of articles published in that decade by category and journal type.

When comparing WMA and TCM-MA, I found that there are statistically significant differences between the topics and study types each group published in the journal articles. In particular, my results show that WMAs published the majority of gold standard clinical trial research about medical acupuncture and focus upon understanding diseases and conditions. TCM-MAs focused their publishing in the areas of clinical practice, credibility and acceptance of medical acupuncture and historical articles. This shows that WMAs and TCM-MAs developed their professional knowledge about medical acupuncture in different ways.

THE SUSTAINING OF TRADITIONAL CHINESE MEDICINE MEDICAL ACUPUNCTURE AND WESTERN MEDICAL ACUPUNCTURE IN WESTERN HEALTH CARE

I analyzed the interviews to understand the sustaining of Traditional Chinese Medicine medical acupuncture (TCM-MA) and western medical acupuncture (WMA). In 2007-8 and 2010-11, I conducted 38 semi-structured interviews with medical acupuncture practitioners, mostly physicians and physical therapists. During these interviews I asked participants their opinion about the two groups I was seeing in my observations. I also asked the interviewees if they

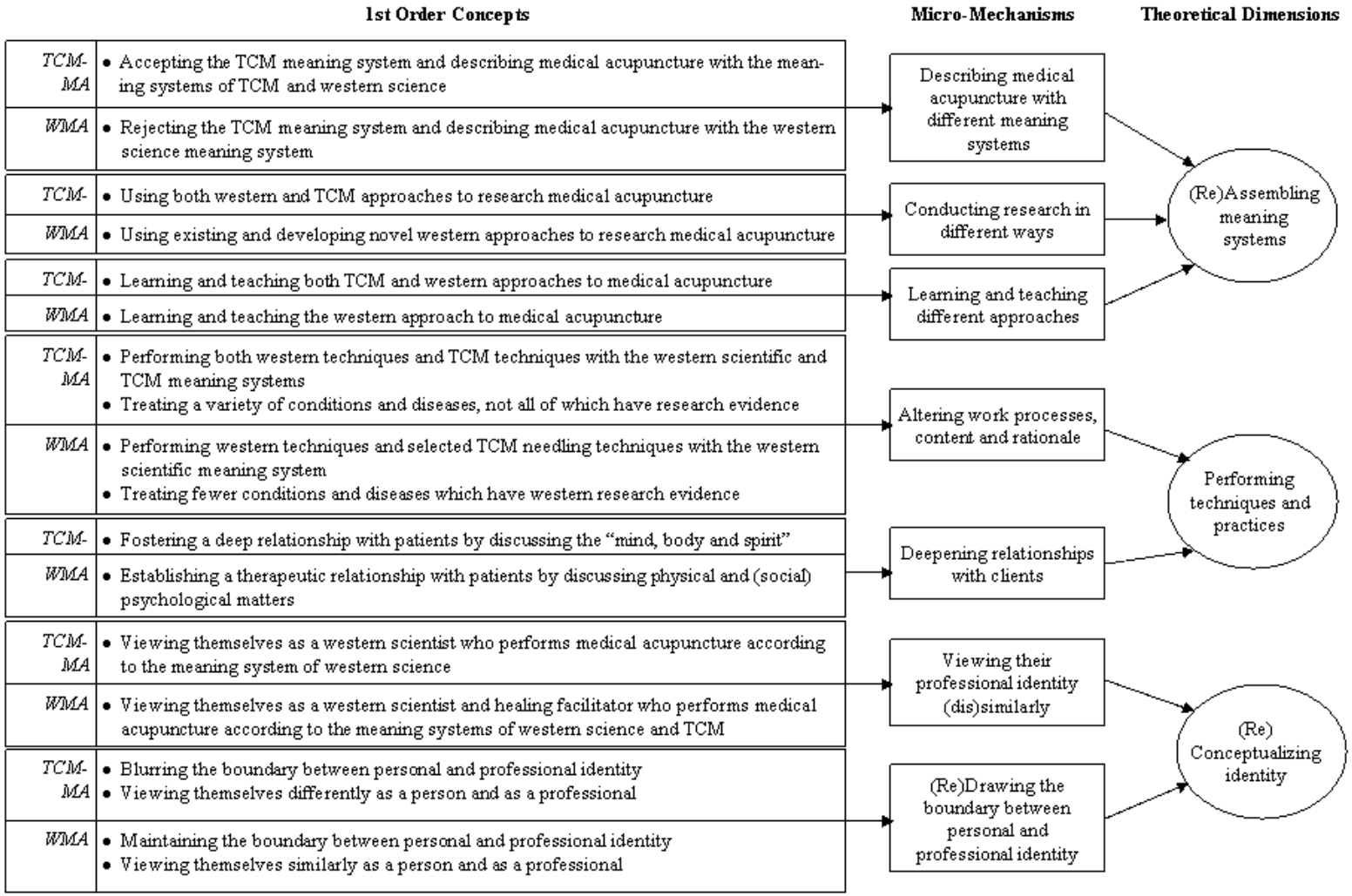
could classify themselves into one or the other. One participant proposed that I utilize three groups according to how much time they devoted to medical acupuncture but the other interviewees did not agree with this characterization. Almost all of the interviewees agreed with my interpretation and saw themselves as fitting into one of the two categories: 14 participants self-classified as a WMA and 24 self-classified as a TCM-MA. The characteristics of the two groups are displayed in Table 1. All of the interviewees are western educated and accredited professionals who have been trained and socialized as western health care providers. The 14 WMA's are distributed fairly equally through early, mid and late/retired career stages while all but 1 of the 24 TCM-MA's interviewed are in their mid- to late career or retired.

Table 6. Characteristics of WMAs and TCM-MAs

	Gender	**Stage of Career**	**Profession**
Western Medical Acupuncture Practitioners (n= 14)	Female: 8 Male: 6	Early career: 4 Mid-career: 6 Late career/retired: 4	Physician: 8 Physical therapist: 5 Nurse: 1
Traditional Chinese Medicine Medical Acupuncture Practitioners (n=24)	Male: 14 Female: 10	Early career: 1 Mid-career: 14 Late career/retired: 9	Physician: 18 Physical therapist: 6

In general, the WMAs and TCM-MAs told me that they think about and administer medical acupuncture in different ways as well as see themselves differently. The interview data shows that WMAs and TCM-MAs use meaning systems, practices and techniques in different ways in their work.

Figure 5. Overview of findings



THE MICRO-PROCESSES THAT SUSTAIN WMA AND TCM-MA

To portray the differences between the two groups that I found through analyzing the data, I developed three theoretical dimensions: *(Re)Assembling meaning systems*, *Performing techniques and practices* and *(Re)Conceptualizing identity* (Figure 5). Together, the three theoretical dimensions best explain the sustaining of competing categories. Based upon the results of my analysis, I highlight the general micro-processes that best represent the processes underlying each theoretical dimension. I next discuss each of the three theoretical dimensions and their associated micro-processes in turn.

1. (Re)Assembling Meaning Systems

a. Describing medical acupuncture with different meaning systems. When I asked interviewees to share their perspective about medical acupuncture, they often told me about their basic beliefs. They shared their stories about how they became involved with providing medical acupuncture. This led to a discussion about the underlying beliefs they held about their work as a western health care professional. Of interest is that each group described medical acupuncture using different words and language. WMAs told me they thought about medical acupuncture from a western scientific point of view and preferred to use scientific vocabulary to discuss medical acupuncture. Alternatively, TCM-MAs talked about bringing together the scientific foundation of western medicine with the holistic approach of Traditional Chinese Medicine. This group discussed TCM-MA using both scientific and Traditional Chinese Medicine vocabulary. Overall, I see that the two groups discussed medical acupuncture using vocabulary from western science and Traditional Chinese Medicine in different ways. Below I examine how each group described medical acupuncture and provide exemplary quotes from my data.

Western medical acupuncture. As Table 7 shows, the WMAs I interviewed endeavored to understand medical acupuncture according to their own familiar western scientific language. Even though they recognize that

western medical acupuncture has roots in Traditional Chinese Medicine, the WMAs told me they preferred to describe it using medical vocabulary and terminology. They also said their scientific interpretation is a shift from viewing acupuncture as being associated with Traditional Chinese Medicine to viewing it as being associated with western medicine. As an example, WMAs told me they recognized that the Chinese had limited medical knowledge when they developed acupuncture. But WMAs said they now prefer to describe medical acupuncture using western words such as "nerves" instead of traditional Chinese words such as "meridians." WMAs thus spoke about their scientific approach as being a novel way to understand medical acupuncture in western health care. A few interviewees also said they do not consider it acceptable for health professionals to discuss medical acupuncture using Traditional Chinese Medicine vocabulary since scientific vocabulary is available. The quotes below illustrate how WMAs prefer to talk about medical acupuncture using their own familiar medical vocabulary:

> the concept of meridians really is a traditional view of the concept of a nerve, of a nerve pathway and the sensation of the nervous system. So that to me provides a coherent explanation of why traditional Chinese acupuncture works. WMA 13

> [The Chinese] had no words for nerves for example. Now we know nerves exist all over the body. And these things about the chi sensation radiating here and there, for me of course it's when you hit nerves or come close to nerves. And so the chi sensation is the Chinese way, in western thinking we say nerve sensation. WMA 21

Traditional Chinese Medicine medical acupuncture. During the interviews TCM-MAs talked about medical acupuncture using a mix of scientific and Traditional Chinese Medicine words and concepts. As an example, most TCM-MAs mentioned they use a combination of Traditional Chinese Medicine and western words vocabularies to describe medical acupuncture. Uniquely, some TCM-MAs said they only use Traditional Chinese Medicine vocabulary when they administer medical acupuncture. In general, TCM-MAs told me they think it is an advantage to use both vocabularies for three reasons. First, this group said

that using both Traditional Chinese Medicine and scientific terminology enables them to explain things to patients in different ways because some things cannot be easily explained with the medical framework. Second, it is not possible to translate some Traditional Chinese Medicine concepts and thus they have become comfortable using a mix of both vocabularies. Third, TCM-MAs said that they can approach their work and patients in different ways by drawing upon the two frameworks. The following quotes exemplify how TCM-MAs described medical acupuncture:

> If you go into the … ancient texts of Chinese medicine … it's not possible to translate it. I think that you need to take on value what the Chinese have been saying … they would use terms like "qi" and "blood" … But they mean more than the red stuff, there's an energy component … So to try and translate it into western terms doesn't work. You're best to go back to the root source of Traditional Chinese Medicine. TCM-MA 3

> If I'm thinking like an acupuncturist, I'm looking at things like pathogens, yin and yang and the progress of chi around the body, what's happening to the chi, the blood and the body fluids in sickness and in health. TCM-MA 14

> if you integrate western medicine with Eastern medicine, you not only address low back pain and kidney qi deficiency but you address the depression, whatever is part of the bigger picture in the patient. TCM-MA 8

One of the biggest differences between WMAs and TCM-MAs is how they describe medical acupuncture using different vocabularies. During their interviews, WMAs described medical acupuncture using their familiar western medical vocabulary. WMAs told me they view western medical acupuncture as being scientific and thus do not find it necessary to incorporate Traditional Chinese Medicine vocabulary. This group also views their scientific approach as a novel way to think about and describe medical acupuncture. On the other hand, TCM-MAs told me that incorporating both Traditional Chinese Medicine and scientific vocabularies offers them another way to think about their work and talk to their patients. Many said they use a mix of Traditional Chinese Medicine and scientific words to describe medical acupuncture. But some TCM-MAs said they

only use Traditional Chinese Medicine vocabulary when they administer medical acupuncture. As well, this group said they view TCM-MA as an advantage since they are able to use the two different vocabularies.

b. Conducting research in different ways. When interviewees spoke about their involvement with medical acupuncture, many raised the subject of research. The two groups discussed their experiences as researchers and as users of research in different ways. WMAs emphasized that it was important for them to conduct and support western research to better explain how medical acupuncture works in scientific terms. When WMAs shared their experiences about conducting research they also brought up common issues, such as obtaining funding and inventing an adequate sham (e.g., an inactive needle) to test medical acupuncture using gold standard western methods such as clinical trials. As the journal articles illustrate, there is a significant difference between the two groups for publishing western scientific gold standard research (WMA vs. TCM-MA, $p < .002$). Generally speaking, most TCM-MAs talked about utilizing research more than they did about conducting research. This group also discussed the importance of combining western and Chinese approaches in medical acupuncture research. In the following paragraphs, I summarize how WMAs and TCM-MAs talked about research and also provide illustrative quotes.

Western medical acupuncture. WMAs told me it was very important for them to be able to develop and support western scientific research for medical acupuncture. As the journal articles showed, WMAs published over two-thirds of the articles about medical acupuncture and, as I discussed above, there is a statistically significant difference between the groups for publishing gold standard research. This group also talked about the invention of new tools such as a sham needle (an inactive needle used in research for comparing to actual needling) so they could test medical acupuncture using gold standard western methods such as clinical trials. However, WMAs also pointed out that their focus upon research led to differences of opinion amongst their colleagues about its validity and reliability. The main research questions the WMA interviewees talked about were: Does medical acupuncture work?, How does medical acupuncture work?

and What does medical acupuncture work for? WMAs who conduct research also discussed their struggle to obtain funding since this impacts their work as well as their ability to conduct research. Overall, WMAs brought up a variety of issues about researching medical acupuncture using western scientific methods; this group also wrote extensively about these issues in the journal articles and textbooks. As WMAs describe below, funding, inventing new tools and issues about how to conduct scientific medical acupuncture research have been central concerns:

> our study [about lowering blood pressure and increasing blood flow to their heart muscle] was published in *Circulation*, one of the premier western journals in cardiovascular disease. … We did another study looking at the opioid system and how it relates to acupuncture and we published that in the *American Journal of Physiology*. So I was seeing the effects of acupuncture in my own laboratory where I could replicate experiments and show that it had a meaningful result. WMA 2

> Sham acupuncture is a problem. Instead of using sham you need to look at the nerves being stimulated. … The trials are missing the point of acupuncture which is why the results are inconclusive. WMA 23

> [when] I put in a grant application for acupuncture, I get a strong sensation that it has extra hurdles to cross. It's not regarded … in the same neutral way as research into … physiotherapy or some drug or some surgical treatment. And there's this boundary, this hurdle around acupuncture WMA 13

Traditional Chinese Medicine medical acupuncture. TCM-MAs told me they feel it is important to combine western science and Traditional Chinese Medicine research approaches to bring new insights into medical acupuncture. Many of the TCM-MA journal articles advocate for novel research approaches such as clinical trials where patients receive a western and a Traditional Chinese Medicine diagnosis before they are randomized into a treatment group. TCM-MAs also told me they feel it is necessary to integrate Traditional Chinese Medicine into their research because it can help explain how and why medical acupuncture works. They mentioned several examples of this, including using the Traditional Chinese Medicine concepts of qi (energy) and meridians (a system of

lines connecting acupuncture points on the body) to explain why putting a needle in someone's foot can alleviate their migraine. Although TCM-MAs said they are interested in medical acupuncture research, most of them talked about reading and using research rather than conducting it. Those TCM-MAs who conduct research also talked about the importance of exploring the placebo effect of medical acupuncture. The placebo effect happens when a patient feels better even though the needle was put in a place known to be ineffective or a person received sham needling (i.e., the needle did not pierce the skin). TCM-MAs also felt that western research ignored the potential benefit that arises when a person receives care and attention from a medical acupuncture professional. The journal articles also show that TCM-MAs have developed novel ways to use both western science and Traditional Chinese Medicine approaches in their research. The research approach of TCM-MAs is illustrated in the following quotes:

> Acupuncture cannot be researched with best evidence because you cannot use the gold standard of double-blind placebo control. They know the needle's going in and you know where you're putting it. So if they put a needle in a sham point or in a fake point, there still may be an effect. … placebo trials are made for medication [not medical acupuncture]. TCM-MA 5

> when I apply for research grants … a lot of well-known researchers are still very skeptical that there is not enough research about the effectiveness of acupuncture. But they don't want to support my grant and me trying to do the research. TCM-MA 25

> a lot of people have criticized acupuncture and said that … [it] is a placebo effect. They don't realize that the placebo effect is an important part of any treatment ... So the question isn't "is acupuncture working through the placebo or the touching effect?", it is "does acupuncture with its placebo effect work better than other things, with their placebo effect?" TCM-MA 9

To sum up the micro-processes "Conducting research in different ways," I see that the two groups of medical acupuncture professionals developed research approaches in line with the way they described medical acupuncture. WMAs told me they conduct research using western scientific methods. WMAs also discussed the development of novel western inventions to conduct gold standard research

for medical acupuncture and brought up ongoing concerns such as obtaining funding. Even though they are mainly consumers of research, TCM-MAs talked about integrating both western and Traditional Chinese Medicine approaches to research medical acupuncture. This includes exploring the placebo effect and randomizing patients according to both their western and Traditional Chinese Medicine diagnoses. The outlook of TCM-MAs toward research also corresponded to the way they described and thought about medical acupuncture.

c. Learning and teaching different approaches. During the interviews, I asked interviewees to tell me about their education and where they learned medical acupuncture. As they discussed their educational background, both groups shared their experiences with learning and teaching medical acupuncture. WMAs talked about their scientific approach to medical acupuncture education wherein they taught and learned about nerves, endorphins and physiology. Many WMA interviewees said they preferred to create, take and teach courses that correspond with their scientific approach. Similar to the way they described and researched medical acupuncture, TCM-MAs told me they developed educational programs which included both western science and Traditional Chinese Medicine approaches. This includes courses in anatomy and physiology as well as qi gong and meditation. TCM-MAs also told me they trained in the west and in China. From the interview analysis, I also see that WMAs and TCM-MAs pass on their beliefs to other western health care professionals through their teaching. I next recount the educational experiences of WMAs and TCM-MAs and provide illustrative quotes from the interviews.

Western medical acupuncture. Because western scientific training for medical acupuncture was not well-developed until the mid-1980s, many long-practicing WMAs told me they originally took Traditional Chinese Medicine courses. However, these WMAs pointed out they do not use Traditional Chinese Medicine theory since it does not fit with their background, work and beliefs. WMAs said they took Traditional Chinese Medicine courses to learn medical acupuncture techniques and practices because this was the only education available at the time. During my ethnographic observations of the continuing

education medical acupuncture course, some participants also told me they were not interested in learning Traditional Chinese Medicine theory. Rather these participants took the course to learn medical acupuncture techniques from a reputable instructor. WMAs said they addressed the lack of scientific training for medical acupuncture by creating courses which incorporate neurophysiology, endorphins and neuroanatomy. I see that the educational programs of WMAs are also connected to and supported by their scientific, gold standard research and the way they described medical acupuncture. The following quotes illustrate the educational experiences of WMAs:

> I begin to search for courses all over the world [so I could learn] medical acupuncture. … my medical curiosity influenced my decision to learn about medical acupuncture. … all my books were neurophysiology and neurobiology. I was curious to learn how a needle can stimulate the nervous system and the nervous system reacts and responds. WMA 27

> [The Association where I trained] was looking at neurophysiology, looking at western medical principles rather than any Traditional Chinese diagnostics or treatment principles. My training was very much scientifically based. WMA 19

> I actually got myself trained in traditional acupuncture … And we were trained to do pulse reading and to make five element diagnosis and to treat according to the five elements. … I probably never whole-heartedly accepted the idea of five element traditional acupuncture, I just thought they were useful places to put the needle. And so I carried on using it simply in order to find somewhere to put the needle for patients.WMA 13

Traditional Chinese Medicine medical acupuncture. Similar to WMAs, the TCM-MAs told me they were interested in learning and teaching a western approach to medical acupuncture. Additionally, TCM-MAs talked about their interest in taking Traditional Chinese Medicine courses such as qi gong (rhythmic breathing and flowing movements), meditation and the five elements (conceptualizing an individual's relationship with the environment by examining their propensity towards fire, earth, metal, water and wood). All but 1 of the 24 TCM-MAs I talked with spoke about traveling to China to take courses. A few of the TCM-MAs told me they teach in traditional Chinese acupuncture schools.

Some others also said they have completed long-term Traditional Chinese Medicine training programs and become licensed acupuncturists. Thus, a small number of TCM-MAs said they hold dual licenses as a western health care professional and a Traditional Chinese Medicine practitioner. Many TCM-MAs also told me they teach courses which include both Traditional Chinese Medicine and western scientific approaches to medical acupuncture. I see that the educational and research approaches of TCM-MAs are closely related because they incorporate both science and Traditional Chinese Medicine. The following quotes capture the educational experiences of TCM-MAs:

> we ended [up] in ... Nanjing with about 30 other people. … it was just an amazing course of people, it was run in English. We learned all the acupuncture points and Traditional Chinese syndromes. We sat in the classroom and recited them. We were the first formal WHO sponsored course in China for western doctors [in the late 1970s]. TCM-MA 9

> I teach the Foundation Course [for physiotherapists]… in that course you actually look at the western approach, the head and neck and neurology [for migraine]. But then I bring in a bit of Chinese medicine of what the Chinese think migraine's all about. TCM-MA 20

> I'm dually registered. I'm a registered Physical Therapist but I'm also registered as an acupuncturist. … So in order to make sure that I was following the College of Physical Therapists guidelines I wrote the provincial exams for Registered Acupuncturists so I could maintain a broad scope of practice. TCM-MA 4

In summary, the interviews with WMAs and TCM-MAs highlighted their establishment of educational programs and courses which are closely related to their research approach and belief systems. Whereas WMAs have created a scientific educational approach to medical acupuncture, TCM-MAs have put together training programs and taken courses in both western science and Traditional Chinese Medicine. For example, TCM-MAs said they took courses in qi gong and some of them also teach in traditional Chinese educational institutions. TCM-MAs also teach mixed Traditional Chinese Medicine and western approaches in their medical acupuncture courses. All of the interviewees

said they learned medical acupuncture in the west. However, all but one of the TCM-MAs told me they also studied in China. As well, some TCM-MAs mentioned they are dually licensed as a western health care professional and a Traditional Chinese Medicine practitioner.

Table 7. (Re)Assembling meaning systems[a]

	WMA	**TCM-MA**
(RE)ASSEMBLING MEANING SYSTEMS AND TECHNIQUES		
Carrying out the (re)assembling of meaning systems and techniques	*Rejecting the Traditional Chinese Medicine meaning system and describing medical acupuncture with the western science meaning system*	*Accepting the Traditional Chinese Medicine meaning system and describing medical acupuncture with the meaning systems of Traditional Chinese Medicine and western science*
	the meridians and acupuncture, it is like longitude and latitude. Nobody thinks there are ropes lying underground, they don't exist, but we use them for the position of where we are in the world. I regard meridians the same way … the nerve tracks have not been described … in Traditional Chinese Medicine. They have no words for nerves for example. WMA 21	I've got two paradigms not one to operate from, I'm operating from two paradigms. I've got the western paradigm and I've got the Eastern paradigm. And the reason it's called medical acupuncture is acknowledging that this acupuncturist doesn't just have one paradigm, they have two. TCM-MA 3
	when I think [about the] energy in our body, I prefer to think about neurotransmission, the energy created when muscles are moved or the energy that [helps] the blood move through the arteries and veins, or the energy that is produced from atrophy instead of something spiritual. WMA 27	thousands of years ago they had an enormous sense of observation and, which has been lost. We are trying to explain the responses in a western paradigm so it makes it easier for doctors to accept it. Because if you really look at the traditional Chinese explanations - even when translated in English it's a different language and we therefore have Anglo-Saxonized, if you like, the basic teaching. We still do the tongue and the pulse diagnoses, we go through and we teach the meridians and the points and the points as to why they work and so on and that's been shown with so many tests around the world as to how acupuncture's now working through the neurophysiological system. But we explain, we tend to explain it in the western paradigm so that the doctors understand it TCM-MA 15
	Felix Mann ... apparently stood up and said … that points don't exist, meridians don't exist … When he said that, it actually freed up the doctors doing acupuncture in the U.K. to think in a very free way, a very novel way about acupuncture. Instead of being necessarily tied to the convention of … precise acupuncture points and learning the traditional understanding of acupuncture, it allowed us to look more scientifically and begin to think	

	more about how we might understand acupuncture working in terms of the mechanisms of normal physiology and normal disease processes. WMA 13 We can't put [Traditional Chinese Medicine] into a framework that we understand. If you start talking about things like qi and energy, these are extraordinarily foreign terms that would not be part of our vocabulary in western medicine. … So you have to translate their terminology into western vocabulary. … how do I translate the concept of a meridian and an acupuncture point and qi into western anatomy and physiology? WMA 2	the point that I might be using which has a designated effect in Chinese terms, but sometimes it comes fairly close to what I would understand is happening in western terms but it is scientifically different. So I'm fairly comfortable if I want to support what I'm doing, … I can tell them both western and eastern arguments usually to support the way I'm thinking. TCM-MA 14 medical doctors that are just not comfortable with looking at a TCM orientation of health and wellness then that's uncomfortable for them. But … I don't think it is as comprehensive or as effective to be looked at purely from a neuroanatomic model. You can have a great deal of clinical success with acupuncture on that basis and it satisfies a number of physicians to understand the neurophysiology or pathology at that level. So, while I think it's an incomplete picture, I don't think it's a total bust. And it does open up some research possibilities, it does open up some opportunities for patients to receive some care, which could be substantial at that level. There's a number of physicians that look at things even though their MDs, they're kind of disenchanted or disaffected with conventional medicine and they look at things only from a TCM or some other paradigm and I think that's regrettable on their part too. I think that to ignore the neurophysiology and pathology and so forth is just as much a limitation as ignoring some of the more energetic aspects of acupuncture. TCM-MA 22
	Using existing and developing novel western approaches to research medical acupuncture	*Using both western and TCM approaches to research medical acupuncture*
	The Park Sham Device involves an improved method of supporting the sham needle and requires validation.[j] we can now with our much greater knowledge of the anatomy and	The results [of this trial] will help determine the significance of Chinese acupuncture in the context of Western medicine for the treatment of [migraine and tension type headache][j] [I have obtained research funding

	physiology of the human body, we can now explain in terms that we understand some of the principles that have been described for thousands of years before anybody knew what was happening and understood the physiology of the body. WMA 19 there isn't a satisfactory placebo control that really is truly inactive WMA 13 we are going to have to subject these integrative therapies to the western standard, which is randomized clinical trial. That's a given. And if they're unwilling to do that, then they might as well shut the door and go home and do something else. Because that's a fact of life in all of western medicine today. We are simply not going to operate on anecdotal evidence. And you know, acupuncture is what, 2500 years old so it's had a long time … to develop – I think there's a lot of truth in many aspects of it, but you gotta prove that unequivocally. WMA 2 I've done some randomized controlled trials about acupuncture and low back pain. WMA 21	for]: Symptom management in cancer, expectations and beliefs influencing outcome from acupuncture and a variety of studies looking at imaging in acupuncture. TCM-MA 1 I think that the healing paradigm is definitely involved in much the same way as the placebo effect. We know that when we do double blind crossover trials that what we are doing is we are excluding the healing effect of the individual who's doing therapy. That's been known because that's the only thing – that's why, you know, a blind crossover trial was invented. TCM-MA 3 [In Traditional Chinese Medicine research], you're individualizing the patient. So all western medicine is geared towards the fact that we're all supposed to be exactly the same and we're all going to be like all these people in the studies … we can't standardize [Traditional Chinese Medicine] the same way although they sometimes try to. But I've just thought about it, and the whole point of a lot of alternative therapies is that they actually try to individualize care. TCM-MA 3
	Learning and teaching the western approach to medical acupuncture	*Learning and teaching both TCM and western approaches to medical acupuncture*
	it's hard to learn and use Chinese medicine as a physio because medicine is black and white WMA 4,5,6 I have lots of patients coming to me and they believe in Yin and Yang and chi and they feel the Yin and Yang in the body and they feel the chi going all over their body ... but I tried to tell them that it's okay to have those feelings but it's not really working in that way … and then I try to describe what is happening in western medical terms. WMA 21	[I have taken] 3 seminars of the Ecole Européenne d'Acupuncture (Chinese of ancient medical texts) every year since 1977. TCM-MA 28 [I] took a course on the five meridians theories… and I actually learned some very valuable things … about patients and meridians. This was from a Chinese physician. TCM-MA 16 At the Ecole Européenne d'Acupuncture I … teach Chinese tradition, [history] and old Chinese textbooks to physicians and non-

	the [scientific] medical acupuncture approach began in 1985, '86. 'Til then, all acupuncture teachers and schools were traditional. From 1985 then there was a movement [towards learning] the biological action for acupuncture and neural theories about acupuncture. There were big discussions about endorphins, about cortisol, about the biological aspect. WMA 27 I teach neurophysiological based acupuncture. WMA 23	physicians. … In Nantes, I teach how to find the points, … how to put the needle in, how to take the pulses, how to take the diagnosis and so on. … It is a program for doctors [but midwives and veterinarians] can also come. TCM-MA 28 I'm quite comfortable to pick from both sides to teach because I think students should be allowed to make up their own minds, too. TCM-MA 14 My original training was with a Japanese master, on more of an apprentice, informal basis. … then I formalized my training through the UCLA Medical Acupuncture Program. TCM-MA 22

[a] All data were derived from the two sets of interviews; j indicates data from journal articles (references for all journal articles cited are available from the author); t indicates data from textbooks

2. Performing techniques and practices

a. Altering work processes, rationale and content. When I asked interviewees to tell me about their experiences with administering medical acupuncture, they discussed their activities and behaviors and often talked about how they treat their patients (Table10). WMAs and TCM-MAs told me how they have integrated western and Traditional Chinese Medicine practices and techniques into their work. For example, WMAs spoke about specializing in needling techniques, a few of which are from Traditional Chinese Medicine but the majority of which are medical inventions. WMAs mentioned they prefer to specialize in the few conditions and diseases which are supported by western research. Moreover, WMAs said they use needling to help patients with their physical problems. On the other hand, TCM-MAs told me they used a wider variety of western and Traditional Chinese Medicine techniques to help patients with emotional, physical and spiritual problems. The interviewees also discussed how they established closer relationships with their patients. As an example,

WMAs discussed developing therapeutic relationships to get to know their patients better while TCM-MAs talked about integrating the Traditional Chinese Medicine philosophy of "mind, body and spirit" to improve relationships with their patients. I next discuss the different techniques and practices that WMAs and TCM-MAs use as well as how they formed closer relationships with patients.

Western medical acupuncture. When I asked interviewees about the techniques they used, WMAs told me they mostly needled. Overall, WMAs mentioned they specialized in western needling techniques such as trigger point acupuncture (needling in tender areas) and ear acupuncture but they also used a few Traditional Chinese Medicine needling techniques such as manual stimulation (moving the needle up and down) and distal needling (needling at a distance from the problem area). WMAs talked about the invention of new types of needles (e.g., the sham needle for using in clinical trials) and finding new ways to use needles with western technology (e.g., westerners invented electroacupuncture, a machine for applying an electrical current to the needle inserted in the skin). WMAs also discussed incorporating existing western techniques and tools such as the pads that stick to the skin and the machine for administering transcutaneous electrical nerve stimulation (TENS). Overall, WMAs said they prefer to needle since it is easier to integrate into their work. This group also said they administer needles for a few conditions and diseases, mainly pain and musculoskeletal issues, which are supported by western research. Thus, WMAs told me that western research guides the techniques, practices and tools they administer for a select few conditions and diseases. The following quotes are examples of how WMAs administer and use medical acupuncture practices, techniques and objects in their work:

> I do electroacupuncture as well as plain needling but that's all. WMA 19

> [I use] acupuncture, drugs and a little cognitive behavior therapy for pain patients. ... [I also use pain] blockage techniques [such as] TENS – transcutaneous electrical nerve stimulation. WMA 21

> I do not treat asthma – acupuncture has no effect according to randomized controlled trials on asthma. But I had one patient for

example with migraine and she asked me once if I could put some needles in for asthma also. Of course I had to tell her that acupuncture has no effect on asthma according to studies so it's not scientifically okay to treat asthma. WMA 21

we wouldn't treat anything other than musculoskeletal [problems]. WMAs 4,5,6

Table 8. Medical acupuncture performed by WMA 23 in his clinic

WMA 23 calls the patient in. This patient was previously treated by another WMA in the clinic but this person is away today. He flips through the thick patient chart. The original assessment revealed that this patient is too complicated for the high volume clinic. WMA 23 asks "How long do you expect the treatment to take to work?" because she has been coming a long time and having no improvement. He continues reading the chart, the other WMA hasn't been able to help the patient or have a dramatic effect. He makes notes in the chart. He asks the patient to fill out the pain diagram on paper. He goes over the notes in the chart and asks the patient questions about her health. He then asks the patient to compare an old pain diagram with the new diagram she just filled out to see which areas of her pain have been missed.
WMA 23 asks the patient to lie face down. He gets a sheet and shuts the curtain so the patient can change. He puts the new diagram into the patient's chart and makes notes in the chart. He checks on the patient behind the curtain. He covers up patient with the sheet, raises the bed and arranges the sheet for the patient. He rubs alcohol sanitizer on his hands. He unwraps the needles and asks the patient if she is sensitive to acupuncture needles. He asks the patient "Are you ok?" He palpates the patient's back and checks the patient's pain diagram to determine where the pain is. He palpates the patient's back and places needles in the lower back. He gets more needles out and places needles up both sides of the spine. He pulls out the needle because the patient says she is in pain. Most of the needles are pushed in deeply but some are not. He also puts needles in the acupuncture points the other medical acupuncture practitioner had noted in the chart. He asks the patient "Do you want needles in your hands?" He puts needles in one hand and makes notes in the chart. He draws on the pain diagram where he has placed needles and counts the number of needles on the diagram. He adjusts a needle because the patient says it's painful. He makes more notes in the chart. He closes the patient chart and looks at the time to see how long the needles have been in. He fills out a form for the patient. He asks the patient if he can leave or if the patient wants the needles out. The patient would like the needles to be taken out. He puts alcohol sanitizer on his hands. He asks "Can you feel the needles?" He takes out all the needles and drops one but quickly finds it. He counts the needles he has taken out and checks this number against the number of needles he has recorded in the chart before discarding them in the sharps container. He lowers the bed and the patient changes. He makes more notes in the patient's chart for a referral.
WMA 23 says, "There are no reliable objective measures about acupuncture outcomes for patients so I can't compare this treatment to previous information in the chart." He checks the patient's appointment card to see how many are left because often only six medical acupuncture treatments are approved by their general practitioner. He removes the used sheet from the bed and puts a new sheet on the bed.
WMA 23 says to me, "I would have give up on the patient using acupuncture long ago since it hasn't worked in so many treatments. The bigger, cheaper, rougher needles probably have more of an impact, but that's not very pleasant" for the patients.

Traditional Chinese Medicine medical acupuncture. When TCM-MAs spoke about administering medical acupuncture to their patients, they said they used a mix of Traditional Chinese Medicine practices, techniques and tools such

as moxibustion cigars and cones (dried, compressed mugwort that is burned), glass cups and oil (for suctioning and sliding cups on the skin) and western techniques and tools such as electroacupuncture and lasers. TCM-MAs told me that incorporating both western and Traditional Chinese Medicine techniques into their work took considerable time and effort over many years. Many TCM-MAs also mentioned that they perform a Traditional Chinese Medicine diagnosis on their patients in addition to a regular western diagnosis. They said that using a dual approach to diagnosis helps them figure out which Traditional Chinese Medicine and western treatment(s) to give to patients. TCM-MAs also told me they experimented with administering Traditional Chinese Medicine and western techniques for a variety of conditions and diseases. To do this, TCM-MAs said their clinical experience guided which techniques they use because this approach may not be supported by research. TCM-MAs also mentioned they use a variety of western and Traditional Chinese Medicine techniques and practices to help patients with their physical, emotional and spiritual issues. Thus, as the following exemplary quotes show, TCM-MAs discussed using a mix of western and Traditional Chinese Medicine techniques, tools and practices:

> I use tongue and pulse diagnosis, I do a lot of auricular acupuncture. I look at the patient's lifestyle and diet and activities. So that's been a common part of my practice. TCM-MA 22

> I'm open to [some techniques] working because I also have seen that acupuncture is effective for my patients even if that condition doesn't have any research. TCM-MA 25

> a famous soccer player came for terrible pain in his back… The western diagnosis was negative: nothing wrong. As I took the pulse I found 'heart empty,' there was nothing special on the tongue. So I did something you cannot find in any book: I gave 'micromoxa' at Heart 9 on the left side. The pulse immediately became normal ... and the patient said 'Thank you, I have no pain anymore' TCM-MA 28

Table 9. Medical acupuncture performed by TCM-MA 31 in her clinic

TCM-MA 31: "Is the music that's on ok for you? It's one of my favorites. Was that on the last time you were here?"
The patient and TCM-MA 31 have a discussion about Tibetan philosophy. She says to the patient, "healing music mantras are a wish and a prayer for your well-being."
She asks the patient "Can I see your tongue?" She looks at the patient's tongue and makes notes in chart. She says, "Once more please [put out your tongue]." She finds that phlegm is showing in the tongue – it is shiny on the sides which means there is phlegm in the body (i.e., mucous). She says her hands are too cold for taking the patient's pulse so she goes to get a hand warmer. The patient is on the examination table wearing a gown and has a pillow under her legs. She returns with the hand warmer and warms her hands; she can't take the Chinese pulse until her hands are warm because taking a pulse with cold fingers "changes the pulse and pulls the pulse back too."
She says to the patient, "So last time we treated you from the back, today we will treat you from the front." She gives the hand warmer to the patient who warms her hands. She will administer therapies to work with the phlegm and get the patient's energy moving.
She gets some needles from the cupboard and unwraps them. She says, "[Your] energy is tied up and blocked because it's not available. Energy is being held in a tension way so we're gonna open it up. It pinches a little bit" [the needle in the patient's foot], "it might not pinch." She puts the needles in same place in both feet of the patient. She needles the patient in the side of the leg to help with the phlegm.
TCM-MA 31: "How's your skin been? I'll do a treatment for that, more for the blood." Chinese medicine views acne as an internal problem. She puts needles in the patient's knees while she explains Chinese medicine as "heat or tension in the body." She says, "The 'pill' can suppress a lot of things in the body. It means your body is doing some self-regulating." She puts in needles, in-between the ribs. She needles up the front of the chest. She asks, "Are you ok? There's none in the head [needles]." She throws away the needle garbage.
TCM-MA 31: "May I see your tongue again please? What I'll do is cover you up with the metal blanket again. What we've done today is treated the blocked energy and reduced phlegm. A western translation of this might be treating for 'balance and hormones.'" She makes notes in the chart and then takes the patient's Chinese pulse. She says there are "reasons to work at balancing and getting your body systems moving freely. Acupuncture can help you move [the blockage] out because the body stores so much, old patterns and memories." She gets the metal sheet out and covers the patient, it's very noisy. She leaves the room to check on another patient.

To summarize, WMAs were more selective about the conditions and diseases which they treat using medical acupuncture. This group told me that they prefer to specialize in needling techniques and administer medical acupuncture for a few diseases and conditions which are supported by western research. In contrast, TCM-MAs talked about experimenting with a variety of Traditional Chinese Medicine and western techniques to treat a wider range of conditions and diseases. TCM-MAs also talked about administering a dual diagnosis for patients, which is a unique approach. Overall, I notice that the techniques WMAs and TCM-MAs use treat their patients and what they treat their patients for are connected to the western and Traditional Chinese Medicine belief systems.

b. Deepening relationships with clients. As they talked about administering medical acupuncture, WMAs and TCM-MAs told me the different ways they established better relationships with their patients. Both groups talked about their approaches for learning more about their patients to better help them. WMAs said they developed closer therapeutic relationships by discussing physical and (social)-psychological issues with their patients. WMAs also said that touching their patients through providing hands-on treatment improved the patient-provider relationship. TCM-MAs talked about becoming closer with their patients through sharing emotions and discussing spiritual issues. In the following section, I examine how the two groups have worked to develop their relationships with patients in different ways and for different reasons.

Western medical acupuncture. WMAs talked about becoming closer to their patients through developing a good therapeutic relationship. Many WMAs pointed out that spending time talking with their patients and getting to know them better was key in this process. WMAs told me that improving the relationship with their patients enabled them to address (social)-psychological issues that might be hindering their patients' ability to improve. As well, WMAs mentioned they like using a hands-on approach because touch helps them learn more about physical problems and communicate with patients in a different way. As illustrated in the examples below, WMAs said they developed better patient-provider relationships by talking with and using hands-on procedures with their patients:

> you examine patients much better, you ask them more questions … I write down much more information about my patient. I examine them much more; you press on different points and see if they react ... So you are much, much closer to the patient. And you see patients many times, usually one course of acupuncture is 8, 10 or 12 treatments. That means that you get very close to your patients. You must be able to be close to your patients. WMA 21

> Touching enables me to communicate with patients at a non-verbal level. Touch is important for patients. WMA 10

> I spend much more time talking to the patients and supporting them ... I've always felt that touch was important … I've always been aware of the value of touch. WMA 19

> I chat with patients and leave the needles in as a point of connection [between myself and the patient] even though I don't believe they work after the first minute. WMA 32

Traditional Chinese Medicine medical acupuncture. TCM-MAs spoke about improving their relationships with patients through discussing emotions and spirituality as well as physical issues. These interviewees told me they addressed issues of the mind, body and spirit with their patients. This is based upon a mix of Traditional Chinese Medicine and western approaches to health. TCM-MAs told me that offering emotional and spiritual support helped them get closer to their patients. They also feel that if their patients share emotional and spiritual issues, this can help them better deal with their physical issues. By considering the emotional and spiritual improvement of patients to be as important as physical improvement, TCM-MAs talked about how they approach relationships with their patients in a different way. TCM-MAs also said that some patients select them because these patients like to discuss a broader range of issues with their medical acupuncture provider. The following quotes exemplify how TCM-MAs have become closer with their patients:

> it's more that emotional extension – that I really care that you feel better, it really matters. I'm listening to what you're saying. … I'm listening to the quality of your voice … all that stuff that brought you [here]. There's a lot more happening, you're not just a person that came in to get something out of me. There's a huge story that goes on. TCM-MA 5

> [I pay] more attention to things other than just 'where is your pain?' I ask [patients], 'how does the pain make you feel?' So I bring in the emotional side – I try to get to know my patient and who I'm dealing with. TCM-MA 20

> I learned to see things, aspects of illness and health, as acupuncture makes a link between body and soul … And the Chinese training in Chinese medicine made me conscious that … the two parts are always linked. … I didn't speak with [patients] in the same manner. If they have a backache, I asked them about the work they are doing and also about the problems they have in their life. I treated at the acupuncture points for psychological aspects of the patients. And the patients loved that. TCM-MA 28

To summarize, both groups talked about administering techniques and developing closer relationships with their patients in different ways. WMAs spoke about administering needling techniques and specializing in pain and musculoskeletal issues because these are supported by western research. WMAs also told me how they improved their relationships with patients by discussing (social)-psychological issues. WMAs spoke about building therapeutic relationships and performing hands-on techniques to learn more about their patients. On the other hand, TCM-MAs said they used an assortment of western and Traditional Chinese Medicine techniques to treat a wider variety of conditions and diseases. TCM-MAs also discussed addressing issues of the mind, body and spirit to help them form deeper relationships with their patients.

Table 10. Performing techniques and practices[a]

	WMA	***TCM-MA***
PERFORMING TECHNIQUES		
Altering work processes and content	*Performing western techniques and selected Traditional Chinese Medicine needling techniques with the western scientific meaning system*	*Performing both western techniques and Traditional Chinese Medicine techniques with the western scientific and TCM meaning systems*
	I do not use pulse diagnosis or tongue diagnosis … In TCM, you use tongue diagnosis and pulse yes? … But I use MRI, I use x-rays. I use medical tests. So I'm not a TCM practitioner. Also I use my medical terminology speaking with you so I prefer to say headache or migraine, this is a medical diagnosis yes? WMA 27 it was fairly soon after I started using these methods that I actually found that, that it was very difficult to make a traditional diagnosis that stood up with the same kind of rigor that a conventional western diagnosis would. … I'm not saying that I was fully trained or fully skilled of course, but … I just didn't feel confident in the, in the five element diagnoses that were made. Nor was I ever really very convinced ... that that was more than a story. I couldn't really get my heart into the idea of controlling energy flowing in the different meridians. WMA 13 all my patients know that if it's necessary to take drugs or antibiotics or pain-killers or non-steroidal anti-inflammatory drugs I can give these to them. And if it's necessary to practice acupuncture, I can give this to them twice a week or combine it with … physical therapy approaches. I often use ultrasounds and electrical stimulation techniques for relieving pain, I use many, many techniques for relieving the pain WMA 27 I haven't a clue what to look for on the tongue and a pulse is a pulse to me, it doesn't have how many layers. No, I don't do any Traditional diagnosis at all. WMA 19	I use the diagnostic techniques probably with every patient, I'll be – as I look in their ear I'm also looking at their ear. When I look at their tongue as I'm looking in their throat, I'll have a look there. When I'm checking their pulse I'll also feel their pulses. TCM-MA 5 I do loads of cupping because it fits with being a manual therapist you know. That's one of the reasons I did it, to save my hands. So I do loads of cupping, Gua Sha. I don't use moxa, I did when I worked in a Chinese-y clinic while I was training but it's impossible with fire alarms and things. And I have got a little machine now that's sort of recreated a kind of moxa infrared spectrum so I might use heat in that way. But then heat is something that physios still use a lot. Other kinds of techniques? Cupping, Gua Sha, I think those are the big things, really. So I needle and do manual based, Chinese Medicine stuff. TCM-MA 20 Now whether I'm selecting points because I think it's having a neurophysiological effect or because Traditional Chinese Medicine says that certain points have an effect on anxiety or depression, I'm not 100% sure, actually. I'd probably have a little bit of TCM in the back of my mind to be fair. So … I am viewing other factors that will influence how the how the patient presents and possibly select my acupuncture points accordingly. So I'll treat the pain but I'll also look at other emotional factors that may be feeding into that pain. TCM-MA 18 acupuncture is an aid to help a person with their spiritual energies. TCM-MA 16

	Treating fewer conditions and diseases which have western research evidence	*Treating a variety of conditions and diseases, not all of which have research evidence*
	it's very, very important for me to know diagnosis behind the pain and what kind of pain the patients have, nociceptic, neuraligic or psychiatric pain for example. And that is… very, very important 'cause acupuncture has no good effect whatsoever on neuraligic pain. And if you meet patients with neuralgic pain you hear the most extraordinary descriptions of how they feel lines around the body and so such things that we not know today how it exists. … Yeah, you have with- within the central nervous system, you have so much reflexes or what we shall call it that we not know about today but we can see it in these patients with neuralgic pain for example. … they describe things in their pain similar to what I hear people describe when I give them acupuncture. And that is why I am very convinced that these effects are transmitted within the central nervous systems WMA 21 I would select patients that I thought might be manageable with acupuncture within a general practice. I think I probably would have selected people with musculoskeletal conditions, probably even at that stage. I probably had a bias towards thinking that acupuncture was most valuable for musculoskeletal conditions. …and of course headaches. WMA 13 reasonably good evidence exists for acupuncture to be effective in alleviating dental pain … and low back pain … For stroke, the evidence is uniformly positive but unconvincing because of methodological problems … The trial data are contradictory for neck pain … For osteoarthritis, the evidence is negative but … not convincingly so … For smoking cessation the data are convincingly negative Ernst & White, 1999: 121[t] For suitable conditions you get about 70-80% response rate to acupuncture … headache, migraine, ulcer, irritable bowel disorder WMA 10	you can help people to get a good rehabilitation when you take psychiatry in account. Some people will need to be ill because they want to talk. I have one patient, say a lady who is not very happy with her husband and the husband is always asking her to do some things, to work in the garden. And she will get terrible backache and cannot move anymore. Once she tells you that you will not use the same points then if she fell from a chair and hurt her back. And in western medicine you only take what you see and you would give her cortisone or anti-inflammatory. When you learn acupuncture you take the psychiatric aspect of the illness in account and you choose the points in order to treat that too. TCM-MA 28 Formerly it was only for pains but now, it is for emotions for everything they are coming. If they don't feel so good, if they are disappointed at their work and they want to be strengthened and say 'Give me some strength so that I can stand all this.' They are also coming in for traditional acupuncture so that they can … stand all the stress. If they feel that their diabetes is not under control, then they are also coming and saying 'Give me the right balance so that my body is obedient to the other therapy'. TCM-MA 12 in terms of the ranges of things that I see, I it's very broad. I see a lot of people with painful conditions, you know neck pain and back pain, extremity pain, shoulder pain, hip pain, I see people with digestive problems … it's the scope of things that you might see in family medicine. People want to avoid traditional medicine approaches, want to combine a western approach with traditional medicine approaches. I see a fair number of people who have issues such as anxiety, depression, sleep disturbance … some people with skin disorders, urinary incontinence, constipation, diarrhea, irritable bowel

		symptoms that type of thing. TCM-MA 11
Deepening relationships with clients	*Establishing a therapeutic relationship with patients by discussing physical, psychological and social-psychological matters*	*Fostering a deep relationship with patients by discussing the mind, body and spirit*
	in conventional medicine we don't touch our patients enough and I think that is a very meaningful and powerful form of forming a powerful therapeutic relationship. I don't use the term healing. I don't have ideas of spiritual relationships with patients. I don't use those ideas. I know people do but I feel uncomfortable with those so that doesn't work for me. I do use the idea of therapeutic relationship, I think that's important, and I do work hard to establish the therapeutic relationship. WMA 13 there are lots of psychological things in this. If you meet the same physician 10 times … they can ask more and more questions that they did not want to ask at the beginning of the treatment sessions. But after more time doing acupuncture … you can learn more about the patients and you know what you are talking about. … this is also a kind of psychological treatment for the patient. When you describe more about their pain, you take up more of their worrying because worries about the pain come from somewhere and patients say 'Doctor, we have not understood that it is this or that'. Those kinds of questions also come up when you are working with these treatments, as you meet the patient many times. So it is a psychological treatment WMA 21 I don't expect that every person I send there is going to be … 'helped' … or 'improved'. If you're talking about a person with some sort of chronic problem, usually you don't make that chronic problem totally go away, you just allow them to live with it better. You allow them to be more functional WMA 2	I became conscious of the very strong links between soul and body and that you cannot separate them. In traditional occidental medicine, they were completely separated. And the training in Chinese medicine made me conscious that … the two parts are always linked. … I didn't speak with [patients] in the same manner. If they have pain, if they have backache and I asked them about the work they are doing and also about the problems they have in their life. I treated the points for psychological aspects … and the patients love that. TCM-MA 28 a lot of traditional medicines didn't separate mind and body and spirit, a lot of the traditional medicines say you're not healthy unless you're healthy in those three areas. TCM-MA 4 I think the spiritual side of medicine or interaction between people is very real and ... has been overlooked in western medicine for quite a long time TCM-MA 16 [for] someone who has chronic pain that is so bad that they are ready to kill themselves, if the pain decreases a little bit, but their attitude toward the pain changes so much that all of a sudden life is, if not enjoyable but it's certainly worth living. TCM-MA 8 there are occasions when I weep with my patients because it's just such a remarkable thing that happens. TCM-MA 11

[a] All data were derived from the two sets of interviews; j indicates data from journal articles; t indicates data from textbooks
(References for all journal articles cited are available from the author)

3. (Re)Conceptualizing Identity

a. Viewing their professional identity (dis)similarly. During the interviews I asked participants questions about their personal and professional identity (Table 9). Overall, WMAs told me that how they view themselves as a western health care professional did not change a great deal, even if they administer medical acupuncture full-time. WMAs also did not mention they had any significant changes in the way they saw themselves as a person. In contrast, TCM-MAs told me how learning Traditional Chinese Medicine affected their identity and work as a western health care professional as well as their identity as a person. Below, I discuss how WMAs and TCM-MAs viewed their professional and personal identity.

Western medical acupuncture. When I asked WMAs to tell me about their identity as a western health care professional who practices medical acupuncture, most did not mention any meaningful shift in the way they view themselves. Many commented that they think about medical acupuncture as another tool they can use to help their patients in their medical scientific work. Even though they administer medical acupuncture in their work, WMAs told me they continued to view themselves as a western health care professional in a similar way. They told me that this similar conceptualization of themselves is strongly tied to their professional identity as a western scientist and their focus upon creating a western research and educational approach to medical acupuncture. Even though medical acupuncture may comprise a large part of some WMAs regular work, for instance they may administer medical acupuncture full-time, they talked about this shift as a career change, not as a shift in their professional identity. The following quotes illustrate how WMAs discussed their professional identity:

> I define myself as a physician who uses acupuncture. WMA 10

> I am a medical doctor and that is number 1, 2, 3, 4 and 5 that I am a medical doctor … acupuncture is one part, even if it's a big part of me. … you are a doctor because you went to medical school. So you have a responsibility to do your best in that field. WMA 21

Traditional Chinese Medicine medical acupuncture. When I asked TCM-MAs about their identity, many of them talked at length about a shift in how they see themselves as a professional. This group talked about embodying Traditional Chinese Medicine medical acupuncture; it became part of their professional identity. TCM-MAs told me about how they came to view themselves as both a western health care professional and a healing facilitator. Many TCM-MAs also spoke about how they integrated these two identities as they learned more about Traditional Chinese Medicine. Of interest, some TCM-MAs also said they began practicing medical acupuncture as WMAs but, because they incorporated Traditional Chinese Medicine, this altered how they regarded themselves as a professional. Many TCM-MAs spoke about integrating Traditional Chinese Medicine concepts about health and healing which also shifted how they viewed their professional identity. I next provide an exemplary quote to show how TCM-MAs viewed their identity as western health care professionals and healing facilitators:

> I had used acupuncture mainly for musculoskeletal and painful problems and headaches ... So that change from just doing it for musculoskeletal to doing it for a variety of medical conditions was a big change for me. And … I also became interested in addiction medicine. And one of the principle concepts of addiction medicine is that it's a spiritual awareness. … And I said, 'Well, I know nothing of the spiritual points' and … that's how I ended up going to [the TCM medical acupuncture] course. TCM-MA 3

b. (Re)drawing boundaries between personal and professional identity. When I asked interviewees if they thought medical acupuncture impacted them personally, both groups responded in different ways. WMAs did not talk about their personal identity to the same degree that TCM-MAs did. In general, WMAs did not view medical acupuncture as influencing the way they see themselves as a person. Rather, some WMAs told me they sometimes administered medical acupuncture to family and friends in their personal time. Of particular interest, TCM-MAs told me that administering medical acupuncture affected them personally, some to a great degree. TCM-MAs spoke about changing the way they think about themselves as a person and also about making

significant changes in their general approach to life. Many TCM-MAs discussed these personal changes in relation to learning Traditional Chinese Medicine. I next examine how WMAs and TCM-MAs viewed their personal identity in different ways.

Western medical acupuncture. Generally, WMAs did not talk about their personal identity to the same extent as TCM-MAs did. WMAs did not mention that learning medical acupuncture affected the way they saw themselves as a person. However, some WMAs commented about how the time they spent learning, teaching and practicing medical acupuncture impacted the activities they did outside of work. More specifically, some WMAs mentioned that administering medical acupuncture to their family and friends took up some of their personal time. Overall, WMAs told me that practicing medical acupuncture did not affect how they saw themselves as a person but that it affected their personal time in small ways. The following quotes exemplify how WMAs regard their personal identity:

> my lifestyle is no different from other doctors'. … No, my [personal] life didn't change. WMA 27

> my friends and family are constantly consulting me about whether acupuncture might help or could they have some acupuncture. WMA 19

Traditional Chinese Medicine medical acupuncture. As TCM-MAs talked about how they viewed themselves as a person, they told me that medical acupuncture affected them personally. For instance, TCM-MAs spoke about changing the way they think about themselves as a person and what they do in their personal life. Some TCM-MAs also told me that learning Traditional Chinese Medicine takes up a portion of their personal time. For instance, TCM-MAs talked about meditating, reading about Traditional Chinese Medicine and practicing qi gong. As part of their personal journey when learning medical acupuncture, TCM-MAs discussed trying to improve their own spirituality and emotional well-being. They talked about improving themselves as a person so they could become better medical acupuncture practitioners. Additionally, many

TCM-MAs told me about making, sometimes profound, changes to the way they approach life. Some talked about this being a gradual process during which they made small personal changes while others discussed it as a shift in the way they view the world. The following quotes illustrate the personal experiences of TCM-MAs:

> there are many concepts of health and wellbeing [from] Traditional Chinese Medicine that that are just good models for wellbeing. And so whether it's activity or diet or rest or therapeutics, I choose in my life and in my practice to look at those things that will keep me healthy or get me back to health if I lose it. TCM-MA 22

> [Learning medical acupuncture] … altered the way I approach my day. It brought me into meditation and qi gong exercises. It brought me more into a spiritual way of looking at life. … certainly learning acupuncture and the Chinese philosophies behind it pushed me in that direction and I was ready to listen to them. TCM-MA 16

> the annual retreat is for [former and current] medical acupuncture students. The retreat … focuses on self-empowerment, making participants better healers. The focus is on the practitioner and their spiritual development. ... There is also qi gong at the retreat. I have attended the retreat every year since it started. TCM-MA 2

In summary, TCM-MAs and WMAs told me they view their professional and personal identity in different ways. Overall, WMAs said that learning medical acupuncture did not affect their professional or personal identity to the same degree that TCM-MAs told me it did. I see that the professional identity of WMAs is closely tied to their identity as western scientists. TCM-MAs talked about experiencing a shift in how they see themselves as a professional and as a person. TCM-MAs viewed themselves as having a dual identity of healing facilitator and western health care professional. This group told me that learning Traditional Chinese Medicine affected their personal life and, more generally, their outlook on life. Although learning medical acupuncture was originally a professional endeavor, many TCM-MAs told me it became part of who they are as a person.

Table 11. (Re)Conceptualizing identity[a]

(RE)CONCEPTUALIZING IDENTITY		
	WMA	TCM-MA
Viewing their identity (dis)similarly	*Viewing themselves as a western scientist who performs medical acupuncture according to the meaning system of western science*	*Viewing themselves as a western scientist and healing facilitator who performs medical acupuncture according to the meaning systems of western science and TCM*
	I don't use the term healing. I don't have ideas of relationships with patients. I don't use those ideas. I know people do but I feel uncomfortable with those so that doesn't work for me. WMA 13 I think the pure western people like me are more recent and we have understood far more about the neurophysiological principles underlying acupuncture. … So I think it's only recently that there has been able to be pure western acupuncturists. WMA 19 we were meeting people from the other acupuncture societies who actually adopted the ideas of traditional acupuncture and they simply, they totally dismissed our approach, our attempts to understand acupuncture. They were delighted to be completely immersed in traditional acupuncture and for them it worked. Well that's fine. That's not a problem with me. For me it doesn't work. WMA 13	I'm a medical doctor and very interested in neurology and anatomy and medical research. And I'm very fine with acupuncture and the traditional Chinese way of thinking. And I don't think there is anything wrong with one or the other way of thinking. So I'm fine with both aspects … My identity is both aspects of medicine. TCM-MA 28 When practicing acupuncture, there's more going on. There's an exchange of energy and there's a healing going on for the practitioner as well. So I think it goes both ways. And it is very rewarding for both of us, not just the person who is receiving treatment but also for the person who is giving the treatment. TCM-MA 8 we call ourselves healers sometimes but really we promote healing, that's my belief about it. It's the person's qi that does the healing and not us. We may help the qi to go to where it needs to go to do the job that needs to be done. TCM-MA 11
(Re)Drawing the boundary between personal and professional identity	*Maintaining the boundary between personal and professional identity*	*Blurring the boundary between personal and professional identity*
	It's something I do because it is my job. … So I do see myself as a medical acupuncturist ... I believe wholeheartedly in it and I enjoy learning more about it. I love treating patients and seeing the results, explaining it to them because it is a useful alternative adjunct. I see acupuncture as something that I do. WMA 19 I think there's a fundamental	in terms of the things we understand about health and wellbeing in acupuncture… I make decisions about how I live and what choices I'm gonna make and acupuncture has an impact on that. … I definitely identify as a medical acupuncturist. It forms a significant paradigm or construct as to how I view health and wellness as well as disease. And so it's an integral part of who I am both as an individual as well as a physician. … Well, it's been a

	difference between somebody who involves ideas of yin and yang and somebody who doesn't. WMA 13 using acupuncture as a physician, you have a very important tool that is non-pharmaceutical. WMA 27	part of my thinking and my activities for almost 40 years. So that's a pretty long time and it's had an impact on not only the choices I make in my personal life but the treatment or instructions I give to my patients as well as much of my schedule throughout the year in terms of traveling to either participate in leadership positions or teaching. TCM-MA 22 But I do think that an acupuncturist can improve themselves throughout their life. Clearly if they address their own spiritual issues. I would think it's their spiritual issues that are much more important than their head issues. TCM-MA 3 there shouldn't be any difference between your attitude outside the clinic and inside the clinic. TCM-MA 16
	Viewing themselves similarly as a person and as a professional	*Viewing themselves differently as a person and as a professional*
	Interviewer: Does acupuncture play a role in your personal life? *WMA 27*: No, not very much, only in that for my family I prefer to do acupuncture instead of giving drugs. … But no, my lifestyle is not different. … I'm an ordinary … doctor. … No, my life didn't change. Since I started acupuncture I still see myself as a professional nurse and university lecturer and whose role is to encourage students to learn, to improve their practice, to widen their horizons. But I've also now got the clinical aspect back and I see myself as a practitioner. WMA 19	Maybe 10 years ago I was shyer [with] colleagues to say, Well, I did acupuncture. It's part of my truth now so I just say it. TCM-MA 5 how I look at the rest of the world … I think that this has to do with learning acupuncture and a different way of looking at life, health and the understanding of life. TCM-MA 25 I've often said the whole reason I must have done a long course is to learn about myself. You know, I think you learn about your whole health, what kind of personality type you are, why you have the weaknesses that you do and then I think also knowing where your own health weaknesses are, it helps you manage your life better. … I mean, I suppose people would say well, I'm trying to live the life. I'm not very good at it but I'm trying TCM-MA 20

[a] All data were derived from the two sets of interviews; j indicates data from journal articles; t indicates data from textbooks
(References for all journal articles cited are available from the author).

TENSION BETWEEN WMAs AND TCM-MAs

WMAs and TCM-MAs mentioned the tension that developed between them since they continue to co-exist over time; the groups do not merge, one group does not become dominant or one group does not die out. Interviewees in the two groups talked about how they administer similar techniques and practices, sharing a similar identity as well as their common belief system of western science. However, WMAs and TCM-MAs also discussed how their very different interpretations of medical acupuncture led to friction between them. Members of both groups talked about having an open-mind to learning about alternative approaches which could help their patients, such as medical acupuncture. In general, interviewees mentioned that their similarities and differences were problematic since each group viewed medical acupuncture in a very different way.

Another common connection that almost all interviewees mentioned is that they view medical acupuncture as an alternative way to help their patients. However, they also said that disagreement arose between the groups because each group developed their own approach to helping their patients. The two groups mentioned they shared some similar techniques and practices but that TCM-MAs used different techniques and practices than did WMAs. The interviewees talked about the techniques they had in common such as western diagnosis and needling. But TCM-MAs also discussed performing a dual diagnosis on patients using both western and Traditional Chinese Medicine approaches. TCM-MAs additionally discussed how they went beyond what WMAs did by also administering Traditional Chinese Medicine techniques such as cupping and moxibustion. As well, each group gave examples of practices they shared such as getting to know their patients better. Nevertheless, WMAs told me about how they sought to form therapeutic relationships with their patients while TCM-MAs talked about integrating emotions and spirituality to become closer to their patients. Each groups talked about sharing some practices and techniques and not others, this is one of the ways interviewees described the tensions which arose between WMAs and TCM-MAs.

Interviewees from both groups mentioned they share a similar identity, background and training as a western health care professional. WMAs talked about retaining their identity as a western health care professional, even though they administered medical acupuncture. While they share a common identity and background with WMAs, because TCM-MAs integrate Traditional Chinese Medicine, they said this enabled them to construct a supplementary identity as a healing facilitator. They said that using both western science and traditional Chinese medicine together became part of how they view themselves.

Paradoxically, interviewees also said that friction between the two groups arose because each practices medical acupuncture with different belief systems. Western scientific beliefs form the cornerstone of the way both groups practice. Although medical acupuncture was originally based upon acupuncture learned in China, WMAs talked about their scientific view of medical acupuncture as being a way to differentiate themselves from those who practice Traditional Chinese Medicine. WMAs said they feel that, in western health care, their scientific approach to medical acupuncture should be dominant because both groups have a similar western scientific background and training. Some WMAs said they cannot understand why someone from a similar scientific background would create TCM-MA. Although they recognized they have much in common with WMAs, TCM-MAs talked about the philosophy and theory of Traditional Chinese Medicine as being integral to the way they think about medical acupuncture. Some TCM-MAs mentioned this causes tension between the two groups because of their belief that Traditional Chinese Medicine should be separated from medical acupuncture. The following quotes illustrate the tensions between the two groups as mentioned by TCM-MAs and WMAs:

> I am a defender of the values of enlightenment. We are becoming soft by enormous amounts of irrationality and I don't want to contribute to that. WMA 10

> an essential feature of medical practice, of medical thinking, is that it rejects ideas that are superseded. And to my mind, Traditional Chinese acupuncture ideas have been superseded and therefore need rejecting. And therefore I think there's a fundamental

> difference between somebody who involves ideas of yin and yang and somebody who doesn't. WMA 13

> it's not trivial, [medical acupuncture] is hard to learn. [The instructor] teaches the Chinese medicine model, but a lot of docs have trouble with it. It's hard for the western mind to wrap around [Traditional Chinese Medicine] concepts. So it's difficult and it doesn't attract all physicians. TCM-MA 11

> people don't take [medical acupuncture] up because it's an experiential concept ... Docs are used to reading about double-blind crossover trials saying that a drug worked or didn't work … I believe that acupuncture, they're kind of putting it on the same shelf. But it really is dramatic if you treat somebody with a difficult painful condition and the pain disappears ... You come to realize as well there's another modality here operating that we haven't thought about in western medicine. And I think that's one of the key things. TCM-MA 3

> if you read *Medical Acupuncture* by White and Filshie … you will see … people are really using a newer physiological based approach. They are treating tender points and they're treating dermatomes, they're supplied by nerves and they're using a very modern neurophysiological approach to acupuncture. … that is the opposition to Traditional Chinese acupuncture, that is the other side of the coin. TCM-MA 1

In summary, both WMAs and TCM-MAs discussed the different sources of tension between the two groups. In the interviews, individuals from the two groups talked about the "other" group in terms of their similarities and differences. WMAs and TCM-MAs told me that while they are aware of the efforts of the other group, they are more comfortable with their own approach to medical acupuncture. There is tension between WMAs and TCM-MAs because the underlying belief systems of each group overlap (i.e., western science) but TCM-MAs also utilize Traditional Chinese Medicine. One key area of disagreement between the two groups is whether or not medical acupuncture should be associated with the philosophy, theory, practices and techniques of Traditional Chinese Medicine. There is also tension between the groups as to whether WMA or TCM-MA should be considered the "correct" interpretation of medical acupuncture.

BRINGING THE DATA TOGETHER

The existing research about medical acupuncture portrays these professionals as a homogeneous, single group since both WMAs and TCM-MAs are western health care professionals, utilize the meaning system of western science and perform medical acupuncture practices and techniques. However, once you probe beyond the surface, the fundamental differences and tensions between the two groups become evident. My research shows that WMAs and TCM-MAs have different belief systems, practices and techniques as well as identities. By analyzing these differences and tensions between the two groups I help explain the sustaining of two competing categories at the micro-level.

Each of the three data sources (interviews, journal articles and textbooks) told a different part of the story about the sustaining of competing categories. The journal articles and textbooks provided general information about the background and history of the two competing categories of WMA and TCM-MA in western health care. The journal article data showed that WMA and TCM-MA articles have been published for over 40 years in both scientific and Traditional Chinese Medicine journals. This signaled that editors and peer reviewers enabled both WMA and TCM-MA articles to be published. The textbooks were the product of pulling together the different knowledge, approaches and vocabularies developed by each group. The interviews shed light on what occurred "behind the scenes" that cannot be seen in the journal articles and textbooks. The interviews illustrated that WMAs and TCM-MAs viewed their work, techniques, practices and identity in different ways.

My analysis demonstrates that the competing categories WMA and TCM-MA developed because they have different underlying support and resources. Each of the categories is supported by a different way of developing professional knowledge and a different group of professionals. WMAs considered their approach to medical acupuncture research as novel because they applied scientific methods and invented new research tools. On the other hand, TCM-MAs experimented with new ways to research medical acupuncture by employing both western and Traditional Chinese Medicine approaches. The different research

approaches are also reflected in how each group passes on its knowledge and beliefs to other medical acupuncture professionals. WMAs developed scientific educational programs that focus on neurology and anatomical aspects of medical acupuncture because this corresponds with their beliefs, education and research as a western health care professional. TCM-MAs taught and learned both Traditional Chinese Medicine and western approaches to medical acupuncture. The educational approach of TCM-MAs corresponds with their bringing together western science and Traditional Chinese Medicine. Overall, my research illustrates that each group developed different ways of approaching professional knowledge, published different types of research and passed these on through different educational programs.

WMAs and TCM-MAs also brought together the meaning systems of western science and Traditional Chinese Medicine in different ways. I show that the underlying beliefs of WMAs and TCM-MAs were different because each group described medical acupuncture using different vocabularies (i.e., words and concepts). These vocabularies are also used when members of each group interact through education and research and when they see patients. WMAs use the vocabulary from western science and TCM-MAs use a mix of vocabularies from western science and Traditional Chinese Medicine. It is important to note these are different ways to think about the two competing categories. This means that although both groups hold the meaning system of western science in common, TCM-MAs also integrate Traditional Chinese Medicine. WMAs viewed their scientific approach as a new western way to understand medical acupuncture. In contrast, TCM-MAs viewed their category as a more comprehensive approach to medical acupuncture because it incorporated vocabularies, practices and techniques from western science and Traditional Chinese Medicine.

The way in which WMAs and TCM-MAs experience and embody categories also differs. Both groups told me their education and background as western health care professionals affected their identity as a medical acupuncture practitioner. Both WMAs and TCM-MAs continued to view themselves as western scientists. For WMAs, their professional identity as a western scientist

underlies who they are and how they do their work. However, TCM-MAs said because they incorporated Traditional Chinese Medicine this changed the way they view themselves. TCM-MAs embodied medical acupuncture as part of who they are as a professional and as a person and it is part of their work and personal life activities and behavior. TCM-MAs spoke about having a dual identity as western scientists and healing facilitators. This group also told me that they have made marked changes to their personal identity and the way they view the world by incorporating the Traditional Chinese Medicine approach of body, mind and spirit. To do this, they incorporated emotions and spirituality as part of who they are as a professional and as a person.

Both groups discussed making changes to their work as a western health care professional who administers medical acupuncture. WMAs specialized in medical acupuncture needling techniques and treating a few conditions such as pain and musculoskeletal issues. WMAs also mentioned they try to tailor the diseases and conditions they use medical acupuncture for according to western research evidence. TCM-MAs integrated the Traditional Chinese Medicine philosophy of mind, body and spirit as well as administered dual western and Traditional Chinese Medicine diagnosis and treatment for their patients. TCM-MAs view themselves as having two meaning systems and sets of practices and techniques to draw from. Both groups also sought to improve their relationships and interactions with patients. WMAs formed therapeutic relationships to help patients physically improve while TCM-MAs broadened their approach to also include emotional and spiritual issues to help their patients improve their body, mind and spirit. TCM-MAs said they do this by using a mix of vocabulary from western science and Traditional Chinese Medicine when they perform medical acupuncture. These differences between the identity and performance of techniques and practices of the two groups help to sustain the two medical acupuncture categories in different ways.

Overall, my analysis shows that sustaining competing categories is protective because there is some overlap between the categories but also enough differences for them to remain separate categories. This enables the groups to

compare and contrast their two categories and capitalize upon their different social identities. Rao, Monin & Durand (2005) illustrated how the boundaries of existing categories soften when borrowing across categories occurs, but the two categories still remain separate and the chefs in each category retain their identity. In my case my analysis at the micro-level reveals that WMAs and TCM-MAs select meaning systems, techniques and practices from western science and share a common identity as western health care professionals. However, TCM-MAs also select meaning systems, techniques and practices from Traditional Chinese Medicine. In other words, WMAs "borrow" from one logic and TCM-MAs "borrow" from two available logics. My research also demonstrates that perhaps it is not the category itself, but the experiences, interactions and connections of those performing it that are most salient.

CONCLUSION

Together, the journals, textbooks and interviews offer a multi-faceted view of the sustaining of WMA and TCM-MA. As evidenced by my findings as a whole, I found that the way individuals in each group draw on belief systems, administer techniques and practices as well as view themselves is done in different ways. My research draws attention to the ways in which different groups perform, experience and embody competing categories at the micro-level. Figure 5 above displays the seven micro-processes that underpin the sustaining of competing categories. These are: 1. Describing medical acupuncture with different meaning systems, 2. Learning and teaching different approaches, 3. Conducting research in different ways, 4. Altering work processes and content, 5. Deepening relationships with clients, 6. Viewing their professional identity (dis)similarly and 7. (Re)Drawing the boundary between personal and professional identity. These seven micro-processes are connected to three key theoretical dimensions which shape the sustaining of competing categories: 1. (Re)assembling meaning systems, 2. Performing techniques and practices and 3. (Re)conceptualizing identity. More specifically, the three theoretical dimensions

were the ones that best explained and tied together the general micro-processes of sustaining competing categories.

CHAPTER 5
DISCUSSION

In my dissertation I seek to understand the sustaining of competing medical acupuncture categories: Western medical acupuncture (WMA) and Traditional Chinese Medicine medical acupuncture (TCM-MA). My main data is from the 38 interviews. I supplemented the interview analysis with a content analysis of 6100 journal articles and 11 textbooks to help document the existence of WMA and TCM-MA over time. My research question that I seek to answer in this discussion is: How are competing categories sustained?

I first discuss my insights into how competing categories are sustained. The rest of this chapter is organized according to my theoretical contribution: understanding the sustaining of competing categories through being performed and experienced by different groups in different ways. In each section, I discuss my research results in light of existing literature, emphasizing my contributions to knowledge.

THE SUSTAINING OF COMPETING CATEGORIES

Scholars imply that even though competing categories may emerge in a developing field, it will be difficult to sustain these (Kennedy, 2005; Ruef & Patterson, 2009). They suggest there are politics involved when different groups attempt to sustain a category in different ways (Bowker & Star, 1999; Jones et al., forthcoming; Kennedy, 2005; Zuckerman & Kim, 2003). Much of our understanding about categories is rooted in their relationship to other categories. Studies about categories largely overlook the nuances of social dynamics at the micro-level. That is, it is implicit in the literature that competing categories will not survive due to struggles for scarce resources and audiences. For this reason, it is likely that one of the categories will become dominant and be sustained. In some cases, another competing category can encompass different content (Lounsbury & Rao, 2004) or the identity of a competing group. The case of

medical acupuncture demonstrates that competition between different groups with different meaning systems, practices and techniques as well as identities fosters, rather than hinders, the sustaining of competing categories. However, we do not know as much about the social dynamics involved with competing categories. That is, does one of the competing categories become dominant while its competitors die out?

Kennedy (2005) and Lounsbury & Rao (2004) suggest that influential 3rd party actors such as the media impact the sustaining of categories. In addition, institutional scholars indicate that because categories are attached to institutional logics (Jones et al., forthcoming; Loewenstein, Ocasio & Jones, 2012), as long as institutional logics co-exist, categories will be sustained. But some categories may not be sustained. Jones et al. (forthcoming) indicate that the category modern architecture began to decline after over 100 years of existence and if "Modern Indian art" is not accepted by the art community (Khaire & Wadhwani, 2010), this new category is at risk of dying out since it might not be connected with other existing art categories. This research contributes knowledge about the micro-processes that are used to sustain competing categories. In particular, I found that experiencing a salient identity and connecting a category to a meaning system and practices are central for understanding sustaining.

Researchers have generally overlooked how competing categories can be sustained by different groups who utilize practices/techniques and meaning systems. I found that WMAs and TCM-MAs developed and passed on different sets of professional knowledge about medical acupuncture through research and education. In my case, competing categories are sustained because the two groups of professionals take education and teach courses as well as conduct and use research in different ways. Education serves the purpose of passing on and sustaining knowledge through training and perhaps indoctrinating new supporters. As well, the interviewees emphasized the importance of research which has the dual function of both generating knowledge and passing it on to others. More specifically, my findings show that producing different types of research help competing categories persist.

My findings show emotional attachment helps to sustain competing categories. Both WMAs and TCM-MAs are attached to their medical acupuncture identity and thus comfortable with their own approach. However, WMAs their category should be dominant given the common identity and background of both groups. Similar to Voronov & Vince (2012) and Walsh & Bartunek, (2011), my findings show that emotions are viewed by some professionals as a motivator to bring about change in what they do and how they do it. Emotions can be an integral part of how an individual performs their work (Hoschild, 1983; Van Maanen, 1991; Weick, 1979). But much of this literature about emotional labor focuses upon emotions as transactions, not as shared experiences between a client and employee (or in my case, professionals). For example, TCM-MAs discussed how they shared emotions with their patients to deepen their relationships and improve their ability to help and understand patients. Researchers additionally found that emotions are socially and physiologically expressed when they are embodied (Ekman et al., 1983). My work illustrates that categories can also be experienced and physiologically expressed (e.g., crying with patients) when professionals embody these as part of their personal and professional identity.

In the literature there is limited discussion about the everyday and routine work that goes into sustaining a category. My research illustrates that different groups perform their competing categories in their daily work in different ways using different objects. As an example, the primary object that WMAs use is the needle, which originally comes from Traditional Chinese Medicine. WMAs advanced needles (e.g., inventing the sham needle for clinical trials) and invented the electroacupuncture machine for administering electrical currents through the needle; WMAs associated electroacupuncture as a needling technique with medical acupuncture. WMAs also discussed using western objects such as lasers (i.e., laser acupuncture) and techniques such as trigger point needling (needling in sensitive muscle spots). On the other hand, TCM-MAs pushed the boundary of their professional practice by incorporating a variety of Traditional Chinese Medicine and western objects, techniques and practices. TCM-MAs used Traditional Chinese Medicine objects such as a spoon and oil for performing gua

sha (scraping the skin) and techniques such as bloodletting (pricking a blood vessel). This group also administered the same western practices and techniques (e.g., trigger point acupuncture) and used the same objects as WMAs (e.g., needles). These findings show that the different ways of performing practices and techniques by using different objects and techniques help each category be sustained by the two groups in a different way.

Research shows that multiple institutional logics can be sustained together over time (Goodrick & Reay, 2011; Lounsbury, 2007; Reay & Hinings, 2009) and drawn on in different ways by different groups (Purdy & Gray, 2009; Zilber, 2002). Because categories are closely connected with logics (Loewenstein, Ocasio & Jones, 2012), the findings show that the co-existence of multiple institutional logics can enable competing categories to be sustained. Therefore as institutional logics shift or new logics become available, there may be an opportunity for new categories to be created and existing categories may be affected (e.g., Jones et al., forthcoming; Mohr & Duquenne, 1997). My research provides insight into the emergence of competing categories when co-existing logics are available. Key to my case is that both the logics of western science and Traditional Chinese Medicine co-exist over time in western health care. WMAs and TCM-MAs draw on these co-existing logics in different ways, which helped sustain the two competing categories. As an example, TCM-MAs talked about utilizing the logics of both medical science and Traditional Chinese Medicine. On the other hand, WMAs shape their category with the logic of western science.

The literature illustrates how ambiguity about a category may be capitalized upon by different audiences (Fleischer, 2009; Negro, Hannan & Rao, 2011; Porac & Thomas, 1994) who interpret it in different ways (Fleischer, 2009; Porac et al., 1995). If an item spans multiple categories this can also foster ambiguity about its identity (e.g., Ruef & Patterson, 2009; Zuckerman, 2000). As well, if audiences are confused by a category's identity, it may be penalized (Hsu, Hannan & Koçak, 2000; Rao, Monin & Durand, 2005; Zuckerman & Kim, 2003). Thus, although a category has a certain degree of elasticity, there are also pressures for it to have a certain identity (Hsu, 2006; Hsu, Hannan & Koçak,

2009; Zuckerman & Kim, 2003). In particular, I demonstrate that ambiguity about a category's identity can be mitigated by the presence of competing categories with different identities.

This research shows that ambiguity about the identity of competing categories is lessened when audiences understand the meaning system(s) that each category is linked with. For example, the meaning systems of Traditional Chinese Medicine and western science were available in western health care. Each competing group was potentially able to select practices and techniques from both meaning systems when forming their identity. This dissertation research illustrates that the establishment of competing categories is protective because this enables groups to define what their category is in relation to what it is not. For example, interview participants talked about the "other" group in relation to how they viewed their group. Each competing category can then encompass the different viewpoints of different audiences and reduce ambiguity about its identity. Thus, this research shows that different audiences may not agree about the identity of a category and thus work to sustain their own competing category. These competing categories reflect the different expectations of each group.

I also add to our knowledge about how meaning systems, techniques and practices are performed in everyday work and the workplace to sustain competing categories. For example, TCM-MAs talked about utilizing the meaning systems and a variety of techniques and practices from both medical science and Traditional Chinese Medicine. On the other hand, WMAs told me they utilize the western scientific meaning system and techniques. WMAs also use a few Traditional Chinese Medicine needling techniques but not the wider variety that TCM-MAs talked about. My analysis showed that the two groups perform medical acupuncture on an ongoing basis and integrate it into their identities and work in different ways, thereby perpetuating its existence.

My study shows that the competing categories of WMA and TCM-MA are sustained by groups with different identities that draw on different meaning systems, practices and techniques. I next discuss the seven micro-processes with

respect to my theoretical contribution of how competing categories are sustained when they are performed and experienced in different ways.

PERFORMING AND EXPERIENCING COMPETING CATEGORIES

This research contributes to the categories literature. I found that the performing and experiencing of competing categories must be done in combination for these to be sustained. My research focused upon the sustaining of competing categories at the micro-level. I found that seven micro-processes contributed to the sustaining of competing categories: 1. Describing medical acupuncture with different meaning systems, 2. Learning and teaching different approaches, 3. Conducting research in different ways, 4. Altering work processes, content and rationale, 5. Deepening relationships with clients, 6. Viewing their professional identity (dis)similarly and 7. (Re)Drawing the boundary between personal and professional identity. Table 12 illustrates how WMAs and TCM-MAs have performed and experienced their categories in different ways.

Table 12. Performing and experiencing WMA and TCM-MA

	WMA	**TCM-MA**
Performing	**Fitting in** • Western diagnosis and treatment • Therapeutic connections with patients • Western needling techniques / education / research / vocabulary / meaning system • Select conditions / diseases • Inventing tools	**Expanding** • Dual diagnosis and treatment • Deep connections with patients • Western and TCM techniques education / research / vocabulary / meaning systems • Variety of conditions / diseases • Incorporating tools
Experiencing	**Preserving** • Retaining western scientist identity • Viewing themselves similarly	**Embodying** • Dual identity as western scientist and healing facilitator • Emotions and spirituality • Personal identity shift

Performing competing categories through (re)assembling meaning systems. The first three micro-processes, "Describing medical acupuncture with different meaning systems", "Learning and teaching different approaches" and "Conducting research in different ways" are connected by the theoretical dimension *(Re)assembling meaning systems* which captures how WMAs and TCM-MAs have studied, researched and passed on meaning systems in different ways. I next discuss how my findings about the (re)assembly of meaning systems contributes to our knowledge about how competing categories can be sustained by different groups.

Describing medical acupuncture with different meaning systems. Recently, Loewenstein, Ocasio & Jones (2012) discussed the connection between categories, practices and vocabularies (see also Meyer & Rowan, 1977; Mills, 1940). Suddaby & Greenwood (2005: 43) describe the term *institutional vocabularies* as "structures of words, expressions, and meanings used to articulate a particular logic" (see also Lowenstein & Ocasio, 2003). Suddaby & Greenwood distinguished proponents and opponents of a new organizational form by examining the institutional vocabulary that each group used to describe the form. They identified the different institutional vocabularies by analyzing testimony and reports from professional association hearings. The institutional vocabularies in this study were derived from analyzing the indices and tables of contents of TCM-MA and WMA textbooks.

My findings bring understanding about how different groups perform competing categories by using and combining available institutional vocabularies in different ways. Suddaby & Greenwood (2005) found that opponents and proponents of a new organizational form developed separate institutional vocabularies from two different institutional logics. My research found that WMAs used with their own familiar scientific institutional vocabulary such as "nerves" and "neurophysiology" to perform medical acupuncture. On the other hand, TCM-MAs expand their description of medical acupuncture by using a mix of institutional vocabularies from western science and Traditional Chinese Medicine. TCM-MAs incorporate Traditional Chinese Medicine institutional

vocabulary such as “meridians” and “qi.” Thus, WMAs fit in medical acupuncture with their scientific vocabulary while TCM-MAs combined scientific and Traditional Chinese Medicine institutional vocabularies to expand their performance of medical acupuncture. The scientific institutional vocabulary used by WMAs and TCM-MAs overlapped but TCM-MAs also incorporated a novel institutional vocabulary from Traditional Chinese Medicine. This highlights the malleability of institutional vocabularies that are utilized and combined by different groups to describe competing categories.

Learning and teaching different approaches and *Conducting research in different ways*. My findings help explain how competing categories are sustained through research and education. The data analysis showed that WMA and TCM-MA are supported by different groups, research knowledge, practices and techniques. WMAs and TCM-MAs developed and passed on different sets of research knowledge. Abbott’s work (1988; 1989) emphasizes that abstract knowledge is the “currency” of professions. Abbott called for more insight into the relationship between education and professions. I found that the two groups perform education in different ways. To illustrate, TCM-MAs developed courses that teach both western science and Traditional Chinese Medicine while WMA educational programs focused upon western scientific content. This study provides additional insight into how research is also key in the development and dissemination of professional knowledge. For instance, WMAs generally talked about research as something they <u>do</u> while TCM-MAs generally talked about research as something they <u>use</u>. The journal articles analysis shows that western scientific knowledge about medical acupuncture, mainly published by WMAs, is shared by both groups. However, TCM-MAs also said they value and incorporate non-western research about medical acupuncture, such as research conducted in China. This highlights that research is utilized differently by and plays a different role in the two groups. The findings illustrate that the WMAs perform medical acupuncture through fitting in educational approaches and research with the medical science approach while TCM-MAs perform medical acupuncture through expanding their educational programs and the research they access. This helps to

explain how the competing categories of medical acupuncture are sustained since their education and research have some commonalities but are also separate.

Performing competing categories through techniques and practices. In 2001, Barley & Kunda advocated for a deeper understanding of work at the micro-level (see also Barley, 1996). Literature about the micro-processes of work sheds light on the activities of individuals in the workplace (Barley, 1996; Barley & Bechky, 1994; Nelsen & Barley, 1997). These authors compare work across occupations (Barley, 1996; Bechky, 2003[a,b]), bringing insight into shared practices and ways of working. The end of the literature review discussed the gap in the literature pertaining to how competing categories are performed by different groups through interaction, behavior, activities and using objects. The two micro-processes of "Altering work processes, content and rationale" and "Deepening relationships with clients" provide insight into this gap.

My results show that WMAs and TCM-MAs perform their work another way by using different practices and techniques. This difference in work and the tools each group used support the sustaining of competing categories. Research shows that practices are guided by institutional logics (Goodrick & Reay, 2011; Reay & Hinings, 2009; Lounsbury, 2007; Schatzki, 2001) however, there is less insight into how institutional logics shape work at the micro-level (but see Lok, 2010). I add to knowledge about work and logics at the micro-level because my findings show that the administration of techniques and practices is shaped in different ways by different meaning systems. In particular, I find that WMAs selective administration of practices and techniques is shaped by the meaning system of western science and their identity as a western scientist. The work of TCM-MAs was influenced by the meaning systems of western science and Traditional Chinese Medicine. Through performing techniques and practices in different ways and drawing on different meaning systems, both TCM-MAs and WMAs developed another way to approach their work. To enact their different ways of helping patients, both groups performed certain activities, behaviors, practices and techniques and not others. In particular, the TCM-MAs utilized the practice of sharing emotional and spiritual issues with their patients and

administered a variety of techniques such as needling and cupping, expanding how they performed medical acupuncture in their daily work. WMAs selectively fit in certain practices and techniques as a part of their work.

This tells us that the features of competing categories may not be as important as how different audiences such as individuals and professionals perform (and experience) them. Barnes (2001) cautions that, unlike Turner (1984), we must be cognizant that practices are performed by individuals involved in social relationships and interactions. The social identity and category literatures also suggest that categories play a role in our interactions and social relationships. I address this gap in our knowledge about how competing categories are performed by different groups at the micro-level by finding that WMAs fit in medical acupuncture to their work while TCM-MAs expand what they do to accommodate medical acupuncture. As Lakoff (1987) points out, our activities and behavior help define a category.

Altering work processes, rationale and content. Pratt, Rockmann & Kaufmann (2006) define "work content" as what professionals do and "work process" as how they do it. I developed a third concept of "work rationale" – why they do it. Pratt, Rockmann & Kaufmann studied medical residents who had little control over their work while I studied professionals who had a considerable amount of control over their work. My research found that WMAs and TCM-MAs differentiated their work content and processes by selecting and administering different practices and techniques. My results also show that meaning systems shaped which practices and techniques each group used. Thus, the underlying motive for why they did work in a certain way differed. For example, WMAs specialized in treating a few conditions and diseases with needling because these conditions and the tool of needling are supported by western science. In contrast, TCM-MAs perform a western and Traditional Chinese Medicine diagnosis on patients because their work is shaped by both the western science and Traditional Chinese Medicine meaning systems. Although WMAs and TCM-MAs perform some of the same techniques (e.g., needling) their underlying rationale for administering these techniques differs.

Studies of practice variation have increased awareness about the assortment of practices that are available when meaning systems co-exist (Lounsbury, 2007; 2008). This research provided insight into how different groups behave in different ways when creating, adopting and utilizing novel practices and techniques (Lok, 2010; Lounsbury & Crumley, 2007; Purdy & Gray, 2009; Reay & Hinings, 2009). In particular, WMAs and TCM-MAs take up practices and techniques in different ways. This variation is shaped by the meaning system(s) each group draws on. However, I also found that practice variation occurs between and within logics. For instance, TCM-MAs have the option of administering 19 western science and 30 Traditional Chinese Medicine practices and techniques. Thus, each TCM-MA has the potential option of using a variety of practices and techniques that are connected with two different meaning systems. Because individual TCM-MAs take up techniques and practices in different ways this generates variation between and within the logics they use. As well, since the practices and techniques associated with two meaning systems have been incorporated in different ways by WMAs and TCM-MAs, this variation developed into different ways to approach their work. Accordingly, practice variation to fit into or expand the work of both groups is key in the sustaining of competing categories.

Zilber's (2002) study found that new professionals in an organization administered feminist practices using their therapeutic meaning system. This is because the new professionals were unaware that the practices originally came from the feminist meaning system. In my case, WMAs administer a few needling techniques using the western science meaning system even though these techniques come from Traditional Chinese Medicine. WMAs focus upon needling techniques because the concept of needling already exists in western science and because this is closely aligned with their identity as western scientists. I add to the literature about the relationship between meaning systems and practices by showing that some individuals may borrow some techniques and practices associated with a co-existing logic because these are closely related to techniques and practices that already exist. The data from TCM-MAs also showed that this

group used meaning systems, practices and techniques from both western science and Traditional Chinese Medicine because they have a dual identity as western scientists and healing facilitators. These differences between the two groups illustrate that when a logic becomes available, groups may ignore it, adopt some practices but not the meaning system or incorporate both the meaning system and practices.

Deepening relationships with clients. This micro-process encompasses the different approaches that WMAs and TCM-MAs took to become closer with their patients. This shows how WMAs and TCM-MAs performed medical acupuncture in different ways. The burgeoning institutional literature suggests that individuals take action when they are emotionally involved in a cause or problem (Gutierrez, Howard-Grenville & Scully, 2010; Pratt & Dutton, 2000; Voronov & Vince, 2012). My work shows that competing categories are sustained because different groups become emotionally invested in a particular category. As well, to different degrees, WMAs and TCM-MAs demonstrate that integrating emotions into their performance of medical acupuncture helps sustain their competing categories. Hence, my work shows that not only do emotions help instigate change (i.e., the performing of competing categories in different ways), the emotional investment of groups also fosters the sustaining of competing categories.

Much of the research about emotions in the workplace focuses upon outward expressions and displays of emotions such as smiling. In some professions, emotions are considered to be an integral part of their work role (Rafaeli & Sutton, 1987; 1990). As such, an individual's work setting and the role they perform can also affect their expression of emotion. Most of the research in this area examined work roles that deal with the public; as part of their work role, individuals are required to act a certain way (Hoschild, 1979; Van Maanen, 1991).Weick (1979) also developed a model about emotional transactions between employees and customers. My research develops our understanding about emotions at work to include shared emotional experiences between professionals and clients. For example, TCM-MAs spoke about forming a close bond with their patients and sharing emotional and spiritual matters with their

patients. This expands how they regard their work as a western health care professional. To some degree, WMAs said they discussed emotions with their patients when they told me about the (social)-psychological approaches they used to get to know their patients better. WMAs fit emotional discussions into their regular approach to patients. Thus, my finding show that emotions can be viewed as a shared experience at work and used to develop better client-professional relationships.

My research also suggests that a professional's own emotions and those of their client can affect their work and relationships with clients. In contrast, scholars mainly focus on the management, transaction and suppression of emotions (Creed, DeJordy & Lok, 2010; Rafaeli & Sutton, 1987; 1990; Weick, 1979). In general, this literature suggests that emotions are to be managed rather than capitalized on, encouraged and shared between employees and clients (Cahill, 1999; Hochschild, 1979). I discovered that sharing emotions with their patients was core to how TCM-MAs performed medical acupuncture in the workplace. TCM-MAs embodied emotions as part of who they are and how they performed their category. By considering the improvement of spiritual and emotional issues to be as important as improving physical problems, TCM-MAs expanded the boundary of their work as western health care professionals.

Spirituality is often explored by management researchers as a profession or calling (Creed, DeJordy & Lok, 2010), an expression of religious beliefs (Gutierrez, Howard-Grenville & Scully, 2010) or as tied to organizational goals and transformation (Bell & Taylor, 2003; Boyle & Healy, 2003). There is less emphasis on the performance of spirituality as a part of one's work. In my study, TCM-MAs talked about spirituality as a way of being, as an integral part of their identity and who they are as a person. Spirituality became part of the everyday work and lifestyle of TCM-MAs, it helped them develop relationships with clients and also connected them to like-minded practitioners. The TCM-MAs interviewed saw spirituality as part of who they were which helped them cultivate deep relationships with their patients, expanding how they performed their work. Unlike Fairholm's (1996) perception of spirituality as "something intangible

beyond the self" (Bell & Taylor, 2003: 332), TCM-MAs identified spirituality as being part of who they are as a person and as a professional. This group internalized and embodied spirituality both as an integral part of their work as a professional and who they were as a person.

TCM-MAs talked about sharing spiritual experiences with their clients. Spirituality is an integral part of how they perform medical acupuncture (see also Boyle & Healy, 2003) because TCM-MAs integrate the Traditional Chinese Medicine concept of "mind, body and spirit" into their work. This is an interesting finding because TCM-MAs highlight that there may be a connection between emotions, spirituality and the performance of categories. This also opens up the possibility that the concept of emotional capital can be expanded to include both spirituality and emotions. Emotional capital is defined as knowledge, contacts and relations as well as emotionally valued skills and assets that are shared within the context of relationships (Cahill, 1999; Nowotny, 1981). Because TCM-MAs share emotional and spiritual relationships with clients, this could also be considered another form of emotional capital rather than an emotional transaction. Because this is a nascent area of research, there is opportunity for theorizing about the role of spirituality in performing work.

Experiencing competing categories through (re)conceptualizing identity. The last two micro-processes of "Viewing professional identity (dis)similarly" and "(Re)Drawing the boundary between personal and professional identity" are connected by the theoretical dimension *(Re)conceptualizing identity*. My findings show that identity (re)conceptualization is connected to how a person views themselves as well as broader meaning systems. Different perceptions of identity are another way to help explain the sustaining of competing categories at the micro-level. The literature review drew attention to the lack of knowledge about how categories are experienced and embodied by individuals in different ways. Below, I explain how different perceptions of personal and professional identity are important to furthering our understanding about how individuals differentially experience and embody competing categories.

Viewing their professional identity (dis)similarly. Professional identity research examines a person's beliefs, values and experiences as well as how their identity can evolve (Ibarra, 1999; Schein, 1978). Professional identity scholars explore the impact of socialization (Pratt, Rockmann & Kaufmann, 2006) and workplace roles (Ashforth, 2001; Chreim, Williams & Hinings, 2007) upon the way a professional views themselves. We also understand how role changes can affect how a person sees themselves as a professional (Ibarra, 1999). The organizational identity literature suggests that during the identity changing process there is a conscious consideration of "who are we going to be" (Corley & Gioia, 2004; Fox-Wolfgramm, Boal & Hunt, 1998). My research illustrates that the consideration of issues such as "who I am as a professional" and "who do I want to become as a professional" is a micro-consideration that helps sustain competing categories.

Identity researchers found that different professionals perform different work according to how they see themselves (Pratt, Kaufmann & Rockmann, 2006). As an example, Mohr & Duquenne (1997) find that different social work professionals classify the poor into social categories like destitute, homeless and needy. This classification process may occur differently according to how each professional perceives their budding identity as a social worker. Ibarra (1999) found that professionals experienced an identity shift when their work role changed. My research found that WMAs preserved their identity as a western scientist even though their work changed when they incorporated medical acupuncture. However, TCM-MAs experienced a change in their professional and personal identity because they incorporated another meaning system, practices and techniques into their work. TCM-MAs talked about having a dual identity as a western health care professional and healing facilitator; thus they embodied their category as part of their identity. We learn from TCM-MAs that individuals can experience a shift in their professional and personal identity by incorporating multiple meaning systems, practices and techniques.

Researchers suggest that a professional's identity is reflected in their behaviors, roles, practices and activities (Chreim, Williams & Hinings, 2007;

Ibarra, 1999; Pratt, Rockmann & Kauffman, 2006). My research finds that groups with different professional identities sustain competing categories instead of a single category becoming dominant. This can add to our understanding about professional identity by showing how it shapes the sustaining of social identity categories. During the interviews, WMAs told me their professional identity as a western scientist was not different even though their work changed when they began to administer medical acupuncture. This similar perception of how WMAs see themselves is shaped by their strong identity as western scientists. Thus, even though their work changed, WMAs continue to think about themselves similarly. As I discussed above, TCM-MAs talked about experiencing a shift in their professional and personal identity when they integrated the Traditional Chinese Medicine meaning system, practices and techniques.

The workplace, the work itself, professional associations and other external audiences (e.g., clients, government) shape how professionals view and enact their identity. Professionals may form their identity around an organization or their profession (Greenwood, Suddaby & Hinings, 2002; Pratt, Rockmann & Kaufmann, 2006). This implies that if an individual changes careers or organizations their identity may change. My research finds that TCM-MAs view themselves differently when they adopt novel practices and techniques into their work while WMAs do not. I show that when a professional integrates novel practices, techniques and meaning systems into their work, this affects their identity. My research also shows that because different groups of professionals are members of different categories, this helps to sustain the different categories.

(Re)drawing the boundary between professional and personal identity. How we regard ourselves is reflected in our behavior (Goffman, 1959) and how we classify ourselves into social categories (Hogg & Abrams, 1988; Turner, 1987). Social identity theory (SIT) tells us that individuals may behave differently according to environmental cues and commonly held beliefs about their identity (Ashforth, 2001). SIT research highlights that individuals classify themselves into some social categories and not others (Ashforth & Mael, 1989; Hogg & Terry, 2000; Tajfel, 1982). Through SIT, we also learn that individuals view themselves

as being part of in-groups ("we") and not as part of out-groups ("they"). My research found that both WMAs and TCM-MAs utilized the concepts of "us" and "them" when talking about the professionals in the "other" medical acupuncture category. This enriches our understanding about the interactions between different groups who place themselves in different social categories. My work also highlights how the perception of oneself as a member of a category and not another, helps sustain competing categories. For example, interviewees self-classified into either the WMA or TCM-MA category. Because each group views their identity differently, this supports the continued existence of both categories.

My research helps to increase our knowledge about the relationship between personal and professional identity. WMAs told me they continued to regard their personal and professional identity in a similar way while TCM-MAs told me that they think about themselves differently both as a person and as a professional. In general, TCM-MAs saw learning medical acupuncture and Traditional Chinese Medicine as a lifelong journey which helped them develop as both a person and a professional. TCM-MAs told me that they often learn about and practice Traditional Chinese Medicine philosophy and activities (e.g., qi gong, meditation) in their spare time. Because their dual identities overlap their work and personal spheres, this blurred the boundary between the personal and professional identity of TCM-MAs. Interestingly, a few WMAs told me that they administer medical acupuncture to their friends and family outside of work. Despite the intrusion of medical acupuncture into their personal time, WMAs viewed medical acupuncture as another tool they use in their work which does not impact who they are as a person. My research suggests that for some groups and individuals there is a stronger link between their personal and professional identity. That is, the identity of some individuals spills across the work-personal boundary.

CONCLUSION

My dissertation research outlined seven micro-processes that help us to better understand the sustaining of competing categories through being

experienced and performed: 1. Describing medical acupuncture with different meaning systems, 2. Learning and teaching different approaches, 3. Conducting research in different ways, 4. Altering work processes, content and rationale, 5. Deepening relationships with clients, 6. Viewing their professional identity (dis)similarly and 7. (Re)Drawing the boundary between personal and professional identity. It illustrated how the two competing categories of WMA and TCM-MA were sustained because these micro-processes were done in different ways by the two groups.

Contrary to what would be expected in the literature, my research shows that in some cases the existence of competing categories may not be a temporary state. My study is important because it demonstrates that competing categories may be sustained over time. Empirically, my findings demonstrate how different groups perform and experience competing categories in different ways. As an example, WMAs fit in medical acupuncture to their work and preserve their identity while TCM-MAs expand their work and embody the category as part of their dual identity. Due to the availability of co-existing meaning systems with different sets of practices and techniques, I found that instead of a single category existing, competing categories were sustained by different groups with different identities. This enriches our understanding about the sustaining of competing categories by linking this to practices, techniques and identity. My research also found that the sustaining of competing categories is protective because these categories provide a point of comparison and are performed and experienced by different groups in different ways.

CHAPTER 6
CONCLUSION

The finding that competing categories can be sustained over time contributes to the categories literature. There is an assumption that categories are a temporary phenomenon and that one category will become dominant. My research shows that competing categories can be sustained over time without one becoming dominant. We can also understand change and stability in fields based on whether categories are sustained or die out. This research shows that the interconnection of a salient identity, meaning systems and practices leads to the self-perpetuation of competing categories. That is, the differences between the way categories are experienced and performed become solidified in identity, practices and behaviors.

This research shows how the interplay between social groups with different identities who draw on different meaning systems and different practices/techniques help sustain them over time. This helps us understand the strength, longevity and protectiveness of categories. Competing categories developed over time can protect each other because each addresses and encompasses the different identities, expectations, meaning systems and practices of a particular group. In general, this dissertation illustrates the performing and experiencing of competing categories by different groups in different ways.

I begin this section with a discussion about my contributions to knowledge concerning the sustaining of competing categories. Following this, I outline my theoretical contribution about the performing and experiencing of competing categories. I then highlight areas for further development and conclude my dissertation.

THE SUSTAINING OF COMPETING CATEGORIES

Implicit in the literature is the idea that the presence of competing categories is a temporary phenomenon (Kennedy, 2005). I address this underlying

assumption because the findings show that competing categories may co-exist for several reasons. First, competing categories can be tied to co-existing logics in different ways. For example, WMAs draw on the logic of western science while TCM-MAs draw on the co-existing logics of western science and Traditional Chinese Medicine. Second, each of the competing categories is supported by a different group with a different identity. These different groups also administer different practices and techniques that are associated with a different meaning system. This discovery is somewhat contrary to Jones et al. (forthcoming) who find that the category "modern architecture" encompasses groups that adhere to different logics. Thus, I add to our knowledge about how some competing categories are formed when different groups with different identities draw on co-existing logics in different ways.

From the categories literature, we can postulate that the sustaining of a category may be linked to influential actors (Kennedy, 2008; Lounsbury & Rao, 2004), institutional logics (Jones et al., forthcoming) or its placement within an existing classification system (Bowker & Star, 1999; Rosa et al., 1999). This research provides insight into the sustaining of categories which is largely overlooked by category researchers. In this case, competing categories were sustained for over 40 years. My findings indicate that competing categories were sustained by different groups. In particular, I found that publishing different types of research on different topics and delivering different educational programs laid the foundation for sustaining categories. More specifically, the two categories I study were sustained by two groups of professionals with different identities, different meaning systems as well as different practices and techniques. As an example, TCM-MAs utilize both western scientific and Traditional Chinese Medicine practices and techniques.

The micro-processes of sustaining identified for WMA and TCM-MAs are found in: activities (i.e., performing practices and techniques), behavior (i.e., deepening relationships with patients) and identity (discussed below). This research helps us to better understand how different groups perform techniques and practices to sustain competing categories. The two groups studied developed

very different approaches to sustaining their competing categories through performing different practices and techniques in different ways. As an example, TCM-MAs develop deep emotional and spiritual relationships with their patients. This research helps to further understanding about sustaining at the micro-level by demonstrating that emotions, spirituality and relationships are tied to this process. I seek to extend Voronov & Vince's (2012) theorization about emotional investment by showing that not only do some groups have an emotional investment in their category, some also use emotions as part of their behavior with patients. I also show that the sustaining of categories occurs when different groups continue to perform practices and techniques in different ways over time. These groups pass on these different ways of performing to others through education and research.

The literature suggests that linking categories to institutional logics can help sustain these. This research shows that categories may be sustained by co-existing logics. I illustrate how WMA is sustained by being linked to the logic of western science while TCM-MA is sustained by the co-existing logics of western science and Traditional Chinese Medicine. Thus, this research demonstrates that categories can be sustained when groups utilize co-existing logics in different ways. This also contributes to our knowledge about how logics are drawn on at the micro-level. Scholars suggest that there is an association between the availability of institutional logics and the sustaining of categories (Loewenstein, Ocasio & Jones, 2012; Lounsbury, 2007). This means that groups are able to select from multiple meaning systems, practices and vocabularies. At the micro-level, this work illustrates how two different groups differentially incorporate meaning systems, practices and institutional vocabularies from the existing logic of medical science and Traditional Chinese Medicine.

My research uncovers that the sustaining of competing categories is protective for two reasons. First, different groups can mitigate politics by forming their own category. Hence, each competing category can be separately shaped according to the expectations of the different groups. Second, if competing categories co-exist, groups are able to compare their category to the other

category(ies). This can enable each group to further define the features of their category in comparison to the other categories (e.g., WMAs define their category in relation to what it does not include, Traditional Chinese Medicine while TCM-MAs include Traditional Chinese Medicine in their category). Thus, my research contributes to our understanding about the potential protectiveness of competing categories in order to mitigate politics and ambiguity as well as facilitate comparison.

Performing competing categories through (re)assembling meaning systems. The findings show that WMAs fit in medical acupuncture with the western science meaning system. TCM-MAs expanded their interpretation of medical acupuncture by using the institutional vocabularies from both the meaning systems of western science and Traditional Chinese Medicine. Loewenstein, Ocasio & Jones (2012) contend that categories are connected to (institutional) vocabularies (Suddaby & Greenwood, 2005). Thus, there is room in this literature to contribute to our understanding about how institutional vocabularies are put together to fit or expand competing categories. This research links the sustaining of competing categories to institutional vocabularies associated with institutional logics. Unlike Suddaby & Greenwood's (2005) findings, I find that different groups use and combine institutional vocabularies in different ways. WMAs use only the western scientific institutional vocabulary to describe medical acupuncture while TCM-MAs use a mix of western scientific and Traditional Chinese Medicine institutional vocabularies. My research contributes knowledge about how different groups use and combine institutional vocabularies to describe categories. This highlights that institutional vocabularies can be used in different ways by different groups to give meaning to different categories.

Performing competing categories through practices and techniques. Our understanding about work at the micro-level highlights what individuals or groups do and how it is done (Barley, 1996; Pratt, Rockmann & Kaufmann, 2006). Researchers have specifically examined work routines (Feldman & Pentland, 2003), processes (Pratt, Rockmann & Kaufmann, 2006) and activities

(Barley, 1986) at the micro-level. Research about categories can also benefit from a micro-understanding about how categories are enacted through practices and techniques. Although we understand how different groups share and do work (Bechky, 2003[a,b]), this research provides further insight into groups who do similar work that is guided by different meaning systems by illustrating that how TCM-MAs and WMAs perform their work (work process) and what they do (work content) are different. I also add the concept of "work rationale", why they do their work. To illustrate the different approaches to work rationale, the practices and techniques that WMAs perform are shaped by the meaning system of western science. WMAs select certain practices and techniques because of how they perceive themselves and their work as a western health care professional. On the other hand, TCM-MAs draw upon the two logics of western science and Traditional Chinese Medicine. TCM-MAs also choose a wider variety of practices and techniques from both western science and Traditional Chinese Medicine. This suggests that WMAs perform medical acupuncture in different ways because they have different identities.

Although we know that practices, categories and institutional logics are connected (Jones et al., forthcoming), my research enhances our knowledge about other micro-processes, such as performing techniques and deepening relationships with clients, that are used to sustain categories at the micro-level. The practice variation literature tells us that if institutional logics are available, a wider variety of practices and techniques may also be available to field actors (Lounsbury, 2007). However, even if a variety of practices and techniques are available, this does not mean that they will be taken up by individuals or groups in the same way. To help us better understand the uptake of practices and techniques at the micro-level, my research shows that practice variation amongst individuals in each group occurs not only between, but also within the group. To provide an example, TCM-MAs could potentially administer 19 western and 39 Traditional Chinese Medicine techniques and practices. However, for various reasons, each individual professional told me he or she administers some of the 49 techniques and practices and not others. In contrast, WMAs mainly performed the 19 western

practices and techniques. WMAs selected a few Traditional Chinese Medicine needling techniques because the concept of needling already exists in western health care. The results of this study show that some techniques and practices may be selected from co-existing institutional logics because they are similar to those that already exist.

This research contributes to a growing discussion about emotions in institutional theory (for example, a meeting about emotions in organizational theory was held at the AOM 2011 annual meeting and sessions about "Institutions and emotions" were held at EGOS 2012 Colloquium). It adds another dimension to our understanding about spirituality in the workplace. Emotions research mainly focuses on how emotions are displayed and exchanged between clients and customers (Hoschild, 1983; Weick, 1979). This research brings out the shared experience of emotions and spirituality between clients and customers. Thus, categories can be experienced, not only performed. The Traditional Chinese Medicine concept of "mind, body and spirit" shapes the work of TCM-MAs who share emotional and spiritual experiences and issues with patients. I also discovered that TCM-MAs consider the improvement of emotional and spiritual issues to be as important as a patient's physical improvement which is a shift away from the traditional medical focus on the physical. Because TCM-MAs develop and invest in emotional and spiritual relationships with their patients, this emotional capital (Nowotny, 1981) impacts their work and how they perform practices and techniques. This opens up the possibility for institutional researchers to explore emotions and the building of emotional and spiritual capital as an integral part of work. Because much of the literature about emotions focuses upon motivations for change efforts, this research shows that when different groups become emotionally invested in their category, this also helps to sustain it.

Experiencing competing categories through (re)conceptualizing identity. We know that there can be some degree of ambiguity about the identity of a category as interpreted by different groups (Jones et al., forthcoming; Negro, Hannan & Rao, 2011). We know that not all categories are mutually exclusive and their features can overlap, which can create ambiguity about the identity of a

category (Porac & Thomas, 1994; Rao, Monin & Durand, 2005). The identity of categories is developed by groups through interaction, practice and language use (Jones et al., forthcoming). The results of this study suggest that the identities of competing categories are developed by building different professional knowledge bases about medical acupuncture. For instance, TCM-MAs integrated Traditional Chinese Medicine history and philosophy as well as western scientific research into their category. TCM-MAs also created and took medical acupuncture education that combines western science and Traditional Chinese Medicine. On the other hand, WMAs created a western scientific approach to medical acupuncture education and research. WMAs developed scientific identity for their category by conducting research, publishing articles, writing textbooks and developing educational programs. While the literature tells us that interactions, practice and language are important for communicating category identity, my research adds that fundamental written and educational knowledge is also read, produced, critiqued, and passed on by different groups of professionals who form the identity of categories.

This study found that both professional and personal identity influence the competing categories that different groups of professionals sustain. WMAs preserve their identity as a western scientist while TCM-MAs told me they embodied Traditional Chinese Medicine as part of their personal and professional identity. The literature suggests that groups may sustain a category as part of their identity (Jones et al., forthcoming) and thus we can postulate that identity plays a role in the sustaining of competing categories. We know that professionals have socially accepted identities and behaviors that are activated by expectations, roles, contexts or social cues (Ashforth, 2001; Chreim, Williams & Hinings, 2007; Freidson, 1970; Pratt, Rockmann & Kauffman, 2006). My study found that some groups of professionals want to be associated with certain categories and not others. In particular, I show that categories are sustained by groups who conceptualize their identity differently.

As well, this research demonstrates that professionals can experience a shift in their identity as they experience a category. This brings insight into the

relationship between who professionals are and the work they do (Creed, Dejordy & Lok, 2010; Pratt, Rockmann & Kaufmann, 2006; Watson, 2008). This study shows that both personal and professional identity shape how competing categories are interpreted in different ways by different groups. Specifically, it demonstrates how TCM-MAs expand the boundaries of their identity as a western scientist by incorporating Traditional Chinese Medicine. TCM-MAs sustained a dual identity as both medical scientists and healing facilitators. In comparison, WMAs continue to view themselves as medical scientists. WMAs preserved their identity, even though their work and career may have changed when they incorporated medical acupuncture. This tells us that identity has a relationship with the sustaining of competing categories. This also shows that identity research needs to take into account that some professionals such as WMAs do not change their identity when they experience work and career changes while others such as TCM-MAs do.

In this study, some groups (re)draw the boundary between personal and professional identity. That is, for TCM-MAs there is a strong relationship between who they are as a person and their identity as a professional while for WMAs this relationship is weaker. WMAs consider their professional identity as being different from their personal identity. In contrast, TCM-MAs perceive their personal and professional identity as overlapping in significant ways. When TCM-MAs made changes to their work by incorporating Traditional Chinese Medicine, they also talked about making significant changes in their personal life. To illustrate, many TCM-MAs talked about learning Traditional Chinese Medicine as a lifelong journey that helps them continue developing themselves as a person and as a professional. Because TCM-MAs and WMAs perceive themselves as a member of one category and not the other, this also enables them to compare and sustain their categories in relation to the other category.

This research finds that some categories are experienced and embodied by the individuals who use them. TCM-MAs discussed how they embodied their category as a shift in their personal and professional identity as well as a shift in their deeper relationship with patients. That is, TCM-MAs embodied emotions

and spirituality as a part of their identity and the way they perform medical acupuncture. Building from the social identity theory literature, my data illustrates there are degrees of embodiment of a category; for TCM-MAs their category becomes a part of who they are and what they do, while WMAs do not embody their category to the same degree. I show that categories can be sustained by different groups who experience and embody them to different degrees.

AREAS FOR FURTHER STUDY

This study provides insights concerning how categories are sustained at the micro-level. In general, further research is needed to better understand and compare the conditions under which categories are sustained. More specifically, it would be helpful to know more about how politics, ambiguity, emotions and spirituality can contribute to the sustaining of competing categories. There is also a more general gap in the institutional exploration of spirituality and emotions as workplace practices and motivators for change. My research also points out that emotional investment in competing categories may lead to their being sustained. The exploration of identity work as a result of daily work, practices, techniques, meaning systems and workplace/setting also provides a way for us to better understand how different groups of professionals sustain categories.

In general, there are three stages of category development: construction, sustaining and dying out or declining. This study begins to provide knowledge about the second stage, but we still know little about the third stage. As an example, the literature hints that categories may die out when institutional logics are no longer available in a field. It would be fruitful to explore what happens to categories when institutional logics shift. We know that actors need to be motivated in order to maintain institutions but we know less about the motivations behind performing maintenance work.

Because the conception of institutional vocabularies is relatively new, it would be interesting to explore how the same institutional vocabulary has different meaning when it is used in different contexts and by different groups.

Along the same lines, we should examine groups that are guided by different logics but who do the same or similar work. This could also lead to further understanding about the relationship between work content, process and rationale and identity.

RESEARCH LIMITATIONS

This dissertation research has three main limitations. First, the generalizability of a qualitative case study in a single empirical setting may be limited to that particular setting and/or group studied (Lok, 2010; Yin, 2009). My qualitative results suggest that there is a relationship between the sustaining of categories and identity, meaning systems, techniques and practices. However, my study cannot assess causality and is more aptly positioned on its transferability and comparability with other cases (Lincoln & Guba, 1985; 2002). Second, although I interviewed individuals who self-classified into WMA and TCM-MA, it can be difficult to analytically separate the individual from the group. In addition, because I used interviews as the main data source, I was dependent on the recalled memories of individual professionals who sometimes struggled to make sense of their personal, subjective experiences. Third, my interviewees were professionals (i.e., physicians) many of whom were in private practice and had more autonomy in their work (Abbott, 1988; Pratt, Rockmann & Kaufmann, 2006). The particular setting and the ability of professionals to integrate novel techniques and practices at their discretion may affect the transferability of my findings.

CONCLUSION

Through examining the micro-processes that underlie the sustaining of competing categories, I show that different types of practices, techniques and groups with different identities help to sustain categories. In particular, my study found that competing categories are sustained because: 1. Co-existing logics remain available in a field, 2. Groups draw on meaning systems, practices and techniques in different ways and 3. Individuals perceive themselves and perform

work in different ways. My work shows that forming categories together is protective because this enables different groups to define the features of their category and reduces ambiguity about the competing categories. I hope the insights from my dissertation work will provide institutional scholars with the opportunity to better understand the sustaining of competing categories at the micro-level.

BIBLIOGRAPHY

Abbott, A. 1988. ***The system of professions: An essay on the division of expert labor***. Chicago: University of Chicago Press.

Abbott, A. 1989. The new occupational structure: What are the questions? ***Work and Occupations***, 16: 273-291.

Abgrall, J. M. 2001. ***Healing or stealing? Medical charlatans in the new age***. New York: Algora.

Anderson, A. 2000. ***Snake oil, hustlers and hambones: The American medicine show***. Jefferson, NC: McFarland & Company.

Anteby, M. 2010. Markets, morals, and practices of trade: Jurisdictional disputes in the U.S. commerce in cadavers. ***Administrative Science Quarterly***, 55: 606-638.

Aristotle. 1938. ***Categories on interpretation: Prior analytics*** (H. P. Cooke, & H. Tredennick, Trans.). Cambridge, MA: Harvard University Press.

Ashforth, B. E. 2001. ***Role transitions in organizational life: An identity-based perspective***. Mahwah, NJ: Erlbaum.

Ashforth, B. E., & Mael, F. 1989. Social identity theory and the organization. ***Academy of Management Review***, 14: 20-39.

Aung, S. K. H., & Chen, W. P. D. 2007. ***Clinical introduction to medical acupuncture***. New York, NY: Thieme.

Baker, G. & Morris, K. J. 1996. ***Descartes' dualism***. London: Routledge.

Barley, S. R. 1986. Technology as an occasion for structuring: Evidence from observations of CT scanners and the social order of radiology departments. ***Administrative Science Quarterly***, 31: 78-108.

Barley, S. 1996. Technicians in the workplace: Ethnographic evidence for bringing work into organization studies. ***Administrative Science Quarterly***, 41: 404-441.

Barley, S. R., & Bechky, B. A. 1994. In the backrooms of science: The work of technicians in science labs. ***Work and Occupations***, 21: 85-126.

Barley, S. R., & Kunda, G. 2001. Bringing work back in. ***Organization Science*** 12: 76-95.

Barnes, B. 2001. Practice as collective action. In T. R. Schatzki, K. Knorr-Cetina, & E. von Savigny (Eds.), ***The practice turn in contemporary theory***: 17-28. London: Routledge.

Bartel, C. A., & Garud, R. 2009. The role of narratives in sustaining organizational innovation. ***Organization Science***, 20: 107-117.

Bechky, B. A. 2003[a]. Sharing meaning across occupational communities: The transformation of knowledge on a production floor. ***Organization Science***, 14: 312-330.

Bechky, B. A. 2003[b]. Object lessons: Workplace artifacts as representations of occupational jurisdiction. ***American Journal of Sociology***, 109: 720-752.

Bell, E., & Taylor, S. 2003. The elevation of work: Pastoral power and the new age work ethic. ***Organization***, 10: 329-349.

Benjamin, B. A., & Podolny, J. M. 1999. Status, quality, and social order in the California wine industry. ***Administrative Science Quarterly***, 44: 563-589.

Benner, M. J. 2007. The incumbent discount: Stock market categories and response to radical technological change. ***Academy of Management Review***, 32: 703-720.

Binning, J. F., Zaba, A. J., & Whattam, J. C. 1986. Explaining the biasing effects of performance cues in terms of cognitive categorization. ***Academy of Management Journal***, 29: 521-535.

Blackwelder, R. E. [1967]. ***Taxonomy: A text and reference book***. New York: Wiley.

Blee, K. M., & Taylor, V. 2002. Semi-structured interviewing in social movement research. In B. Klandermans, & S. Staggenborg (Eds.), ***Methods of social movement research***, Vol. 16. Minneapolis, MN: University of Minnesota Press.

Bodenhausen, G. V., & Peery, D. 2009. Social categorization and stereotyping in vivo: The VUCA challenge. ***Social and Personality Psychology Compass***, 3: 133-151.

Bonica, J. J. 1974. Therapeutic acupuncture in the People's Republic of China: Implications for American medicine. ***JAMA***, 228: 1544-1551.

Bowers, J. Z. 1973. Acupuncture. ***Proceedings of the American Philosophical Society***, 117: 143-151.

Bowker, G. C., & Star, S. L. 1999. ***Sorting things out: Classification and its consequences***. Cambridge, MA: MIT Press.

Brown, R. 1965. ***Social psychology***. New York: Free Press.

Brown, J. S., & Duguid, P. 1991. Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. ***Organization Science***, 2: 40-57.

Cahill, S. E. 1999. Emotional capital and professional socialization: The case of mortuary science students (and me). ***Social Psychology Quarterly***, 62: 101-116.

Callon, M., Méadel, C., & Rabeharisoa, V. 2002. The economy of qualities. ***Economy and Society***, 31: 194-217.

Cebon, P. 2012. Institutional rules and category structure. Working paper. Melbourne, Australia: University of Melbourne.

Chatman, J. A., & Spataro, S. E. 2005. Using self-categorization theory to understand relational demography-based variations in people's responsiveness to organizational culture. ***Academy of Management Journal***, 48: 321-331.

Chenail, R. J. 2011. Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. ***The Qualitative Report***, 16: 255-262.

Chreim, S., Williams, B. E., & Hinings, C. R. 2007. Interlevel influences on the reconstruction of professional role identity. ***Academy of Management Journal***, 50: 1515-1539.

Committee on Electronic Scientific and Medical Journal Publishing and its Implications. 2004. ***Electronic scientific, technical, and medical journal publishing and its implications: Proceedings of a symposium***. Washington, DC: National Academies Press.

Coomarasamy, A., Gee, H., Publicover, M., & Khan, K. 2001. Medical journals and effective dissemination of health research. ***Health Information and Libraries Journal***, 18: 183-191.

Cooper, D. J., Hinings, B., Greenwood, R., & Brown, J. L. 1996. Sedimentation and transformation in organizational change: The case of Canadian law firms. ***Organization Studies***, 17: 623-647.

Cooper, J. M. (Ed.). 1997. ***Plato: Complete works***. Indianapolis, IN: Hackett.

Cooper, M. J., Gulen, H., & Rau, P. R. 2005. Changing names with style: Mutual fund name changes and their effects on fund flows. ***Journal of Finance***, LX: 2825-2858.

Corley, K. G., & Gioia, D. A. 2004. Identity ambiguity and change in the wake of a corporate spin-off. ***Administrative Science Quarterly***, 49: 173-208.

Creed, W. E. D., DeJordy, R., & Lok, J. 2010. Being the change: Resolving institutional contradiction through identity work. ***Academy of Management Journal***, 53: 1336-1364.

Creswell, J. W., & Miller, D. L. 2000. Determining validity in qualitative inquiry. ***Theory into Practice***, 39: 124-130.

Currim, I. S., & Sarin, R. K. 1983. A procedure for measuring and estimating consumer preferences under uncertainty. ***Journal of Marketing Research***, 20: 249-256.

Czarniawska, B., & Sevón, G. (Eds.) 2005. ***Global ideas: How ideas, objects and practices travel in the global economy***. Malmö, Sweden: Liber & Copenhagen Business School Press.

Davis, D. L. 1974. Acupuncture. ***Journal of the American Medical Association***, 229: 1421.

Davis D. L. 1975. The history and sociology of the scientific study of acupuncture. ***American Journal of Chinese Medicine***, 3: 5-26.

Denzin, N. K. 1989. ***Interpretive interactionism***. Newbury Park, CA: Sage.

Dew, K. 2000. Deviant insiders: Medical acupuncturists in New Zealand. ***Social Science & Medicine***, 50: 1785-1795.

DiMaggio, P., & Powell, W. W. 1983. The iron cage revisited: Institutional

isomorphism and collective rationality in organizational fields. ***American Sociological Review***, 48: 147-160.

Dimond, E.G. 1971. Acupuncture anesthesia. Western medicine and Chinese traditional medicine. ***JAMA***, 218: 1558-1563.

Douglas, M. 1986. ***How institutions think***. Syracuse, NY: Syracuse University Press.

Duguid, P. 2005. The art of knowing: Social and tacit dimensions of knowledge and the limits of the community of practice. ***The Information Society***, 21: 109-118.

Eckman, P. 1996. History as mystery: Traditional acupuncture's journey to the West. In P. Eckman (Ed.), ***In the footsteps of the yellow emperor: Tracing the history of traditional acupuncture***: 91-180. San Francisco: Cypress Book Company.

Eisenhardt, K. M. 1989. Building theories from case study research. ***Academy of Management Review***, 14: 532-550.

Eisenhardt, K. M., & Graebner, M. E. 2007. Theory building from cases: Opportunities and challenges. ***Academy of Management Journal***, 50: 25-32.

Ekman, P., Levenson, R. W., & Friesen, W. V. 1983. Autonomic nervous system activity distinguishes among emotions. ***Science***, 221: 1208-1210.

Elsbach, K. D. 2003. Relating physical environment to self-categorizations: Identity threat and affirmation in a non-territorial office space. ***Administrative Science Quarterly***, 48: 622-654.

Engeström, Y., & Blackler, F. On the life of the object. ***Organization***, 12: 307-330.

Ernst, E., & White, A. 2000. Acupuncture may be associated with serious adverse events. ***British Medical Journal***, 320: 513.

Fairholm, G. W. 1996. Spiritual leadership: Fulfilling whole-self needs at work. ***Leadership and Organization Development Journal***, 17: 11–17.

Feagin, J. R., Orum, A. M., & Sjoberg, G. (Eds.). 1991. ***A case for the case study***. Chapel Hill: University of North Carolina Press.

Filshie, J., & White, A. 1998. ***Medical acupuncture: A western scientific approach***. Edinburgh: Churchill Livingstone.

Fleischer, A. 2009. Ambiguity and the equity of rating systems: United States brokerage firms, 1995-2000. ***Administrative Science Quarterly***, 54: 555-574.

Fleiss, J. L. 1971. Measuring nominal scale agreement among many raters. ***Psychological Bulletin***, 76: 378-382.

Fontana, A., & Frey, J. H. 1994. Interviewing: The art of science. In N. K. Denzin, & Y. S. Lincoln (Eds.), ***Handbook of qualitative research***: 361-376. Thousand Oaks, CA: Sage.

Fontana, A., & Frey, J. H. 2005. The interview: From neutral stance to political involvement. In N. K. Denzin, & Y. S. Lincoln (Eds.), ***The Sage handbook of qualitative research***, 3rd ed.: 695-727. Thousand Oaks, CA: Sage.

Foreman, P., & Whetten, D. A. 2002. Members' identification with multiple-identity organizations. ***Organization Science***, 13: 618-635.

Fox-Wolfgramm, S. J., Boal, K. B., & Hunt, J. G. 1998. Organizational adaptation to institutional change: A comparative study of first-order change in prospector and defender banks. ***Administrative Science Quarterly***, 43: 87-126.

Friedland, R., & Alford, R. R. 1991. Bringing society back in: symbols, practices, and institutional contradictions. In W. W. Powell, & P. J. DiMaggio (Eds.), ***The New Institutionalism in Organizational Analysis***: 232-266. Chicago: University of Chicago Press.

Garfinkel, H. 1967. ***Studies in Ethnomethodology***. Englewood Cliffs, NJ: Prentice-Hall.

Geertz, C. 1975. ***The interpretation of cultures: Selected essays by Clifford Geertz***. London: Hutchinson.

Gillham, B. 2008. ***Small-scale social survey methods: Real world research***. London: Continuum International.

Gingras, G., & Geekie, D. A. 1973. China report: Health care in the world's most populous country. ***Canadian Medical Association Journal***, 109: A-J.

Gioia, D. A., & Chitttipeddi, K. 1991. Sensemaking and sensegiving in strategic change initiation. ***Strategic Management Journal***, 12: 433-448.

Glaser, B. G., & Strauss, A. L. 1967. ***The discovery of grounded theory: Strategies for qualitative research***. Chicago: Aldine de Gruyter.

Glynn, M. A., & Lounsbury, M. 2005. From the critics' corner: Logic blending, discursive change and authenticity in a cultural production system. ***Journal of Management Studies***, 42: 1031-1055.

Godderis, R. 2011. Iterative generation of diagnostic categories through production and practice: The case of postpartum depression. ***Culture, Medicine and Psychiatry***, 35: 484-500.

Goffman, E. 1959. ***The presentation of self in everyday life***. Garden City, NY: Doubleday Anchor Books.

Goldberg, A. 2012. ***Where do social categories come from? A comparative analysis of online interaction and categorical emergence in music and finance***. Unpublished Doctoral Dissertation, Princeton University, Princeton.

Goodman, L. A. 1961. Snowball sampling. ***Annals of Mathematical Statistics***, 32: 148-170.

Goodrick, E., & Reay, T. 2011. Constellations of logics: The role of attributes in understanding work behavior. ***Work and Occupations***.

Gorman, M., & Sanford, J. J. (Eds.). 2004. ***Categories: Historical and systematic essays***. Washington, DC: Catholic University of America Press.

Greenwood, R., & Suddaby, R. 2006. Institutional entrepreneurship in mature fields: The big five accounting firms. ***Academy of Management Journal***, 49: 27-48.

Greenwood, R., Suddaby, R., & Hinings, C. R. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. ***Academy of Management Journal***, 45: 58-80.

Gutierrez, B., Howard-Grenville, J., & Scully, M. 2010. The faithful rise up: Split identification and an unlikely change effort. ***Academy of Management Journal***, 53: 673.

Hammersley, M., & Atkinson, P. 2007. ***Ethnography: Principles in practice*** (3rd ed.). London: Routledge.

Hannan, M. T., Pólos, L., & Carroll, G. R. 2007. ***Logics of organization theory: Audiences, codes, and ecologies***. Princeton University Press: Princeton, N.J.

Harnad, S. (Ed.). 1987. ***Categorical perception: The groundwork of cognition***. Cambridge, UK: University of Cambridge.

Haveman, H. A., & Rao, H. 1997. Structuring a theory of moral sentiments: Institutional and organizational coevolution in the early thrift industry. ***American Journal of Sociology***, 102: 1606-1651.

Heckathorn, D. D. 1997. Respondent-driven sampling: A new approach to the study of hidden populations. ***Social Problems*** 44: 174-199.

Helms, J. M. 1995. ***Acupuncture energetics: A clinical approach for physicians***. New York, NY: Thieme.

Hiddleston, H. J. H. 1972. Anecdotal acupuncture. ***New Zealand Medical Journal***: 131-133.

Hirsch, P., & Lounsbury, M. 1997. Ending the family quarrel: Towards a reconciliation of 'Old' and 'New' institutionalism. ***American Behavioral Scientist***, 40: 406-418.

Hogg, M. A., & Abrams, D. 1988. ***Social identifications: A psychology of intergroup relations and group processes***. London: Routledge.

Hogg, M. A., & Terry, D. J. 2000. Social identity and self-categorization processes in organizational contexts. ***Academy of Management Review***, 25: 121-140.

Hochschild, A. 1979. Emotion work, feeling rules, and social structure. ***American Journal of Sociology***, 85: 551-575.

Hsu, G., Hannan, M. T., & Koçak, Ö. 2009. Multiple category memberships in markets: An integrative theory and two empirical tests. ***American Sociological Review***, 74: 150-169.

Ibarra, H. 1999. Provisional selves: Experimenting with image and identity in professional adaptation. ***Administrative Science Quarterly***, 44: 764-791.

Jackall, R. 1988. ***Moral mazes: The world of corporate managers***. New York: Oxford University Press.

Jarzabkowski, P., Matthiesen, J., & van de Ven, A. 2009. Doing which work? A practice approach to institutional pluralism. In T. Lawrence, B. Leca, & R. Suddaby (Eds.), ***Institutional Work: Actors and Agency in Institutional Studies of Organizations***: 284-316. Cambridge, UK: Cambridge University Press.

Jones, C., Maoret, M., Massa, F. G., & Svejenova, S. forthcoming. Rebels with a cause: Formation, contestation and expansion of the de novo category "modern architecture", 1870-1975. ***Organization Science***.

Kahl, S., Kim, Y.-K., & Phillips, D. J. 2010. Identity sequences and the early adoption pattern of a jazz canon, 1920-1929. ***Research in the Sociology of Organizations***, 31: 81-113.

Kant, I. 2007. ***Critique of judgement***. Oxford Oxford University Press.

Kennedy, M. T. 2005. Behind the one-way mirror: Refraction in the construction of product market categories. ***Poetics***, 33: 201-226.

Kennedy, M. T. 2008. The counting conundrum: Markets, media and reality. ***American Sociological Review***, 73: 270-295.

Kelleher, D., Gabe, J., & Williams, G. 1994. Understanding medical dominance in the modern world. In J. Gabe, D. Kelleher, & G. Williams (Eds.), ***Challenging medicine***: xi-xxix. London: Routledge.

Khaire, M., & Wadhwani, R. D. 2010. Changing landscapes: The construction of meaning and value in a new market category - Modern Indian art. ***Academy of Management Journal***, 53: 1281-1304.

Knorr-Cetina, K., & Mulkay, M. 1983. ***Science observed: Perspectives on the social study of science***. London: Sage.

Knorr Cetina, K. 2001. Objectual practice. In T. R. Schatzki, K. Knorr-Cetina, & E. von Savigny (Eds.), ***The practice turn in contemporary theory***: 175-188. London: Routledge.

Knorr, K. D., Krohn, R., & Whitley, R. (Eds.). 1981. ***The social process of scientific investigation***. Dordrecht, Holland: D. Reidel.

Kotarba, J. A. 1975. American acupuncturists: The new entrepreneurs of hope. ***Urban Life***, 4: 149-177.

Krippendorff, K. 2013. ***Content analysis: An introduction to its methodology*** (3rd ed.). Los Angeles, CA: Sage.

Lajos, J., Katona, Z., Chattopadhyay, A., & Sarvary, M. 2009. Category activation model: A spreading activation network model of subcategory positioning when categorization uncertainty is high. ***Journal of Consumer Research***, 36: 122-136.

Lakoff, G. 1987. ***Women, fire, and dangerous things: What categories reveal about the mind***. Chicago: University of Chicago Press.

Latour, B. 1987. ***Science in action: How to follow scientists and engineers through society***. Cambridge, MA: Harvard University Press.

Latour, B. 1988. ***The pasteurization of France*** (A. Sheridan, & J. Law, Trans.). Cambridge, MA: Harvard University Press.

Latour, B. 2005. ***Reassembling the social: An introduction to actor-network-theory***. Oxford: Oxford University Press.

Latour, B., & Woolgar, S. 1979. ***Laboratory life: The construction of scientific facts***. Princeton, NJ: Princeton University Press.

Lawrence, T. B., & Suddaby, R. 2006. Institutions and institutional work. In S. R. Clegg, C. Hardy, T. B. Lawrence, & W. R. Nord (Eds.), ***The Sage handbook of organization studies***: 215-254. London: Sage.

Lehrnbecher, W., & Bischko, J. 1974. Acupuncture. ***Canadian Medical Association Journal***, 111: 213,215.

Lenox, M. J. 2006. The role of private decentralized institutions in sustaining industry self-regulation. ***Organization Science***, 17: 677-690.

Levy, Y., Schlesinger, I. M., & Braine, M. D. S. 1988. ***Categories and processes in language acquisition***. Hillsdale, N.J.: L. Erlbaum Associates.

Lewith, G. 1982. ***Acupuncture: Its place in western medical science***. Wellingborough, UK: Thorsons.

Lincoln, Y. S., & Guba, E. G. 1985. ***Naturalistic inquiry.*** Beverly Hills, CA: Sage.

Lincoln, Y. S., & Guba, E. G. 2002. Judging the quality of case study reports. In A. M. Huberman, & M. B. Matthews (Eds.), ***The qualitative researcher's companion***: 205-216. Thousand Oaks, CA: Sage.

Locke, K. 2001. ***Grounded theory in management research***. Thousand Oaks, CA: Sage.

Locke, K. 2005. ***Grounded theory in management research***. London: Sage.

Loewenstein, J., & Ocasio, W. 2005. Vocabularies of organizing: How language links culture, cognition, and action in organizations, ***McCombs Research Paper Series***: 1-46. Austin, TX: University of Texas at Austin.

Loewenstein, J., Ocasio, W., & Jones, C. 2012. Vocabularies and vocabulary structure: A new approach linking categories, practices, and institutions. ***Academy of Management Annals***, 6. [in press]

Lok, J. 2010. Institutional logics as identity projects. ***Academy of Management Journal***, 53: 1305-1335

Loken, B. 2006. Consumer psychology: Categorization, inferences, affect, and persuasion. ***Annual Review of*** Psychology, 57: 453–485.

Lounsbury, M. 2002. Institutional transformation and status mobility: The professionalization of the field of finance. ***Academy of Management Journal***, 45: 255-266.

Lounsbury, M. 2007. A tale of two cities: Competing logics and practice variation in the professionalization of mutual funds. ***Academy of Management Journal***, 50: 289-307.

Lounsbury, M., & Crumley, E. T. 2007. New practice creation: An institutional perspective on innovation. ***Organization Studies***, 28: 993–1012.

Lounsbury, M., & Rao, H. 2004. Sources of durability and change in market

classifications: A study of the reconstitution of product categories in the American mutual fund industry, 1944-1985. ***Social Forces***, 82: 969-999.

MacDonald, A. J. R. 1977[a]. The origins and evolution of medical acupuncture. ***Mims Magazine***: 83-84,87-89.

MacDonald, A. J. R. 1977[b]. Modern approaches to medical acupuncture. ***Mims Magazine***: 67-68,71,75-76,78,81-82.

Mann, F. n.d. ***About Felix Mann***. London: Felix Mann. Accessed 11 March 2009. Available: http://www.felixmann.co.uk/index.html

Mann, F. 1992. ***Acupuncture: Cure of many diseases*** (2nd ed.). Oxford: Butterworth-Heinemann.

Mann, F. 2000. ***Reinventing acupuncture: A new concept of ancient medicine*** (2nd ed.). Oxford: Butterworth-Heinemann.

March, J. G., & Simon, H. A. 1958. ***Organizations***. New York: Wiley.

Marquis, C., & Lounsbury, M. 2007. Vive la résistance: Competing logics in the consolidation of community banking. ***Academy of Management Journal***, 50: 799-820.

McClellan, M. B., McGinnis, J. M., Nabel, E. G., & Olsen, L. M. 2008. ***Evidence-based medicine and the changing nature of health care: 2007 IOM annual meeting summary***. Paper presented at the 37th Annual Meeting of the Institute of Medicine, Washington, DC.

Merriam, S. B. 2009. ***Qualitative research: A guide to design and implementation***. San Francisco, CA: Jossey-Bass.

Mervis, C. 1986. Child-basic object categories and early lexical development. In U. Neisser (Ed.), ***Concepts reconsidered: The ecological and intellectual bases of categorization***: 201-233. New York: Cambridge University Press.

Meyer, J. P., Becker, T. E., & Van Dick, R. 2006. Social identities and commitment at work: Toward an integrative model. ***Journal of Organizational Behavior***, 27: 665-683.

Meyer, J. W., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. ***American Journal of Sociology***, 83: 340-363.

Meyer, R. E., & Hammerschmid, G. 2006. Changing institutional logics and executive identities: A managerial challenge to public administration in Austria. ***American Behavioral Scientist***, 49: 1000-1014.

Miles, M. B., & Huberman, A. M. 1994. ***Qualitative data analysis: An expanded sourcebook*** (2nd ed.). Thousand Oaks, CA: Sage.

Mills, C. W. 1940. Situated actions and vocabularies of motive. ***American Sociological Review***, 5: 904-913.

Mohr, J. W., & Duquenne, V. 1997. The duality of culture and practice: Poverty relief in New York City, 1888-1917. ***Theory and Society***, 26: 305-356.

Mohr, J. W., & Guerra-Pearson, F. 2010 The duality of niche and form: The Differentiation of institutional space in New York City, 1888-1917. In G. Hsu, O. Kocak, & G. Negro (Eds.), ***Categories in Markets: Origins and Evolution***, Vol. 31: 321-368. Bingley, UK: Emerald.

Mol, A. 1999. Ontological politics. A word and some questions. ***Sociological Review***, 46 (S): 74-89.

Mol, A. 2002. ***The body multiple: Ontology in medical practice***. Durham, NC: Duke University Press.

Mol, A., & Law, J. 2004. Embodied action, enacted bodies: The example of hypoglycaemia. ***Body & Society***, 10: 43-62.

Morse, J. M., & Richards, L. 2002. ***Readme First for a User's Guide to Qualitative Methods***. Thousand Oaks, CA: Sage.

Moser, R. H. 1974. Editorial: Message from China. *JAMA*, **230**: 1566-1568.

Mol, A. 1999. Ontological politics: A word and some questions. ***The Sociological Review***, 46: S74-S89.

Nag, R., & Gioia, D. A. 2012. From common to uncommon knowledge: Foundations of firm-specific use of knowledge as a resource. ***Academy of Management Journal***, 55: 421-457.

Negro, G., Hannan, M. T., & Rao, H. 2011. Category reinterpretation and defection: Modernism and tradition in Italian winemaking. ***Organization Science***, 22: 1449-1463.

Nelsen, B. J., & Barley, S. R. 1997. For love or money: Commodification and the construction of an occupational mandate. ***Administrative Science Quarterly***, 42: 619-653

Nowotny, H. 1981. Women in public life in Austrai. In C. F. Epstein, & R. L. Coser (Eds.), ***Access to power: Cross-national studies of women and elites***. London: Allen & Unwin.

Nunkoosing, K. 2005. The problems with interviews. ***Qualitative Health Research***, 15: 698-706.

Oakley, D. 1973. Mao sends us China's best of acupuncture, ***Rome News-Tribune***. Rome, Georgia: News Publishing Company.

Oakes, L. S., Townley, B., & Cooper, D. J. 1998. Business Planning as Pedagogy: Language and Control in a Changing Institutional Field. ***Administrative Science Quarterly***, 43: 257-292.

Ocasio, W. 1997. Towards an attention-based view of the firm. ***Strategic Management Journal***, 18: 187-206.

Oliver, D. G., Serovich, J. M., & Mason, T. L. 2005. Constraints and opportunities with interview transcription: Towards reflection in qualitative research. ***Soc Forces***, 84: 1273-1289.

Omura, Y. 2003. ***Acupuncture medicine: Its historical and clinical background***. Mineola, NY: Dover.

Orlikowski, W. J. 1992. The duality of technology: Rethinking the concept of technology in organizations. ***Organization Science***, 3: 398-427.

Orlikowski, W. J. 2007. Sociomaterial practices: Exploring technology at work. ***Organization Studies***, 28: 1435-1448.

Pettigrew, A. M. 1990. Longitudinal field research on change: Theory and practice. ***Organization Science***, 1: 267-292.

Phillips, H. P. 1960. Problems of translation and meaning in field work. In R. N. Adams, & J. J. Preiss (Eds.), ***Human organization research: Field relations and techniques***: 290-307. Homewood, IL: Dorsey Press.

Pickering, A. 1995. ***The mangle of practice: Time, agency, & science***. Chicago: University of Chicago Press.

Pontikes, E. G. 2012. Two sides of the same coin: How ambiguous classification affects multiple audiences' evaluations. ***Administrative Science Quarterly***, 57: 81-118.

Porac, J., & Rosa, J. A. 1996. Rivalry, industry models, and the cognitive embeddedness of the comparable firm. ***Advances in Strategic Management***, 13: 363-388.

Porac, J. F., & Thomas, H. 1990. Taxonomic mental models in competitor definition. ***Academy of Management Review***, 15: 224-240.

Porac, J. F., & Thomas, H. 1994. Cognitive categorization and subjective rivalry among retailers in a small city. ***Journal of Applied Psychology***, 79: 54-66.

Porac, J. F., Thomas, H., Wilson, F., Paton, D., & Kanfer, A. 1995. Rivalry and the industry model of Scottish knitwear producers. ***Administrative Science Quarterly***, 40: 203-227.

Porac, J. F., Wade, J. B., & Pollock, T. G. 1999. Industry categories and the politics of the comparable firm in CEO compensation. ***Administrative Science Quarterly***, 44: 112-144.

Powell, W. W., & Colyvas, J. A. 2008. Microfoundations of institutional theory. In R. Greenwood, C. Oliver, K. Sahlin, & R. Suddaby (Eds.), ***Handbook of Organizational Institutionalism***: 276-298. Thousand Oaks, CA: Sage.

Pratt, M. G. 2008. Fitting oval pegs into round holes: Tensions in evaluating and publishing qualitative research in top-tier North American journals. ***Organizational Research Methods***, 11: 481-509.

Pratt, M. G., Rockmann, K., & Kaufmann, J. 2006. Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. ***Academy of Management Journal***, 49: 235-262.

Purdy, J. M., & Gray, B. 2009. Conflicting logics, mechanisms of diffusion, and multilevel dynamics in emerging institutional fields. ***Academy of Management Journal***, 52: 355-380.

Ramey, D., & Buell, P. D. 2004. A true history of acupuncture. ***Focus on Alternative and Complementary Therapies***, 9: 269–273.

Rafaeli, A., & Sutton, R. I. 1990. Busy stores and demanding customers: How do they affect the display of positive emotion? ***Academy of Management Journal***, 33: 623-637.

Rafaeli, A., & Sutton, R. I. 1987. The expression of emotion as part of the work role. ***Academy of Management Review***, 12: 23-37.

Rao, H., Monin, P., & Durand, R. 2005. Border crossing: Bricolage and the erosion of categorical boundaries in French gastronomy. ***American Sociological Review***, 70: 968-991.

Reay, T., Golden-Biddle, K., & GermAnn, K. 2006. Legitimizing a new role: Small wins and micro-processes of change. ***Academy of Management Journal***, 49: 977-998.

Reay, T., & Hinings, C. R. 2005. The recomposition of an organizational field: Health care in Alberta. ***Organization Studies***, 26: 351-384.

Reay, T., & Hinings, C. R. 2009. Managing the rivalry of competing institutional logics. ***Organization Studies***, 30: 629-652.

Reston, J. 1971[a]. Now, about my operation in Peking, ***New York Times***: 1-2.

Reston, J. 1971[b]. A view from Shanghai, ***New York Times***: 13.

Rich, W. G. 1975. Acupuncture. ***Medical Journal of Australia***, 795-796.

Richards, L., & Morse, J. M. 2013. ***Readme first for a user's guide to qualitative methods*** (3rd ed.). Thousand Oaks, CA: Sage.

Roberts, L. M. 2005. Changing faces: Professional image construction in diverse organizational settings. ***Academy of Management Review***, 30: 685-711.

Rosa, J. A., Porac, J. F., Runser-Psanjol, J., & Saxon, M. S. 1999. Sociocognitive dynamics in a product market. ***Journal of Marketing***, 63: 64-77.

Rosch, E. 1978. Principles of categorization. In E. Rosch, & B. B. Lloyd (Eds.), ***Cognition and Categorization***: 27-48. Hillsdale. NJ: Eribaum.

Ruef, M., & Patterson, K. 2009. Credit and classification: The impact of industry boundaries in 19th century America. ***Administrative Science Quarterly***, 54: 486-520.

Saks, M. 1992. The paradox of incorporation: Acupuncture and the medical profession in modern Britain. In M. Saks (Ed.), ***Alternative Medicine in Britain***: 183-198. Oxford: Clarendon.

Scheid, V. 2002. ***Chinese medicine in contemporary China: Plurality and synthesis***. Durham, NC: Duke University.

Schatzki, T. R. 2001[a]. Introduction: Practice. In T. R. Schatzki, K. Knorr-Cetina, & E. von Savigny (Eds.), ***The practice turn in contemporary theory***: 1-14. London: Routledge.

Schatzki, T. R. 2001[b]. Practice mind-ed orders. In T. R. Schatzki, K. Knorr-Cetina, & E. von Savigny (Eds.), ***The practice turn in contemporary theory***: 42-55. London: Routledge.

Schein, E. H. 1978. ***Career dynamics: Matching individual and organizational needs***. Reading, MA: Addison-Wesley.

Schutz, A. 1967. ***The phenomenology of the social world*** (G. Walsh, & F. Lenhert, Trans.). Chicago: Northwestern University Press.

Schwartz, R. 1981. Acupuncture and expertise: A challenge to physician control, ***The Hastings Center Report***: 5-7. Garrison, NY: The Hastings Center.

Scott, W. R. 2001. ***Institutions and organizations*** (2nd ed.). Newbury Park, CA: Sage.

Scott, W. R. 2008. ***Institutions and organizations*** (3rd ed.). Thousand Oaks, CA: Sage.

Scott, W. R., Ruef, M., Mendel, P. J., & Caronna, C. A. 2000. ***Institutional change and healthcare organizations: From professional dominance to managed care***. Chicago: University of Chicago Press.

Seidman, I. 2006. ***Interviewing as qualitative research: A guide for researchers in education and the social sciences***, (3rd ed). New York: Teachers College Press.

Seo, M., & Creed, W. E. D. 2002. Institutional contradictions, praxis, and institutional change: A dialectical perspective. ***Academy of Management Review***, 27: 222-247.

Shapiro, R. 2008. ***Suckers: How alternative medicine makes fools of us all***. London: Harvill Secker.

Smith, D. W. 2007. ***Husserl***. London: Routledge.

Smith, E. E., & Medin, D. L. 1981. ***Categories and concepts***. Cambridge, MA: Harvard University Press.

Snowdon, C. T. 1987. A naturalistic view of categorical perception. In S. Harnad (Ed.), ***Categorical perception: The groundwork of cognition***: 332-354. Cambridge, UK: University of Cambridge.

Spradley, J. P. 1979. ***The ethnographic interview***. New York, NY: Holt, Rinehart and Winston.

Steensland, B. 2006. Cultural categories and the American welfare state: The case of guaranteed income policy. ***American Journal of Sociology***, 111: 1273-1326.

Stokes, M. E., Davis, C. S., & Koch, G. G. 2000. ***Categorical data analysis using the SAS system*** (2nd ed.). Cary, N.C.: SAS Institute.

Strauss, A. L., & Corbin, J. 1998. ***Basics of qualitative research: Techniques and procedures for developing grounded theory***. Thousand Oaks, CA: Sage.

Suddaby, R. 2006. What grounded theory is not. ***Academy of Management Journal***, 49: 633–642.

Suddaby, R., & Greenwood, R. 2005. Rhetorical strategies of legitimacy. ***Administrative Science Quarterly***, 50: 35-67.

Swidler, A. 2001. What anchors cultural practices. In T. R. Schatzki, K. Knorr-Cetina, & E. Von Savigny (Eds.), ***The practice turn in contemporary theory***: 74-92. London: Routledge.

Tajfel, H. 1982. Social psychology of intergroup relations. ***Annual Review of Psychology***, 33: 1-39.

Tajfel, H., & Turner, J. C. 1986. The social identity theory of intergroup behavior. In S. Worchel, & W. G. Austin (Eds.), ***Psychology of intergroup relations***: 7-24. Chicago: Nelson-Hall.

Taylor, K. 2005. ***Chinese medicine in early communist China, 1945-63: A medicine of revolution***. London: RoutledgeCurzon.

Tenopir, C., King, D., & Bush, A. 2004 Medical faculty's use of print and electronic journals: Changes over time and in comparison with scientists. ***Journal of the Medical Library Association***, 92: 233-241.

Tenopir, C., King, D., Clarke, M., Na, K., & Zhou, X. 2007. Journal Reading Patterns and Preferences of Pediatricians. ***Journal of the Medical Library Association***, 95: 56-63.

Thornton, P. H. 2002. The rise of the corporation in a craft industry: Conflict and conformity in institutional logics. ***Academy of Management Journal***, 45: 81-101.

Thornton, P. H. 2004. ***Markets from culture: Institutional logics and organizational decisions in higher education publishing*** Stanford, CA: Stanford University Press.

Thornton, P. H., Jones, C., & Kury, K. 2005. Institutional logics and institutional change in organizations: Transformation in accounting, architecture, and publishing. In C. Jones, & P. H. Thornton (Eds.), ***Research in the Sociology of Organizations: Transformation in Cultural Industries***, Vol. 23: 125-170: JAI.

Thornton, P. H., & Ocasio, W. 2008. Institutional logics. In R. Greenwood, C. Oliver, K. Sahlin, & R. Suddaby (Eds.), ***Handbook of organizational institutionalism***: 99-129. Thousand Oaks, CA: Sage.

Trank, C. Q., & Washington, M. 2009. Maintaining an institution in a contested organizational field: The work of the AACSB and its constituents. In T. B. Lawrence, R. Suddaby, & B. Leca (Eds.), ***Institutional work: Actors and agency in institutional studies of organizations***: 236-261. Cambridge, UK: Cambridge University Press.

Tsui, A. S., Egan, T. D., & O'Reilly III, C. A. 1992. Being different: Relational demography and organizational attachment. ***Administrative Science Quarterly***, 37: 549-579.

Turner, B. A. 1981. Some practical aspects of qualitative data analysis: One way of organising the cognitive processes associated with the generation of grounded theory. ***Quality and Quantity***, 15: 225-247.

Turner, J. C. 1987 ***Rediscovering the social group: A self-categorization theory***. Oxford: Basil-Blackwell.

Turner, S. 1994. ***The social theory of practices: Tradition, tacit knowledge, and presuppositions***. Cambridge, MA: Polity.

Ulett, G. A. 1992. ***Beyond yin and yang: How acupuncture really works***. St. Louis, MI: Warren H. Green.

Van Maanen, J. 1988. ***Tales of the field: On writing ethnography***. Chicago, IL: University of Chicago Press.

Van Maanen, J. 1991. The smile factory: Work at Disneyland. In P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg, & J. Martin (Eds.), ***Reframing organizational culture***: 58-76. Newbury Park, CA: Sage.

Viswanathan, M., & Childers, T. L. 1999. Understanding how product attributes influence product categorization: Development and validation of fuzzy set based measures of gradedness in product categories. ***Journal of Marketing Research***, 36: 75-94.

von Linné, C. 1830-31. ***Genera plantarum***. Goettingen: Dieterich.

Voronov, M., & Vince, R. 2012. Integrating emotions into the analysis of institutional work. ***Academy of Management Review***, 37: 58-81.

Wallace, J. D. 1975. The acupuncture mess. ***Canadian Medical Association Journal***, 112: 207.

Walsh, I. J., & Bartunek, J. M. 2011. Cheating the fates: Organizational foundings in the wake of demise. ***Academy of Management Journal***, 54: 1017-1044.

Warren, F. Z. 1976. ***Handbook of medical acupuncture***. New York, NY: Van Nostrand Reinhold.

Weick, K. E. 1979. ***The social psychology of organizing*** (2nd ed.). Reading, MA: Addison-Wesley.

Wenger, E. 2000. Communities of practice and social learning systems. ***Organization***, 7: 225-246.

White, A., Cummings, M., & Filshie, J. (Eds.). 2008. ***An introduction to western medical acupuncture***. Edinburgh: Churchill Livingstone.

White, A. 2009. Western medical acupuncture: A definition. ***Acupuncture in Medicine***, 27: 33-35.

Whorton, J. C. 2002. ***Nature cures: The history of alternative medicine in America***. New York, NY: Oxford University Press.

Williams Jr., J. A. 1964. Interviewer-respondent interaction: A study of bias in the information interview. ***Sociometry***, 27: 338-352.

World Health Organization. 1979. ***Viewpoint on Acupuncture***. Geneva: World Health Organization.

World Health Organization. 1991. ***A proposed standard international acupuncture nomenclature: Report of a WHO Scientific Group***. Geneva: World Health Organization.

World Health Organization. 1995. ***Guidelines for clinical research on acupuncture***. Geneva: World Health Organization.

Yanow, D. 2003. ***Constructing "race" and "ethnicity" in America: Category-making in public policy and administration*** Armonk, N.Y.: M.E. Sharpe.

Yin, R. K. 2009. ***Case study research: Design and methods*** (4th ed.). Thousand Oaks, CA: Sage.

Zerubavel, E. 1996. Lumping and splitting: Notes on social classification. ***Sociological Forum***, 11: 421-433.

Zietzma, C., & Lawrence, T. B. 2010. Institutional work in the transformation of an organizational field: The interplay of boundary work and practice work. ***Administrative Science Quarterly***, 55: 189-221.

Zilber, T. B. 2002. Institutionalization as an interplay between actions, meanings, and actors: The case of a rape crisis center in Israel. ***Academy of Management Journal***, 45: 234-254.

Zilber, T. B. 2009. Institutional maintenance as narrative acts. In T. B. Lawrence, & R. L. Suddaby, B. (Eds.), ***Institutional work***: 205-235. Cambridge: Cambridge University Press.

Zuckerman, E. W. 1999. The categorical imperative: Securities analysts and the illegitimacy discount. ***American Journal of Sociology***, 104: 1398-1438.

Zuckerman, E. W. 2000. Focusing the corporate product: Securities analysts and de-diversification. ***Administrative Science Quarterly***, 45: 591-619.

Zuckerman, E. W., & Kim, T.-Y. 2003. The critical trade-off: Identity assignment and box-office success in the feature film industry. ***Industrial and Corporate Change***, 12: 27-67.

Zuckerman, E. W., Kim, T.-Y., Ukanwa, K., & von Rittmann, J. 2003. Robust identities or nonentities? Typecasting in the feature-film labor market. ***American Journal of Sociology***, 108: 1018-1074.

APPENDIX 1
INTERVIEW CONSENT FORM

I, Ellen T. Crumley, am a doctoral candidate in the Department of Strategic Management & Organization at the University of Alberta School of Business and Dr. Trish Reay is my supervisor. I am inviting you to participate in a research project titled: "**How two versions of medical acupuncture have been created in western health care**". The outcome of this project will be my dissertation and scholarly research papers that will be available publicly.

All participants involved in this project will be protected under the **University of Alberta Standards for the Protection of Human Research Participants**. More information is available at: http://www.uofaweb.ualberta.ca/secretariat/ We do not foresee any harm arising from your participation in the project. You and/or your organization may benefit from the findings based on this research.

This form provides information about conducting an interview with you. The duration of the interview will be approximately 1 hour and you will be asked questions about your involvement with medical acupuncture. The interviewer will also make notes and ask further questions based upon the conversation. We would greatly appreciate if you could read and sign the following:

I, _____, understand that:

- My participation is voluntary. This means that if I refuse to participate or elect to withdraw from this study, no one other than the interviewer will have knowledge that I have declined to participate.
- I may end the interview at any time and refuse to answer any question that I am not comfortable with without any penalty.
- All data will be handled in compliance with the Standards for the Protection of Human Research Participants.
- Interviews will be stored on paper in a locked cabinet and/or electronically in a password-protected file.
- Any written or audio version of an interview will be destroyed three years from today or immediately upon my request.
- No other person outside of the interviewer and the principle investigator will have access to the records of your interview.
- My name will not be mentioned in any written materials resulting from these interviews.

Please use the following contact information if you have concerns or if you would like to learn more about this research:

Co-investigator (PhD Candidate)	**Principal Investigator**
Ellen T. Crumley 3-23 School of Business University of Alberta, Edmonton, Alberta T6G 2R6 Phone: 780-893-6360 Fax: 780-492-3325 Email: ecrumley@ualberta.ca	Dr. Trish Reay 3-23 School of Business University of Alberta, Edmonton, Alberta T6G 2R6 Phone: 780-492-4246 Fax: 780-492-3325 Email: trish.reay@ualberta.ca

This study has been reviewed and approved by the School of Business Research Ethics Board of the University of Alberta. For any questions regarding participant rights and the ethical conduct of research, please contact the Research Ethics Board at 780-492-8443 or at researchethicsboard@bus.ualberta.ca

I give my consent to participate in this interview and acknowledge that I have received a copy of this consent form.

Name: _____ Date: _____

APPENDIX 2
ETHNOGRAPHIC OBSERVATION CONSENT FORM

I, Ellen T. Crumley, am a doctoral candidate in the Department of Strategic Management & Organization at the University of Alberta School of Business and Dr. Trish Reay is my supervisor. I am inviting you to participate in a research project titled: "**How two versions of medical acupuncture have been created in western health care**". The outcome of this project will be my dissertation and scholarly research papers that will be available publicly.

All participants involved in this project will be protected under the **University of Alberta Standards for the Protection of Human Research Participants**. More information is available at: http://www.uofaweb.ualberta.ca/secretariat/ We do not foresee any harm arising from your participation in the project. You and/or your organization may benefit from the findings.

This form provides information about conducting participant observation with you. The duration of the participant observation will be approximately 3-4 business working days. During this time(s), the observer will make notes about your daily activities with regard to medical acupuncture and may ask further questions or clarification based upon the observations. We would greatly appreciate if you could read and sign the following:

I, _____, understand that:

- My participation is voluntary. This means that if I refuse to participate or elect to withdraw from this study, no one other than the observer will have knowledge that I have declined to participate.
- I may end the participant observation at any time and refuse to answer any question that I am not comfortable with without any penalty.
- During certain periods, I may ask the observer to excuse herself from observing my daily activities.
- All data will be handled in compliance with the Standards for the Protection of Human Research Participants.
- Observation notes and information will be stored on paper in a locked cabinet and/or electronically in a password-protected file.
- Any written or audio version of the observation will be destroyed three years from today or immediately upon my request.
- No other person outside of the observer and the principle investigator will have access to the records of your observation.
- My name will not be mentioned in any written materials resulting from the observation.

Please use the following contact information if you have concerns or if you would like to learn more about this research:

Co-investigator (PhD Candidate)	**Principal Investigator**
Ellen T. Crumley 3-23 School of Business University of Alberta, Edmonton, Alberta T6G 2R6 Phone: 780-893-6360 Fax: 780-492-3325 Email: ecrumley@ualberta.ca	Dr. Trish Reay 3-23 School of Business University of Alberta, Edmonton, Alberta T6G 2R6 Phone: 780-492-4246 Fax: 780-492-3325 Email: trish.reay@ualberta.ca

This study has been reviewed and approved by the School of Business Research Ethics Board of the University of Alberta. For any questions regarding participant rights and the ethical conduct of research, please contact the Research Ethics Board at 780-492-8443 or at researchethicsboard@bus.ualberta.ca

I give my consent to participate in this interview and acknowledge that I have received a copy of this consent form.

Name: _____ Date: _____

APPENDIX 3
INTERVIEW GUIDE

I want to know about the practice of western health care providers like yourself that administer medical acupuncture, what you do, how you view your work, your patients and yourselves. I want to study medical acupuncture from your point of view. I also want you to know that you are freely able to withdraw your consent at any time and you may choose not to answer any questions you are not comfortable with. Do you have xx mins (one hour) available today to talk with me?

1. Background

- How long have you been practicing medical acupuncture?
- Where did you take your MA training? In what year did you finish? Have you done any further training or reading since you did your MA training? Would you say the training you took was TCM-oriented or science-oriented?
- How long had you worked as a physician before you became involved with MA?
- Could you describe to me how you have integrated acupuncture into your professional practice?
- Could you tell me how you became interested in acupuncture? What sort of experiences or events got you interested in acupuncture? Did this occur before you went to medical school?
- Did you have an epiphany or religious experience that caused you to re-think your professional identity?

2. Identity

- If I was to ask you to think about your professional identity as a western health care practitioner that practices acupuncture, could you tell me more about "Who am I?"?
- What does it mean for you as a western health care practitioner to be able to administer acupuncture to your patients? Why is it important to you to be able to administer acupuncture to your patients?
- How do you view your role as a western acupuncture practitioner? Would you call yourself a medical acupuncture practitioner? I see myself as… I am a…
- Would you think of acupuncture as an art or a science?
- As a professional, is medical acupuncture something you do or something you are?
- How does practicing medical acupuncture define you as a western health care professional?
- Some of the interviewees have talked about being a "healer" or "healing facilitator", while others consider themselves scientists, where do you fall in these categories?

- Do you have any role models that you look to as the ideal practitioner of MA? Is there anyone who has influenced you as an acupuncture practitioner?
- Would you consider medical acupuncture a specialty like gynecology or surgery?
- Some colleagues have talked about "keeping your feet in two worlds" [as in acupuncture and western medicine]. How do you see your role in this?
- If there were no barriers, would you want to do acupuncture FT in your practice?

3. Two kinds of MA

I have noticed in my research that two different types of medical acupuncture have been created in western health care. One integrates Chinese philosophy and theory with western medical principles while the other does not.

- Can you help me understand why the two kinds of MA have been developed in western health care?
- What role does Traditional Chinese Medicine, its theory and philosophy, play in your medical acupuncture practice?
- I'm finding that the type of medical acupuncture that western health care providers practice is strongly associated with the practitioner, not the therapies they use. Can you help me understand the two main kinds of western acupuncture practitioners I am seeing in my work, those that incorporate TCM and those that do not?
- Do you think it is important to distinguish between Traditional Chinese Medicine acupuncture and medical acupuncture?
- Are the MA's that practice medical scientific acupuncture (or mechanical) missing something?

4. Patients

- How often do you administer acupuncture to your patients (e.g., daily, weekly, monthly, a few times a year)? Do you see more than one acupuncture patient at a time? On average, how much time do you spend with each acupuncture patient?
- Since you have learned acupuncture, do you find that your role as a physician or your relationship with patients has changed? Can you give me some examples?
- When you are talking to a patient to whom you are giving acupuncture, can you tell me about a typical conversation and how the flow of the visit would normally go?
- When you are administering acupuncture you have probably had some interesting experiences with your patients (some of my interviewees have referred to these as "pivotal patients" or "miracle patients"), can you tell me about some of these experiences?