SENSE OF WORKPLACE:

THE ROLE OF PLACE IN THE MODERN WORK ENVIRONMENT

A Thesis

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Master of Science

by

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ABSTRACT

This study investigates the relationship between workplace mobility and workplace attachment for a sample of 205 employed U.S. adults. Participants were either employees of Company X or Company Y or recruited through the use of email or social media sites. This study was conducted entirely through the use of online surveys. Correlations and regression models were used to study the main and interactive effects of workplace mobility on workplace attachment. Results of this study suggest that the relationship between mobility and attachment differs in relation to an individual's age. It was found that mobility detracts from place attachment for older workers but does the opposite for younger workers. These findings help add to the knowledge base concerning the relationship between mobility and attachment and have implications for designers, managers, and employees in terms of the physical and organizational design of workplaces and the activities that occur within them.

BIOGRAPHICAL SKETCH

Michael David French was born and grew up in Rochester, NY amongst good family, friends, and food. He has always been interested in people, places, and the relationship between them. Upon graduating from the Aquinas Institute of Rochester in 2004 he attended Herkimer County Community College (NY) where he was part of the 2005 NJCAA National Championship Men's Lacrosse team and received an A.A. in the spring of 2006. After graduating from HCCC he attended Geneseo State (NY) where he majored in Geography and minored in Environmental Studies. He graduated from Geneseo in the spring of 2009 with a B.A. In the fall of 2009 Michael joined the Department of Design and Environmental Analysis at Cornell University to pursue a M.S. in Human-Environment Relations with concentrations in Facility Planning and Management as well as Real Estate.

Dedicated to my family and friends

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INTRODUCTION

Statement of the Problem

Over the past decades a drastic shift can be seen in the ways in which we work. Technological advances have afforded many the ability to be in many different places while still being connected to those with whom they work. Because of this the modern workplace is an organic and ever changing environment. According to an IDC Market Analysis Report, the worldwide mobile worker population is expected to increase from 919.4 million in 2008 to 1.19 billion in 2013, an increase of over 29% in just five years. Globally, the U.S. has the highest percentage of mobile workers, with 72.2% of the workforce being labeled as mobile. This figure is expected to increase to 75.5% in 2013 to an estimated 119.7 million mobile workers (Drake, Jaffe, & Boggs, 2010).

As more emphasis is being placed on mobility and flexibility within and between places of work, the role of the physical environment in which we work will change as well. This may prove to have a profound effect on the form, function and feel of the future workplace as well as the way in which we experience our places of work. To better understand the effects that mobility has on our feelings and experiences of our workplaces, this study will explore the relationship between workplace mobility and workplace attachment. Before exploring this relationship, however, the constructs of workplace mobility and workplace attachment will be defined.

Workplace Mobility

For the purpose of this research, workplace mobility is defined as the ability to work from a variety of settings both within and away from what is seen as the

conventional workplace. This description of workplace mobility differs from previous definitions that are more closely related to the more general term of job mobility, the willingness of an employee to move their home location for employment. The current definition of workplace mobility was created by the author after a literature review and focus group were conducted on the relationship between mobility and work.

The most analogous concepts to the current definition of workplace mobility might be those of local mobility and mobility work. Local mobility is defined by Bardram & Bossen (2003) as "the intermediate space between working together over distance and working face-to-face in an office" (p. 355). They go on to mention that local mobility occurs in cooperative work environments where individuals need to move in order to complete their work. By the same token, "mobility work designates the work needed to achieve the right configuration of people, resources, knowledge, and place in order to carry out tasks" (Bardram & Bossen, 2005, p. 136).

To understand the overall construct of mobility it was necessary to find references that focus on both the underlying concepts along with the theories of what it means to be mobile. According to Urry (2000), at the most basic of levels mobility can be viewed as the movement of people, objects, or information within and across boundaries, whether they are physical (i.e. countries) or imaginary (i.e. the Internet). Bell and Ward (2000) point to mobility as a means for "individuals to optimize access to their network of various life activities" (p. 105). In a similar context, Sheller and Urry (2006) define what they refer to as 'the new mobilities paradigm' as one in which "all places are tied into at least thin networks of connections that stretch beyond each such place" (p. 209). Said differently, the fact that humans live in such a geographically

diverse area means less today than it once did because humans can now easily connect themselves and communicate to one another through the use of a complex linkage of technological and transportation systems.

Although the previous sources mention mobility; its definition varies slightly. Most of the sources mention mobility in terms of its spatial or temporal dimensions. Many point to technology and the fact that laptop computers, cell phones, and various forms of transportation have given use the ability to be in many different places simultaneously or in much shorter time. However, only Kakihara & Sorensen (2002) define the concept of mobility in terms of a third dimension which they call contextual mobility. The following sections discuss each of these subconstructs of mobility in further detail.

Contextual Mobility

Kakihara & Sorensen (2002) recognize the importance of the spatial and temporal aspects of mobility but they argue that "'being mobile' is not just a matter of people traveling but, far more importantly, related to the interaction they perform – the way in which they interact with each other in their social lives" (p. 1757). Contextual mobility deals with the "in what way, in what circumstance, or towards whom" (p. 1759) aspects of the interactions between humans. They also point out that because technology provides us with several opportunities to interact with others, we are thus free from contextual constraints on interaction. They go on to say that technology "not only enables people to asynchronously connect with others in distant areas, it also transforms the contextual constraints amongst those interacting" (p. 1759).

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Spatial Mobility

The most often mentioned dimension of mobility, that of the spatial kind, was seen throughout the literature. Brown & O'Hara (2003) might have said it best when they wrote that "the constraints of the place impact the kind of work activities that can be usefully carried out there" (p. 7). They later go on to say that workers expect "similarity between places" (p. 9) in which they are expected to work. Halford (2005) seconds this notion when she says that "where work is done makes a difference to working practices and to organisational and personal relationships" (p. 20).

The spatial dimension of mobility was also mentioned by Felstead, Jewson, & Walters (2003). They recognized that technology moved the workplace beyond its physical boundaries but also within its own physical boundaries. Because of technology, work can now be accomplished in most any location, be it a desk, cafeteria, conference room within the workplace or other non-work locations.

Temporal Mobility

The temporal dimension of mobility is also frequently seen in the literature. Kakihara & Sorensen (2002) point to the fact that technology has no longer made it necessary to share the same time period with those with which we communicate. In other words, we are able to communicate and work with anyone at any time regardless of their physical location. Also the use of email and other information and communication technologies allows for users to deal with multiple tasks at the same time. Thus, users are able to communicate almost instantly while at the same time they are able to work more productively.

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Brown and O'Hara (2003) also speak of the temporal dimensions of work when they acknowledge that mobile workers often structure their day so as to reduce the impacts of travel. Mobile workers, they claim, structure their activities and behaviors to minimize the "temporal cost of travel" (p. 17). Costs, in the case of mobile workers, refer to the time and effort of traveling. By reducing the costs of travel, mobile workers are able to work more efficiently in the hopes of working more effectively.

A major point that previous authors stress is the impact that mobility, regardless of its form or how it is defined, is having on society. As it pertains to the workplace, mobility is drastically altering the behaviors and intervals in which we work as well as the people with whom we are able to work. Felstead, Jewson & Walters (2005) point to this idea when it is said that "the relationship between spaces and times of work and non-work are no longer sequential, linear, and chronological but, instead, are becoming a dispersed mosaic of ubiquitous connections that are always available" (p. 5). They go on to declare that the daily activities and actions of those involved with the modern workplace are undergoing fundamental transformations, especially in regards to workplace mobility.

Workplace Attachment

Workplace attachment, much like the overarching concept of place attachment, is defined here as an affective bond between an individual and their place of work, the main characteristic of which is the tendency of the individual to maintain a closeness to that place (cf. Hidalgo & Hernandez, 2001). The only difference between the two concepts is the scale at which the attachment is measured. The idea of scale will be re-

visited later, first a brief history and description of the concept of place attachment. For an in-depth review on the overall construct of place attachment see Lewicka (2011).

Many point to the first study of people-place bonding as the work of Fried (1963), in his study of the 'West End' of Boston. In his work, Fried studied the effects of forced relocation of the residents of Boston's 'West End'. At the time the ideas of place and human feelings towards them were in their infancy, yet Fried alluded to these concepts when he spoke of the strong affective bonds that residents had towards their neighborhood. However, it was not until the 1970's that the study of place and its accompanying theories and underlying explanations began to be empirically tested in more depth.

Before these bonds were tested, a definition of place was needed, which humanistic geographers Relph and Tuan took the lead in. When defining place, Relph (1976) states that "a place is not just the 'where' of something; it is the location plus everything that occupies that location seen as an integral and meaningful phenomenon" (p. 3). Relph (1976) also states that "to be human is to live in a world that is filled with significant places: to be human is to have and to know your place" (p. 1). Similarly, Tuan (1977) mentions that "places are centers of felt value" (p. 4) in which needs are met and behavior patterns arise. These definitions of place show that place is more than just a physical setting in which human beings live. Hence, a correct definition of place should encompass not only the physical aspects but also the emotional, cognitive, social, and behavioral aspects that are inevitably intertwined with place.

The empirical foundation of place set forth by Fried (1963) and the phenomenological foundations of place presented by Relph (1976) and Tuan (1977), as well as others like Buttimer and Seamon (1980), set the stage for future research on the concept of place; its meanings to humans, how it is formed, and its underlying theories, explanations and processes. These early environment-behavior studies, over time, evolved to address a wide range of ideas including those of personal space, territoriality and belonging, crowding, environmental attitudes, as well as family, group or cultural uses of space. From here the concept of place attachment, broadly defined as the bonding of people to place, was adopted by scholars and researchers.

As alluded to by Altman and Low (1992), the concept of place attachment includes a variety of comparable ideas, including topophilia, place identity, insideness and outsideness, sense of place or rootedness, environmental embeddedness, place dependence, community attachment, and sense of community. Based on this, a primary assumption of the study of place attachment is that it is a complex phenomenon that incorporates several aspects of people-place bonding.

As Hidalgo and Hernandez (2001) point out, "the main difficulty the researcher has encountered when dealing with the study of place attachment has been the diversity of approaches available at the theoretical level as well as the empirical. There was no agreement regarding its name, definition or methodological approach best suited to deal with it" (p. 273). This idea is seen earlier in the literature when Lalli (1992) states that, "the heterogeneity of these terms and their spatial extension, the differences in theoretical foundations and their fragmentary formulation, the lack of adequate measuring instruments and the related lack of empirical productivity is

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probably responsible for the fact that psychological research on place identity has not been especially fruitful" (p. 285).

For the purposes of this research the overall construct of place attachment will be defined in terms of two sub-constructs, place dependence and place identity. Place dependence reflects the utilitarian role of place that provides the function and form necessary to support goals or activities (Stokols & Shumaker, 1981). As such, place dependence exhibits itself when a functional relationship with a particular setting is formed and continues. Williams and Vaske (2003) suggest that dependence may form with "any place supporting highly valued goals or activities" (p.831).

Place identity reflects an emotional or symbolic connection to a place that may represent particular values, attitudes, feelings, and beliefs held by an individual. Thus, place identity is often viewed of as a component of an individual's self-identity (Proshansky, Fabian, & Kaminoff, 1983). In the context of the workplace it is possible that self-identity my lead to a form of corporate identity. It has also been said that place identity involves a psychological investment with a place that tends to develop over time (Giuliani & Feldman, 1993).

According to Hidalgo and Hernandez (2001), the majority of studies currently carried out only consider place as a social environment, thus neglecting the role, if any, that the physical environment plays in attachment. Perhaps the reason for this lies in the fact that early work on the constructs of sense of place and place attachment were conducted by phenomenologists, such as Relph and Tuan, who were more concerned with the human experience of place. These ideas can also be seen in the statement by

Altman and Low (1992) that "the social relations that a place signifies may be equally or more important to the attachment process than the place qua place" (p. 7). Although this may be possible, the vast majority of studies have not empirically tested this statement and thus the physical as well as social dimensions of place should be included, whenever possible, in any future people-place bonding studies.

One such study that does account for both physical as well as the social aspects of attachment was done by Riger and Lavrakas (1981). In this study two dimensions of community attachment are identified: bonding or social attachment and rootedness or physical attachment. Results from this study show that bonding and rootedness were highly correlated. Nearly two-thirds of the sample was either low or high on both dimensions, proving that both social and physical aspects of attachment are important in predicting ones overall attachment to an environment.

A limitation of current place attachment research that is oft-cited in the literature lies in the amount of work done on the subject. Most authors then ask the question of whether place attachment exists to environments that have yet to be empirically tested. That is, if place attachment has not been studied for a particular environment can we definitively say that attachment to this environment is possible? This idea can be seen when Gustafson (2001) states that the meaning and importance of significant places in our lives differs in relation to the spatial scale under consideration.

Hidalgo and Hernandez (2001) also point to this fact when they state that results of their study should be tested on other environments with differing characteristics. They also mention that place attachment studies have dealt with a limited variety of

settings, focusing mainly on the neighborhood or community. Williams and Vaske (2003) make a similar statement in that future research should "test place attachment across a wider range of places and contexts" (p.839). This idea is again mentioned by Cuba and Hummon (1993). In their study they explicitly state that a general theory of place-identity "has been limited by a critical lack of studies that simultaneously examine identification with places of different scales ranging from the dwelling place to the community and the region" (p. 112). The ideas of scale and environment are also alluded to by Gustafson (2001) when he contends that the meaning and importance of significant places in our lives differ in relation to the spatial scale under consideration.

Two such studies that do test attachment to places of varying scale simultaneously have been done by Hidalgo and Hernandez (2001) as well as Lewicka (2010). In both instances a curvilinear, U-shaped, relationship between scale of place and intensity of place attachment was reported.   In their study Hidalgo and Hernandez (2001) found that attachment levels to home and city were higher, for both the physical and social aspects of place, than were attachment levels attributable to the neighborhood scale. Lewicka (2010) found the same U- shaped relationship between scale and attachment while investigating five places of differing scale (apartment, building, neighborhood, city district, and city).

Relationship between mobility and attachment

Of particular importance to this study is research done by those who are interested in both mobility and the concept of place. As people become more mobile, is place still significant? In our current culture does place still have some meaning to us?

Similar questions are raised in the work done by Per Gustafson, who in several articles has explicitly explored the relationship between mobility and attachment.

In his early work Gustafson (2001b) tested the relationship between mobility and attachment through the use of qualitative interviews to better understand individuals' views and experiences of the link between place attachment and mobility. When setting his theoretical grounds for the study Gustafson discusses two perspectives on the linkage between attachment and mobility. The first school of thought "values place attachment while often regarding mobility as a threat to a person's affective bonds with place, whereas the second favors mobility and, sometimes, explicitly or implicitly, devalues place attachment" (p. 669).

Gustafson (2001b) goes on to describe these perspectives in more general terms through a roots/routes theme. Within the roots theme, place is primarily regarded as a source of attachment and favors one or a few specific places, however within the context of the routes theme, place and mobility represent personal development, growth, and freedom and favor a multitude of places. Gustafson used this framework to analyze the qualitative interview data and found that the meaning of place differed among each respondent. "The difference that stood out in the analysis was not that some preferred place attachment whereas others preferred mobility, but that they regarded the relationship between place attachment and mobility differently" (p. 679).

Similar to the questions posited earlier, Gustafson (2009) raises the questions: "Does extensive mobility produce uprootedness and loss of meaningful places, or can mobile persons maintain a sense of territorial belonging? Or do territorial bonds acquire

a particular significance for mobile persons precisely because of their mobility? Or perhaps mobility itself produces a sense of territorial belonging" (p. 490-491). Using survey data, Gustafson (2009) concludes that several different types of mobility (commute time, domestic travel, and residential mobility) were all associated with a weaker sense of both local and regional belonging. However when looking at the national level, different forms of mobility have different implications. At the European level all significant associations were linked with a higher sense of belonging. This research shows that both type of mobility and scale play a vital role in predicting levels of attachment.

In yet another study Gustafson (2009b) investigated the relationship between work-related mobility and multiple levels of belonging. Using survey and questionnaire data, he found that "frequent travelers differed little from other workers in their sense of local, regional or national belonging, and in some respects international travelers tended to be more involved than non-travelers" (p 43), mostly through their use of social networking tools. Much of Gustafson's work dispels the notion that in a highly mobile, modern, and globalized world, attachment to varying places is still a possibility. In fact the importance (of place) in the contemporary world actually may have grown (Lewicka, 2011).

Fuhrer, Kaiser & Hartig (1993) were interested in understanding the relationship between mobility and place attachment as it pertains to both traffic intensity and leisure travel. The authors hypothesized that "if the development of place attachment is impeded, as may happen in residential areas with high traffic intensities, then people are expected to become more mobile" (p. 311). Fuhrer et al. believed that a place

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becomes important to a person once certain levels of personal autonomy, arousal, and security are achieved.

Those with high attachment to their home or near-home territories traveled fewer kilometers for leisure activities. Similarly individuals with a higher attachment to home use less distant places for social withdrawal as compared to those with low levels of attachment to home (Fuhrer, Kaiser, & Hartig, 1993). In relation to the workplace, these findings may signal that those with higher levels of attachment to their place of work will, as a result, choose to be less mobile.

Results also revealed a main effect of traffic intensity on place attachment, in which a curvilinear relationship was found. Streets with medium levels of traffic intensity scored lower on attachment levels that did streets with either low or high levels of traffic. One of the main conclusions is that attachment to home and near-home territories is directly related to the relationship between the desired and achieved states of arousal of an individual to their surrounding environment (Fuhrer, Kaiser, & Hartig, 1993). These findings may point to the notion that levels of mobility within the office may have an effect on arousal levels and possibly relate to the strength of an individual's level of attachment to their workplace.

Yet another article tests the relationship between mobility and place attachment, albeit in an indirect way. In her work, Milligan (1998) looks at how the relocation of employees to a new building affected place attachment. In the paper an interactionist-based theory of place attachment is used in which place attachment is seen as a function of two intertwined components, that the author titles interactional past and

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interactional potential. It is argued that for an individual to become attached to a place both interactional past and potential play a role.

Interactional past designates that a place can be meaningful to an individual based on the activities and the memories associated with those activities that have occurred within that particular place. Interactional potential relates to the expectations that an individual perceives can happen in a certain place, given the specific physical features and the associated activities of that place. Milligan (1998) goes on to say that "interactional past and potential are linked to the spatial continuity of experience" (p. 9) and when continuity is interrupted both past and potential experiences are altered. Thus it follows that physical relocation would result in a change of both past and potential experiences and result in a disruption in an individual's attachment to a given place.

Milligan found that employees with high levels of attachment to the previous workplace experienced more disruption and felt as if they had lost a connection to the memories which occurred there (Milligan, 1998). The findings of this study show that the involuntary movement of employees resulted in disruptions to attachment levels. What if attachment levels were measured amongst employees in which their voluntary movement or mobility across the workplace was commonplace and conventional or even encouraged?

Throughout the past, researchers have posed questions that future research should begin to undertake. This is done well by Altman and Low (1992). They begin by asking "Do the same principles apply to people's bonding to objects and places of

varying scale, or must they me understood as distinct phenomena?" They concluded by stating that "understanding place attachment may require differentiation of affective and symbolic relationships with a variety of settings" (p. 5-6). Many other questions are raised by researchers and common themes in them relate to setting, scale, and the environments in which place attachment is measured.

From the previous discussions it can be seen that both opportunities and gaps exist in the knowledge base of both mobility and place attachment, especially their relationships to one another. As such, an implicit goal of this study is to increase and advance this knowledge base by examining place attachment in the environment of the corporate workplace. The current study will examine the relationship between mobility and place attachment. Therefore, the overall objective of this study will be to discover the effect that workplace mobility has on an individual's attachment to their workplace.

I hypothesize that individuals with both high and low levels of mobility will report higher levels of attachment to their workplace. Conversely, those with moderate levels of mobility will have low levels of attachment to their workplace. The reasoning behind these thoughts is that mobility may influence the sub-constructs of place attachment in different ways. In place of physical attendance, highly mobile individuals may seek an emotional or symbolic connection with their place of work and as a result these individuals may report relatively higher levels of place identity. On the other hand, an immobile individual's workplace may serve a more utilitarian or functional purpose in which their location determines the type of work that can be performed and consequently these individuals will report higher levels of place dependence. As a

result, this research will examine whether there is a curvilinear, U-shaped, main effect of workplace mobility on workplace attachment.

This study will also investigate the possibility of a setting by mobility interaction. Both companies under investigation may put a different emphasis on either mobility or attachment within their corporate culture. As such, this may result in a different relationship between the two companies. Another hypothesis of this study is that age will interact with the relationship between mobility and attachment. Older individuals who have more experience or familiarity with a place are likely to have higher levels of attachment to that place as compared to younger individuals having spent less time in that place.

METHOD

Participants

Participants of this study were recruited from a variety of sources. The first set of participants (n = 88) was recruited through the use of the internet, mainly by means of email as well as Facebook. The final two sets of participants were made up entirely of employees from one of either two companies. Company A is a worldwide business consultancy group while Company B is a U.S. based design and consultancy group. All employees of Company A were eligible to participate in the research and were recruited via email, in total 64 employees responded to the survey. Employees from Company B were chosen, by management, to participate in the survey so as to get a representative sample from the entire company as well as on perceived individual levels of mobility, in total 53 responses to the survey were collected.

Design

The purpose of this research is to study the relationship between mobility and place attachment. This study employed a simple non-experimental case study design in which the independent variable of workplace mobility is measured against the dependent variable of workplace attachment to examine if a correlational relationship exists. Also, the variable of setting was measured so as to discover the possibility of an interaction effect. For the purposes of this research, setting relates to the source from which the data were collected, as mentioned previously.

To measure each variable a survey was used, in the case of workplace mobility a new survey was created. For workplace attachment a previously used survey was modified. Basic demographic data was also collected for each survey respondent. All data for this study were collected through the use of an online survey.

Instruments

The instrument used to measure workplace mobility was created entirely for the purposes of this research. Through the use of a literature review and focus group it was clear that the concept of workplace mobility involved three sub-constructs – spatial, temporal and contextual mobility all seem to play a role in the overall concept of workplace mobility. Spatial mobility deals with the places in which we work. A question from the scale that pertains to spatial mobility is: 'Technology affords me the ability to be geographically independent.' Temporal mobility is concerned with the time in which work is completed. A question from the scale pertaining to temporal mobility is: 'I find myself working across a variety of times (early morning or late night).' Contextual mobility relates to the ways in which interaction occurs within or across the workplace. A question from the scale pertaining to contextual mobility is: 'I regularly communicate with others who are in a different country and/or time zone.'

Once the construct of workplace mobility was represented an initial 5 point Likert scale was developed. From here the scale was given to eight different judges. After their scores were calculated the highest and lowest 25% of the judges were identified. The highest 25% of judges were the two with the highest overall scores. The lowest 25% of judges were the two with the lowest overall scores.

These groups were identified to ascertain which items on the scale did well in differentiating between those with high and low levels of mobility. To do this the scores for each item of the scale were averaged for both groups and compared. The criterion to keep an item for the final scale was a difference of at least one and a half points between the two groups. The final result was a scale consisting of 17 items.

During the formulation of this scale both the Cronbach alpha and the test-retest correlation coefficient were calculated to test its reliability. The Cronbach alpha was found to be 0.85 and the test-retest correlation coefficient (over a three day period) was found to be 0.89. The validity of the scale was also tested. To do this the 17 item scale was administered to four people, two of whom were hypothesized to have low mobility and two with high mobility due to their current job status. Those with high mobility are traveling salespeople on the road four days a week while those with low mobility are scientists who spend their time in the same lab five days a week. The results show that out of a possible 85 points those hypothesized with high mobility scored an average of 71.5 and those with low mobility scored an average of 42. Reliability of the scale was also calculated using the scores of study participants and was found to be very reliable (α = .734).

The instrument used to measure workplace attachment was modified from existing place attachment scales. The scales being modified were those used by Williams and Vaske (2003) and Hidalgo and Hernandez (2001). These scales were used because they account well for the sub-constructs that fall within the overall concept of place attachment.

The Williams and Vaske scale accounts for the two dimensions of place attachment –place dependence and place identity. Construct validity of the scale was verified by confirmatory factor analysis indicating that the best fit model was two dimensional. Another reason for the use of the Williams and Vaske study was that the reliability of the scale had been tested and the Cronbach alpha was found to range from .81 to .94.

The Hidalgo and Hernandez scale accounts for both the physical and social aspects of place attachment. An example of a question from the scale pertaining to social attachment is: 'I would be sorry if the people I lived with moved out without me.' Physical attachment involves the buildings and places themselves regardless of the people within them. An example of a question on the scale pertaining to physical attachment is: 'I would be sorry if I and the people I live with moved out.' No reliability or validity information was given regarding the scale used.

The separation of place attachment into physical and social dimensions could give a better understanding of the overall construct and allows researchers the ability to analyze any differences between them. Perhaps the physical and social dimensions of place attachment vary across cultures, ages, or the scale under investigation. The resulting instrument used for this study took the preceding scales and modified them so as to pertain to the workplace and was found to have a high level of reliability (α = .784).

RESULTS

This section provides information from statistical analyses pertaining to the main and interactive effects of workplace mobility on workplace attachment. Data were analyzed with IBM SPSS Statistics 19; some data tables and figures report findings from the entire survey sample while others report data from a specific source.

Figure 1 shows the relationship between workplace mobility and workplace attachment for the entire survey sample. As can be seen, there is no definitive relationship between the two variables, R^2 = .001. A check on nonlinear effects also proved insignificant. For the overall sample, an individual's workplace mobility is a poor predictor of attachment to their workplace.
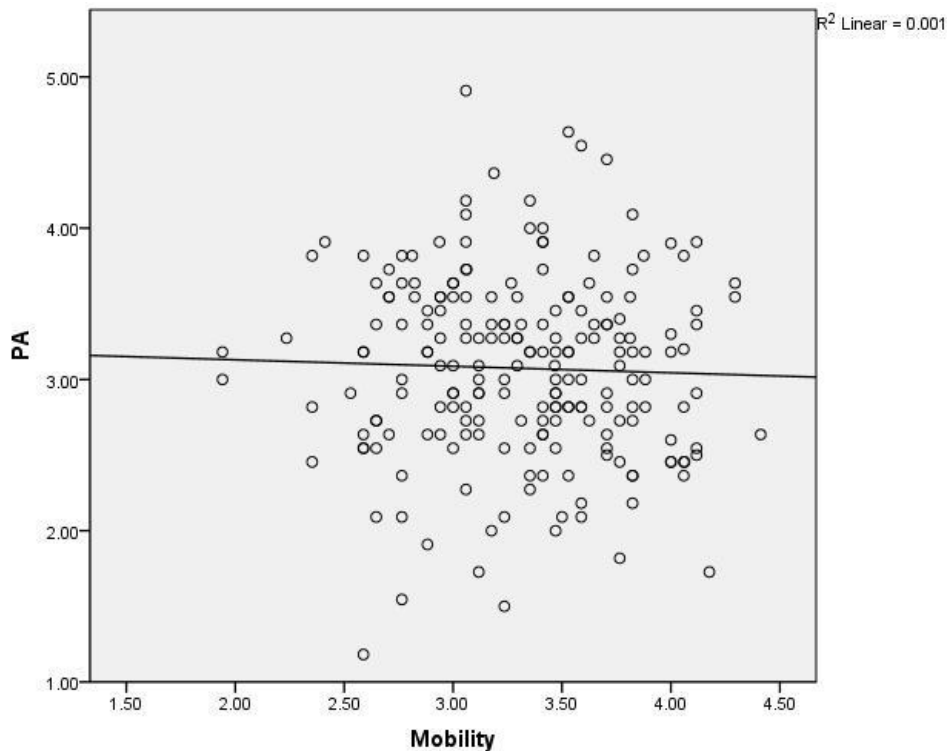

Figure 1. Relationship between workplace mobility and workplace attachment

As Figure 1 relates to the overall survey sample, perhaps the relationship between mobility and attachment differs according to the source of the data. From the results in Table 1, although there is some variability by source, in no instance was a strong or significant relationship between the two variables discovered.

Table 1. Correlation Coefficients – Mobility x Place Attachment

Data Source	Correlation Coefficient (r)	Significance
Overall	-.034	.630
Internet	-.030	.783
Company A	.050	.696
Company B	-.179	.199

Another explicit goal of this study was to test for the possibility of a setting interaction with mobility. To test for the interaction two different analyses were run. The first included all three data sources. When all three sources were included no significant interaction was found ($p = .729$). The second analysis only used data from Company's A and B, so as to explore the relationship between these companies. Limiting the data to respondents from the same companies was done so as to control for extraneous variables such as corporate culture. Again, no significant setting interaction was found ($p = .266$), although the strength of the relationship did improve.

When other interactions were tested, age significantly impacted the relationship between workplace mobility and workplace attachment ($p = .007$). Figure 2 shows the relationship for the interaction effect between mobility and age on place attachment. This figure shows that, contrary to conventional wisdom, younger individuals have higher levels of place attachment. As age increases reported levels of attachment decrease. This relationship holds true for each group. Also, when mobility is accounted

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for, the differences in attachment levels change. As younger individuals become more

mobile they report higher levels of attachment than their less mobile counterparts. The

opposite can be said for older individuals, as mobility increases attachment decreases.
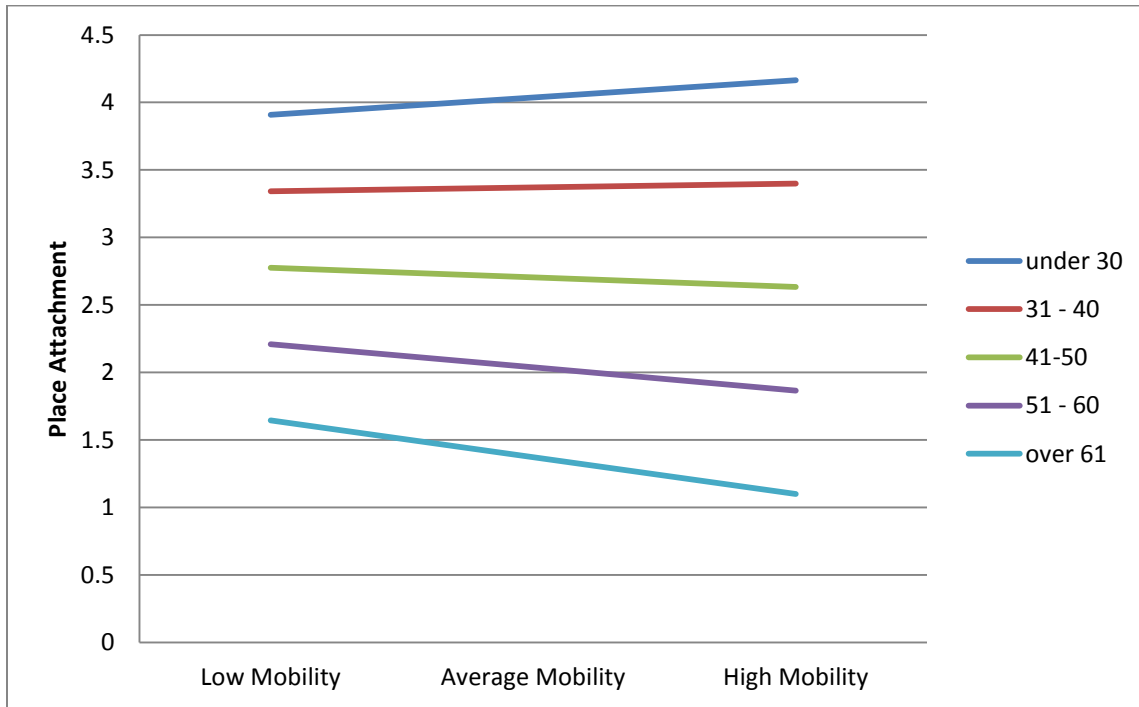

Figure 2. Mean place attachment levels in relation to mobility and age

To explore the interaction in Figure 2 further I examined the number of

participants in different age levels. Table 2 below shows a good distribution of

participants across the various age and mobility levels, except for workers 'Over 61.'

Due to limited cell counts, the 'Over 61' group should be combined with the previous '51

– 60' group, resulting in the need to re-analyze the interaction effect.

Table 2. Age by Mobility Crosstabulation

Mobility	Age				
	Under 30	31 – 40	41 – 50	51 – 60	Over 61
Low	32	25	13	20	2
High	25	24	25	25	2

Figure 3 shows the final interpretation of interaction effect between mobility and age on mean place attachment levels. When this interaction was calculated it was still found to be significant ($p = .014$), albeit at a slightly smaller significance. Regardless of the p-value, many of the same relationships hold true in Figure 3 as they did in Figure 2. The graph also shows that for individuals ranging in age from 31 to 50, mobility seems to have less of an effect on attachment levels when compared to the youngest and eldest age groups.
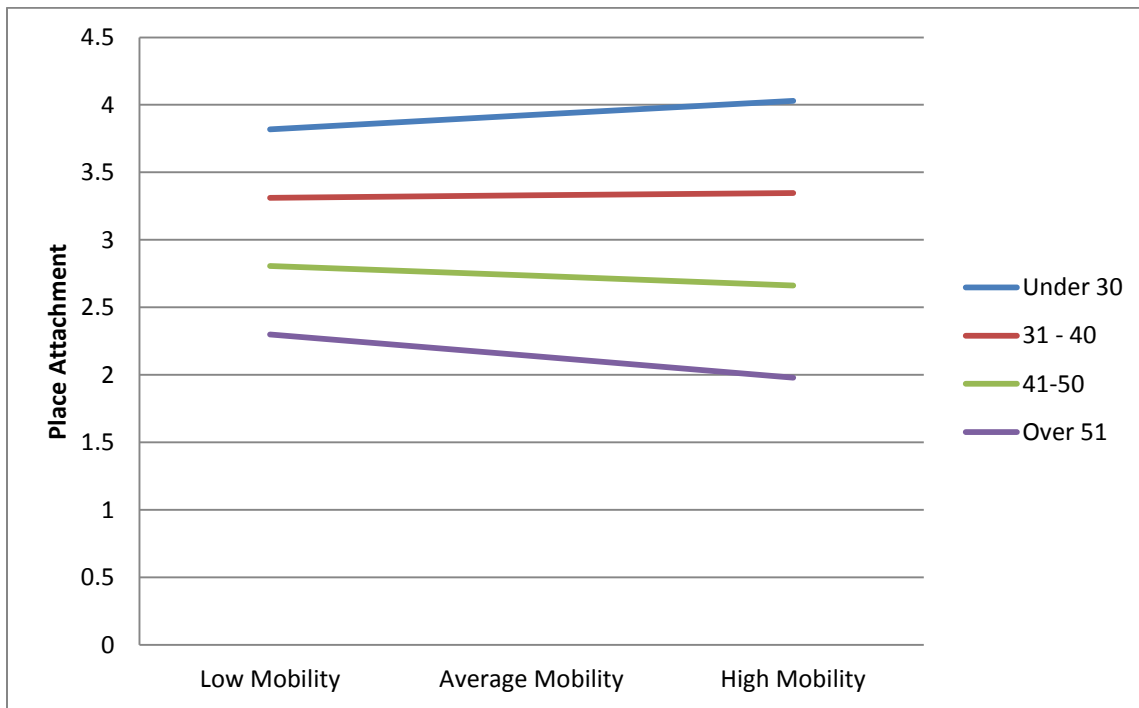

Figure 3. Mean place attachment levels in relation to mobility and age (combining the '51-60' and 'Over 61' age groups)

A final interaction was tested between mobility and work department on mean place attachment levels. A significant interaction was found ($p = .038$), indicating that work groups differ in their relationship between mobility and attachment. Some work groups mean attachment levels increase with mobility while others decrease with mobility. However after a crosstabulation, some cell counts were not adequate.

To investigate this interaction further, work groups without adequate cell counts were either removed from the analysis or combined with similar work groups. Once this was done only four work groups remained. Table 3 shows the work groups still under consideration as well as the cell counts for these work groups and their corresponding level of mobility.

Table 3. Work Group by Mobility Crosstabulation

Mobility	Work Group			
	Consulting	Architecture/Design	Healthcare	Education/Technology
Low	17	45	8	12
High	34	34	11	13

When the regression analysis was calculated using only the four previous work groups a significant interaction effect was found ($p = .004$). Figure 4 shows the new interaction effect between mobility and work group on mean place attachment levels. The relationship between mobility and attachment is highly dependent on the type of work under consideration. Increased mobility decreases place attachment for the majority of work groups. Consultants are the only work group with a positive relationship while architects and designers seem to be ambivalent in relation to the two variables under study.
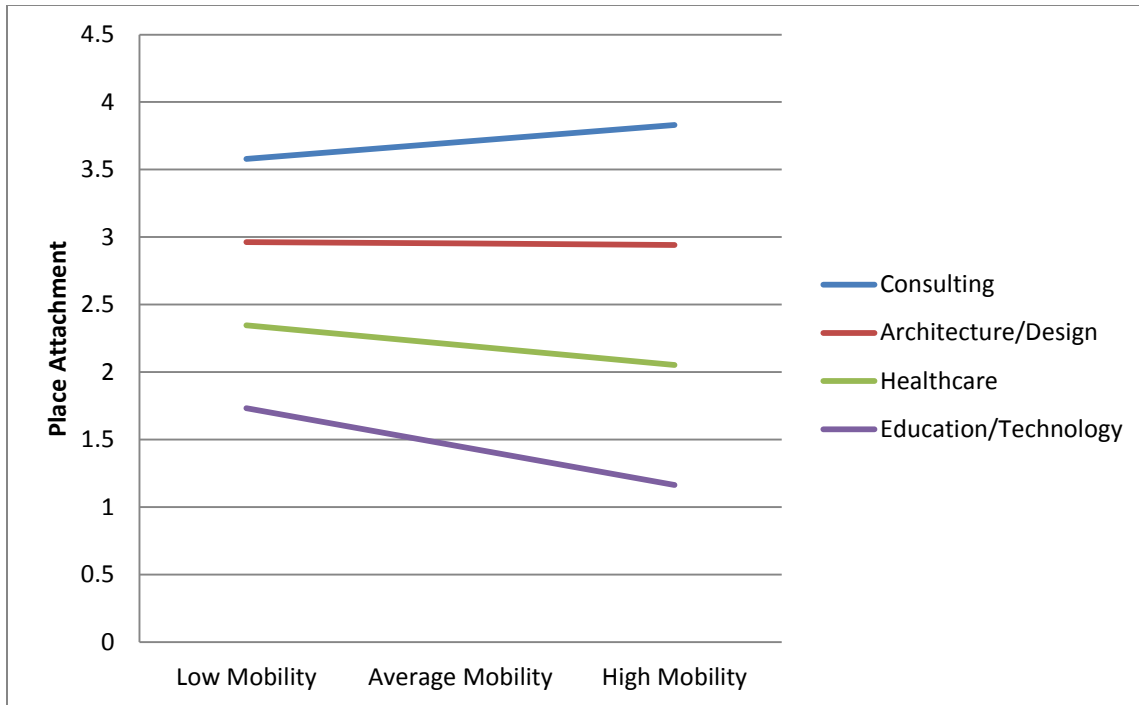
Figure 4. Mean place attachment levels in relation to mobility and work group

       The following analysis relates to other salient workplace variables and their relationship with mobility and place attachment. Survey participants were asked questions regarding company policies and preferences as well as current work practices and design. Correlations were then calculated between the results of these questions and mobility and place attachment. Table 4 shows the strength and significance of the correlations.

Table 4. Correlation data between salient workplace variables, mobility and dimensions of place attachment.

		When in an office setting where do you normally work?	Do any of the following constraints affect the place(s) in which you are able work?	
			I require access to specific software or materials only available in the office	Need to collaborate with colleague(s)
Mobility	Pearson Correlation	.324	-.331	
	Significance	.000	.000	
Social Dimension of Place Attachment	Pearson Correlation	-.174		.195
	Significance	.012		.005
Physical Dimension of Place Attachment	Pearson Correlation	-.145		
	Significance	.039		

From the table it can be seen that a significant, albeit moderate, correlation was found to exist between the question 'When in an office setting where do you normally work?' and mobility. The response alternatives for this question were: 1 – 'I have and assigned workspace', 2 – 'I sit wherever I want using available shared space', 3 – 'I don't have an assigned space but my team has a designated area in which to work', or 4 – 'Other.' Due to the ambiguity of the 'Other' category, this response was removed from the analysis. It was shown that as individuals answered higher on the scale (i.e. they choose answer 2 or 3) they were more mobile than their counterparts who answered lower on the scale. The data also show that as individuals are more mobile they report lower levels of attachment to both the physical and social dimensions of their workplace.

Other interesting results from the correlational data show that mobility is impeded in instances where individuals reported that they needed access to specific materials or

software only available at the office. It was also shown that in instances where individuals reported a need to be in the office to collaborate with colleagues, higher levels of social attachment to the workplace were reported.

DISCUSSION

Summary of Findings

This study explored the relationships among mobility, attachment and other salient workplace variables in a sample of working adults. It was hypothesized that individuals on each end of the mobility spectrum would report higher levels of attachment than would their counterparts located in the middle of the mobility spectrum. It was also hypothesized that age would interact with the relationship between mobility and attachment. Results of the study refuted the first hypothesis and supported the second hypothesis, although in a different way than predicted.

Overall, no main effect between workplace mobility and workplace attachment was found, however, two significant interaction effects were found. Age interacts with the relationship between mobility and place attachment. Mobility detracts from place attachment for older workers but does the opposite for younger workers. The issues of age, experience, and familiarity have been linked to place attachment by several authors (Tuan, 1977; Cuba & Hummon, 1993; Hay, 1998; Hidalgo & Hernandez, 2001; Stedman, 2002). Hidalgo and Hernandez (2001) found that attachment increases as individuals' age, while Stedman (2002) found that length of residence (i.e. experience or familiarity) had no effect on attachment levels. Likewise, Hay (1998) found that high levels of residential mobility related to a weak sense of attachment.

From the previous research it can be seen that factors such as age, experience, and familiarity interact with place attachment in various ways. In some instances these factors increase place attachment while in others they have no effect. In this study it was found that age, in conjunction with mobility, does have an effect on attachment.

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However, unlike the results attained by Hidalgo and Hernandez (2001), attachment decreases with age and this effect is amplified with increases in mobility. As shown in Figures 2 and 3, as younger individual's mobility levels increase so too does their attachment. When older individual's mobility levels increase their attachment levels go down. The findings of this study also refute the findings of Stedman (2002). For individuals in the present study, familiarity and experience were shown to play a key role in predicting levels of attachment.

The type of work done by an individual also has an interactive effect on the relationship between mobility and attachment. From Figure 4 it can be seen that for the majority of work groups, individuals in healthcare, education, technology, attachment decreases with increased levels of mobility. Architects and designers attachment levels, however, did not vary in relation to their level of mobility. The only group who enjoyed higher levels mobility was consultants, as mobility increased so did levels of place attachment.

The current findings may signal that major differences may be present in the types of work being done or the people working in these fields. The differences, then, manifest in the interaction effect found. Individuals who work as consultants may have chosen that particular line of work due to a predisposition to working in a highly paced, mobile environment. On the other hand, individuals in healthcare and education may be less comfortable with the practice of mobile work and therefore work in a field that is seen as somewhat traditional.

As alluded to in Table 1, the strength, direction, and significance of the relationship varies according to the source under consideration. Thus, it is possible that if different participants or companies are investigated in another similar study a main effect, or different results, may be found. This idea parallels Gustafson (2001b), who reasoned it was said that the relationship between place attachment and mobility differs on an individual basis. The findings in this study support Gustafson's findings and reiterate that there is not a "one size fits all" approach to looking at the relationship between mobility and attachment, especially as it pertains to the workplace.

Possible Explanations

A possible explanation for the age by mobility interaction effect may be that younger and older adults define, or think about, place and thus place attachment differently. Some evidence suggests that individuals below the age of 30 may be more likely to describe places in terms of the social groups available to them while older individuals tend to define places as a physical location (American Association of Retired Persons, 1997). As younger adults become more mobile they can still be connected to their informal social networks in a multitude of ways. However, when older adults become more mobile they are forced to lose their physical connections to specific places.

Another possible explanation might be that these two generations have a different understanding of what work is, how it should get done, and where it should be accomplished. This framework may manifest itself in younger individuals embracing the ability to work from a variety of locations while older adults may be more hesitant.

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Younger generations have more experience and are more familiar with mobile technologies and their impacts. As such, the age (and its familiarity and experience) component may not be what drives place attachment, rather the experience and familiarity of being mobile may predict an individual's level of attachment.

Younger generations have grown up with technology and are constantly immersed in it. As such younger generations not only have the tools to be mobile, but they have the experience of being mobile. Younger generations often prefer technology over tradition. For example, some evidence suggests that younger generations feel isolated when seeking information from more tradition outlets such as newspapers and books (Small & Vorgan, 2008).

The age by mobility interaction found in this study may be important to understand in terms of the long-term outlook of companies as well as the life span of buildings. As time goes on, newer and more technologically advanced generations will enter the workplace. In the next decade the "iGeneration," children born in the 1990's and the new millennium, will be entering the workforce, bringing with them lifelong experiences with technology and mobility. This generation will be accustomed to different ways of learning and will more than likely crave different ways of working (Rosen, Carrier, & Cheever, 2010). Understanding this generation's affinity towards new ways of working may give companies an edge in hiring and retaining the best talent available. Designing for the workplace of the future now may save companies in the long run.

There appear to be fundamental differences between the work groups examined in this study. These differences may be due to many things including, the nature and type of work done or the way work is designed and structured. By their nature consultants are a highly mobile workforce. They are more able to design and structure their work habits in ways that focus and respond to mobility. This predisposition to mobility and perhaps the freedom to be more mobile may result in higher levels of attachment as mobility increases. Conversely, educators are traditionally not a mobile workforce. Their work is designed and structured in such a way that mobility (as it is defined in this study) is not easily achieved and perhaps not wanted, resulting in lower levels of attachment at higher levels of mobility.

Solutions

Some of the findings of this research have implications for physical and organizational design (Pfeffer, 1978; Hackman & Oldham, 1980; Horgen, Joroff, Porter, & Schon, 1999, Becker, 2004; Felstead et al, 2005). Based on the findings from this research, changes can and should be made to the form and function of the workplace as well as the ways in which the actual work is designed. It is no secret that demographics will have a dramatic impact on the workplace (Florida, 2002; Farnsworth Riche, 2003; Donkin, 2010) over the next decade. Companies that recognize and prepare for this could benefit in a multitude of ways.

One such change that can be made is redesigning the ways in which individuals, groups and organizations work. Policies and procedures should be planned and developed, on an individual, group, or company basis, which acknowledges the

relationship between mobility and attachment. From this study it was found that as older individuals become more mobile their attachment to their place of work decreases. To combat this, work should be managed in ways that regulate or promote the amount of mobility an individual experiences.

For instance, if an older individual has to be on the road for work it may make sense that limitations are made on the frequency, duration, or distance of travel. The opposite may be done for younger individuals; perhaps they should be given the opportunity, and even encouraged, to work away from the office in certain instances. Likewise the physical location of older, more experienced employees may be of some significance. Centrally locating these individuals amongst their team or department may afford the ability to share knowledge easily and often.

In Europe the previous ideas and concepts are already beginning to be addressed with some specific solutions put into place. Age management is one such solution that has been in place for some time. It refers to the many dimensions in which human resources are managed within organizations that explicitly focus on age and the policies that help to create an environment in which individual employees are able to achieve their potential without being disadvantaged by their age. Age management can also be viewed as a concept that arranges the work of older employees in ways that best match the needs of the employer to the individual (Walker 1997, Naegele & Walker, 2006; Donkin, 2011).

Dimensions that can be addressed or incorporated in age management strategies include: job recruitment/exit, training, development, and promotion as well as working practices and job design (Casey, Metcalf & Lakey 1993). Within these

dimensions, a common theme that emerges is that of ability, as people age their work abilities may change. However, changing work ability may not mean a decline in work capability, as such; companies should be cognizant of this issue to get the most from their employees. Comprehensive age management strategies can also enable the creation of work teams with complementary experiences and perspectives as well as the transmission of skills, knowledge, and expertise across generations (Walker, 2005).

Due to the relationship found between mobility and attachment for differing work groups, several design interventions may be possible. For those workgroups who seem to enjoy mobility, that is, as their mobility increases so too does their attachment, design solutions such as hoteling or hot-desking may be applicable. This term, coined in the 1990's by Michael Brill, refers to the idea that employees reserve a place to work for a defined length of time. Just like in a hotel, an employee would not be certain upon reservation of what floor or space they will occupy but will be certain that upon arrival there will be a space from which to work (Becker, 2004).

In this study it was also found that as some group's levels of mobility increased, levels of attachment decreased. It would follow, then, that the idea of hoteling may not be well received by these groups. For these groups a more traditional approach, albeit slightly modified, may work best. It may be best for these groups to have assigned workspaces in which they can take ownership but also give them the flexibility to experience mobility in an almost serendipitous manner. Using an assigned open plan work design that gives less emphasis on individual square footage and more emphasis on circulation and impromptu meeting areas may suit the working styles of these groups

best. This would allow these groups the ability to be immobile by working at an assigned work space but also allow them the opportunity to interact with coworkers.

The workplace of the future should recognize that within the overall concept of work there are different types of work which require diverse design solutions. Work can be done by individuals or groups, require concentration and focus, or the need to collaborate and share ideas. Duffy (1997) relates these types of work to a distinctive design feature and titled them hive, cell, den, and club. Hives are characterized by individual, routine-process work with low levels of both interaction and autonomy. Likewise cells offer individuals the ability to accommodate for work that requires concentration and focus. Dens and clubs are designed to increase interaction and are characterized by highly interactive group work. Duffy argues that workplaces of the future will shift from hives and cells to dens and clubs.

Companies are beginning to realize that work is no longer confined by place but that it is an activity that can be conducted anywhere (McGregor & Shiem-Shin Then, 2001). At the same time companies have begun to understand the importance of the social aspect of work and designed their workplace accordingly. New workplace designs have drawn from the ideas and theories of urban planners and sociologists and incorporated town squares, main streets, and neighborhoods to increase the ability for co-workers to socialize (Duffy, 1997; Turner & Myerson, 1998; Marmot & Eley, 2000). There is a litany of case studies showing that organizations are embracing news ways of work and new forms of design including British Airways, Google, SAS, Nickelodeon, Bank of America, and Facebook, just to name a few. These companies have embraced the idea that a vast array of food, services, and amenities all in one location keeps

employees in the workplace for longer periods and allows for the opportunity to be more productive and efficient.

As mobility and flexibility become more prevalent across society, it is important to design these features into the workplace while simultaneously understanding that different individuals and work groups may be comfortable with different levels of and exposure to mobility and flexibility. A better planned, designed, and managed workplace could result in a more dynamic, proficient and responsive workforce.

Limitations of Current Research

The greatest limitations to the current research revolve around mono-operation and mono-method bias, specifically the definition of workplace mobility and the instrument used to measure it. The current definition of workplace mobility, and hence the instrument, does not take a systems perspective. The current definition places mobility along a simple continuum and does not provide insight as to the patterns or preferences of mobility. By simplifying mobility in such a way, the possibility exists that the full extent of an individual's mobility is not being measured. It is possible that the current scale only captures a portion of an individual's true mobility. Further investigation may be needed to understand the ecology of workplace mobility such that one could capture an individual's cumulative mobility.

To more validly assess the full extent of an individual's workplace mobility, it would be best to use multiple methods of data collection. Interviewing and observation are two such methods and would allow for a more detailed measurement and

understanding of mobility. Interviews might provide further insight into an individual's thoughts, feelings, and definition of mobility and attachment as well as the relationship between the two. Observations would allow for the ability to physically measure ones mobility, the amount of time spent in certain locations, as well as patterns of movement. Taking a systems perspective and using these techniques may allow for a better understanding of the overall construct of workplace mobility.

Despite the possible solutions and benefits of this study the previous ideas threaten the validity of this study. The validity issues with the current research parallel those of other people-environment studies, most notably the Hawthorne studies. Sommer (1968) argued that a simple deterministic model of research, like that in this study and Hawthorne, is inadequate. Each study may not have given enough consideration to informal communication patterns, roles, norms, and other social processes which may play a crucial role in affecting an individual's attitudes towards their work. Identifying no effect between a single cause-and effect relationship in connection to the physical environment is nearly inevitable (Becker, 1981).

Another limitation with the current study is the lack of detailed knowledge of the sample. By distributing the survey via email or through the use of social media websites, no controls were present as to who took the survey and under what conditions the survey was taken. Also, with the method used, it is impossible to know the response rate of the survey. Without this knowledge the validity and representativeness of the survey can be called into question.

Future Research

To address the major limitations of this study, future research on mobility would benefit from a more in-depth definition of workplace mobility as well as a multi-method approach to measuring it. As mentioned previously, interview and observation techniques could all be used to understand the many facets of workplace mobility. Using a multi-method approach would allow researchers to better comprehend how mobility occurs and the differences between individuals that are not able to be gained from a mono-method approach.

Personality type and traits may also play a role in the relationship between mobility and attachment, especially as it pertains to the work group interaction effect for in this study. Although not tested for in the current study, it may be that individuals with a certain type of personality are more likely to work in one of the work groups in this study. These personality traits would work in conjunction with an individual's work group to possibly explain the interaction effect.

In relation to the current study, personality could play a role in the work group by mobility interaction previously mentioned. The link between mobility and attachment differs according to work group. Perhaps some of this might be attributable to the personality of individuals. It may be that certain personality traits select specific work groups and this, in turn, contributes to the interaction effect found. For instance consultants may be extroverted and thus outgoing. This predisposition to mobility may explain that for consultants higher mobility relates to higher attachment levels.

Previous studies have looked at the relationship between the big five personality factors (extraversion, agreeableness, conscientiousness, neuroticism, and openness)

on different forms of mobility, both geographic and occupational mobility (Pihl & Caron, 1980; Van Vianen, Feij, Krausz, Taris; 2003). Both studies found little evidence to support a link between the two variables. However, Van Vianen et al. (2003) point to the idea that the big five personality factors cover broad constructs and thus may have limited predictive power. Future research investigating the link between mobility and attachment may benefit by exploring, in more depth, the personality characteristics and traits of the individuals in the study.

The work group interaction may also benefit from a better understanding of the characteristics that encompass each of the job types under consideration. For instance, it may be important to know the amount of interaction an individual has with other co-workers and clients or the amount of group vs. individual work done being done. This may allow for more insight about the norms and standards for a certain work group. A job that requires more group work may allow for more mobility and may affect place attachment differently than a job in which the majority of work is done at the individual level.

Similarly, future research may benefit from understanding the difference between voluntary and involuntary mobility. Understanding the degree to which mobility is by choice may allow researchers to better predict the attitudes and feelings that come with those forms of mobility. If an individual is forced to be mobile they may have negative feelings towards their mobility and as such may respond differently than an individual who voluntarily works from a variety of locations.

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Further research could also examine the relationship between workplace attachment and human resource issues such as organizational commitment, retention, and churn. It is possible that employees with higher levels of attachment are less likely to leave their current employer. This relationship may be of particular importance to C-level officers as well as those in HR due to the high cost of finding and hiring the right employees. As Froggatt (2001) points out "the struggle to fill job openings and the high cost of replacing employees will continue to have a significant effect on the performance of traditional and non-traditional business" (p. 7). In one study of a non-profit organization, employees expressed positive levels of attachment toward the organization's mission, and those attitudes were related to employee satisfaction and intentions to remain with the organization (Brown & Yoshioka, 2003).

Another path that future research may take is incorporating a life cycle approach to the study of both mobility and attachment. As Bronfenbrenner & Morris (1998) point out "human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment" (p. 996). It would follow then, that individuals at different points in this process may interact and experience their places of work in different ways. Becker (2004) reiterates this idea when he mentions that younger individuals see the workplace as one in which they can learn and develop new skills as well as new relationships. The social aspect of work is of vital importance to those just starting their work careers. The social context still remains important to individuals as they progress in their life cycle, albeit in a different way.

As previously mentioned, it would be interesting to further investigate how younger and older individuals view and define both mobility and attachment. Doing this over time may yield interesting results as well. Questions such as: 'How do a generation's definition of mobility and attachment change over time?' could possibly be answered. A fundamental difference in the way that groups define and view mobility and attachment may be present and provide insight into ways to design workplaces and the work within them to better suit all of those involved.

Still, further research might benefit from understanding the differences, impacts, and importance of workplace attachment when compared to attachment to differing environments such as the home, city, or neighborhood. Fundamental differences may be present in how individuals feel towards their place of work when compared to how individuals feel towards their home or neighborhood. Perhaps less emphasis on attachment, to any environment, is evident for some individuals while for others a high priority is given to attachment to multiple places. This may also tie well into a life cycle approach as well as the roots versus routes theme mentioned earlier. Perhaps points along the life course change ones need for attachment to their place of work and result in the change from a routes theme to the roots theme or vice versa.

Contributions of this Study

An explicit goal of this research was to add to the knowledge base on place attachment. Many have pointed to the fact that place attachment research has been limited in the amount of work done as well as environments in which attachment has been tested. This study has contributed to scholarship on place attachment by

examining an environment which has received little attention, the modern workplace. As the world of work changes in response to demographics and technology (Froggatt, 2001; Florida, 2002; Donkin, 2010), it is becoming more important for those designing and managing these places of work to understand its many underlying dynamics.

This study is also beneficial to place attachment scholarship in simultaneously measuring mobility and its effect on attachment. Many researchers have posited that mobility has an effect on our attitudes towards and experiences of place (Relph, 1976; Tuan 1977). Yet there is not much empirical work testing this relationship. In the last decade, Gustafson (2001b, 2009) looked at this relationship in differing contexts. The current research builds upon his work and reaffirms some conclusions and thoughts. The relationship between mobility and attachment varies on an individual basis and is dependent upon the scale or environment under considerations.

Perhaps the greatest contribution of the present study will be the stimulation of interest in the study of workplaces and the enrichment of our understanding of its effects on employees. By better understanding the relationships that workers have to the physical and social dimensions of their places of work, decision makers will have better knowledge and evidence to make decisions. As such, the survey tools used in this study are meant to be used by those in design and management to understand the current state of their clients or company. Only then will the best design and management decisions be made.

APPENDIX

This appendix contains the surveys used for this research including the workplace demogrpahic survey, workplace mobility survey, and the workplace attachment survey.

Workplace Demographic Survey

Age

❍ Under 30 years (1)
❍ 31 - 40 (2)
❍ 41 - 50 (3)
❍ 51-60 (4)
❍ Over 61 (5)

Gender

❑ Male (1)
❑ Female (2)

What is the highest degree or level of school you have completed? If currently enrolled, mark the previous grade or highest degree received.

❍ High School or GED (1)
❍ Associates (2)
❍ Bachelors (B.A. or B.S.) (3)
❍ Masters (M.A., M.S., or M.P.S) (4)
❍ Doctorate (PhD, MD) (5)

Years in the Workforce

❍ Under 5 (1)
❍ 6 - 10 (2)
❍ 11- 15 (3)
❍ 16-20 (4)
❍ Over 21 (5)

Years with Current Employer (including years with a legacy employer if your company has been acquired)

❍ Under 5 (1)
❍ 6 - 10 (2)
❍ 11 -15 (3)
❍ 16 -20 (4)
❍ Over 21 (5)

What line of work does the company you work for do?

- ❍ Legal / Human Resources (1)
- ❍ Finance / Accounting (2)
- ❍ Consulting (3)
- ❍ Architecture / Design (4)
- ❍ Sales (5)
- ❍ Healthcare (6)
- ❍ Business / Management (7)
- ❍ Education (8)
- ❍ Technology (9)
- ❍ Other (10)

When in an office setting where do you normally work?

- ❍ I have an assigned workspace (1)
- ❍ I sit wherever I want using available shared space (2)
- ❍ I don't have an assigned space but my team has a designated are in which to work (3)
- ❍ Other (4)

Do any of the following constraints affect the place(s) in which you are able work?

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Company Policy (1)	❍	❍	❍	❍	❍
Managerial Preference (2)	❍	❍	❍	❍	❍
I require access to specific software or materials only available in the office (3)	❍	❍	❍	❍	❍
Need to collaborate with colleagues (4)	❍	❍	❍	❍	❍

My work can only be done in certain a specific place.

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

Technology affords me the ability to be geographically independent

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

The ways in which I communicate with coworkers is constantly evolving

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

Technology allows me the ability to multitask

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

Technology allows me to work in places where it was previously not possible (the train, an airport, a taxi)

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

I make it a point to not check email or do other work related activities when away from the office.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I often feel that my work follows me everywhere

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I find myself working across a variety of times (early morning or late night)

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I schedule my work day so that meetings and/or conference calls occur one after the other.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I prefer to work during normal business hours.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I regularly communicate with others who are in a different country and/or time zone

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

My entire work team is made up of individuals with whom I share workspace with.

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

My workplace is limited to the physical place in which I work.

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

I choose to work in the same place on a daily basis.

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

My job requires me to work at many different places throughout the day

○ Strongly Disagree (1)
○ Disagree (2)
○ Neither Agree nor Disagree (3)
○ Agree (4)
○ Strongly Agree (5)

I do not need a workstation to complete my daily tasks

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

My work requires time away from others to concentrate and focus.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I feel my place of work is a part of me

❍ Strongly Disagree (1)
❍ Disagree (2)
❍ Neither Agree nor Disagree (3)
❍ Agree (4)
❍ Strongly Agree (5)

My place of work is very special to me

❍ Strongly Disagree (1)
❍ Disagree (2)
❍ Neither Agree nor Disagree (3)
❍ Agree (4)
❍ Strongly Agree (5)

I identify strongly with my place of work

❍ Strongly Disagree (1)
❍ Disagree (2)
❍ Neither Agree nor Disagree (3)
❍ Agree (4)
❍ Strongly Agree (5)

My workplace says a lot about who I am

❍ Strongly Disagree (1)
❍ Disagree (2)
❍ Neither Agree nor Disagree (3)
❍ Agree (4)
❍ Strongly Agree (5)

I would be upset if my work team were relocated without me to a different location within the building

❍ Strongly Disagree (1)
❍ Disagree (2)
❍ Neither Agree nor Disagree (3)
❍ Agree (4)
❍ Strongly Agree (5)

My workplace is the best for the work that I do

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

No other workplace can compare to my current place of work

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I would not enjoy working at another workplace as much as I enjoy working at my current workplace

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I get more satisfaction from my current workplace than any other previous place of work

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

I would be happy to be relocated along with my fellow coworkers to a different location within the building

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

My work team is more important to me than the space in which we work

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

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