

# Psychological ownership within the job design context: revision of the job characteristics model

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## Summary

In this paper, we offer a theoretical modification to the Hackman and Oldham (1975) Job Characteristics Model by integrating research on the psychological aspects of job design with emerging theory on psychological ownership. We develop the connection between job design and (a) the motives facilitating psychological ownership, (b) the routes through which psychological ownership emerges, and (c) the individual-level outcomes (e.g., emotional, attitudinal, motivational, and behavioral) that result from an employee's psychological ownership of his or her job. Our work covers several previously ignored positive and negative effects. We conclude by positioning psychological ownership as a plausible substitute for other proposed mediating psychological states in the job design–employee response relationship. Copyright © 2008 John Wiley & Sons, Ltd.

## Introduction

Scholarly interest in the design of work has a long and rich history. Adam Smith (1776) advocated making work *simple* in order to achieve productivity gains, and his call for a division of labor led to the horizontal and vertical standardization, specialization, and simplification of work. His contributions and those of his followers (e.g., Taylor, 1911) virtually ignored the psychology of work—both in their rationale and their mechanistic approach to the structuring of people's jobs. Herzberg and his colleagues (1959) played an instrumental role encouraging scholars to think about the psychology of work and the making of work *interesting* in order to achieve similar ends. This, along with the scholarship of others (e.g., Hackman & Lawler, 1971; Hulin & Blood, 1968; Turner & Lawrence, 1965), was instrumental in reversing the standardization, specialization, and simplification of jobs as efforts promoting job enlargement and enrichment emerged.

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The majority of recent scholarly attention in this area has focused on ways of thinking about work/job design (e.g., the dimensionality of job and work design), and upon its positive attitudinal, motivational, and behavioral effects. The process(es) through which the structure of work produces its individual-level effects, and in particular the psychology of job design has received much less attention. To that end Morgeson and Campion (2003) criticized the most popular theory of job design, the Job Characteristics Model (Hackman & Oldham, 1975), for its inclusion of an unnecessary number of mediating psychological processes linking job design with its effects. They called for a more parsimonious theoretical explanation of job design effects. Similarly critical, and on the heels of their meta-analytic summary of the work design literature, Humphrey, Nahrgang, and Morgeson (2007) noted that there are weaknesses in work design theory and empirical research. Acknowledging the importance and impact of work design, Morgeson and Campion (2003) and Humphrey et al. (2007) highlighted the need for additional theory construction and more empirical research in this area—“The apparent decline of interest in work design research is troubling” ... this “reduced research interest in recent times is all the more surprising given the resurgent interest in work design in organizations” (Morgeson & Campion, 2003, p. 423).

Responding to these calls, we employ emerging psychological ownership theory to provide a new and expanded perspective to the theory of job design. More specifically, we argue that complex jobs possess the characteristics that can arouse and satisfy the needs for psychological ownership, and the structural features that promote the emergence of ownership feelings, thereby making the job a target of an employee’s psychological ownership. As a result we propose a revision to the Job Characteristics Model, and posit that psychological ownership better mediates the job design–employee response relationship than previously proposed psychological states (i.e., experienced meaningfulness of work, experienced responsibility for work outcomes, and knowledge of results). In addition, acknowledgment of the job design–psychological ownership relationship advances our understanding of individual level effects that could accompany job enrichment efforts, some positive (e.g., protection and nurturing behavior) and some negative (e.g., stress and isolation) in nature.

We start by providing a brief overview of the job design research in general and the Job Characteristics Model in particular. Then, we turn our attention to a review of the current and most prominent conceptualizations of the role of psychological states in the current job design literature. Next we provide a brief review of the psychological ownership construct in advance of our suggestion that it represents a critical psychological state that helps us push the theory of job design forward in a way that responds to the calls of Morgeson and Campion (2003) and Humphrey et al. (2007). This discussion includes a presentation of the construct’s conceptual definition, an identification of its “roots” (i.e., the motives that underpin this psychological state), and the paths down which people travel that gives rise to a sense of ownership. Central to our work is the joining of job design and psychological ownership. Finally, we turn our attention to outcomes produced as a result of the job design–psychological ownership connection, including previously unrecognized negative effects.

## **The Extant Job Design and Psychological Ownership Literature**

As just noted, we now turn our attention to a brief overview of the two literatures that provide the foundation for our revision of the Job Characteristics Model. We start with a look at the job design and the JCM, inclusive of an overview of the psychology of work. Then we turn our attention to current theorizing on the psychological ownership construct.

*Job design and the job characteristics model*

A brief review of the job/work design literature reveals that for nearly a century, there have been a number of efforts directed toward the conceptualization and measurement of the structure of the job (work) assigned to employees (e.g., Campion, 1988; Gilbreth, 1912; Hackman & Oldham, 1975; Jaques, 1956; McCormick, Jeanneret, & Mecham, 1972). In addition, extensive conceptual and empirical work has examined the effects associated how work is designed (e.g., Argyris, 1957; Campion, Medsker, & Higgs, 1993; Hackman & Oldham, 1980; Hulin & Blood, 1968; Humphrey et al., 2007; Langfred & Moye, 2004).

Noteworthy in this effort has been Hackman and Oldham’s (1975) motivational approach to job design, as reflected in their Job Characteristics Model (JCM). According to Renn and Vandenberg (1995) this model has served as the catalyst for the publication of a couple of hundred empirical studies. Building upon the job enlargement and job enrichment tradition, Hackman and Oldham (1975) highlight five core job design characteristics, a set of critical psychological states, individual and work outcomes, and a moderating individual difference construct. In addition, they specify the relationships among these four components (see Figure 1). Their work has prompted other conceptualizations of job design (e.g., Campion, 1988; Humphrey et al., 2007), approaches to job design measurement (e.g., Campion & Thayer, 1985; Idaszak & Drasgow, 1987), construct validation work (e.g., Fried & Ferris, 1987; Idaszak & Drasgow, 1987), and their own approach to the redesign of work (Hackman & Oldham, 1980). Extensions to the Job Characteristics Model include the addition of important social (e.g., social support and feedback from others) and work contextual (e.g., physical work demands and ergonomics) features (e.g., Campion, 1988; Humphrey et al., 2007). Empirical research provides both a detailed examination of and support for the proposed relationship between the core job design characteristics, and several employee attitudinal, motivational, and behavioral responses (e.g., Fried & Ferris, 1987; Humphrey et al., 2007; Renn & Vandenberg, 1995).

*The psychology of work*

Many scholars provide insight into the psychology of work. For example, Tilgher (1958) discussed the meaning of work both as an evil curse and as the execution of god’s will. Deci (1975) provides us with

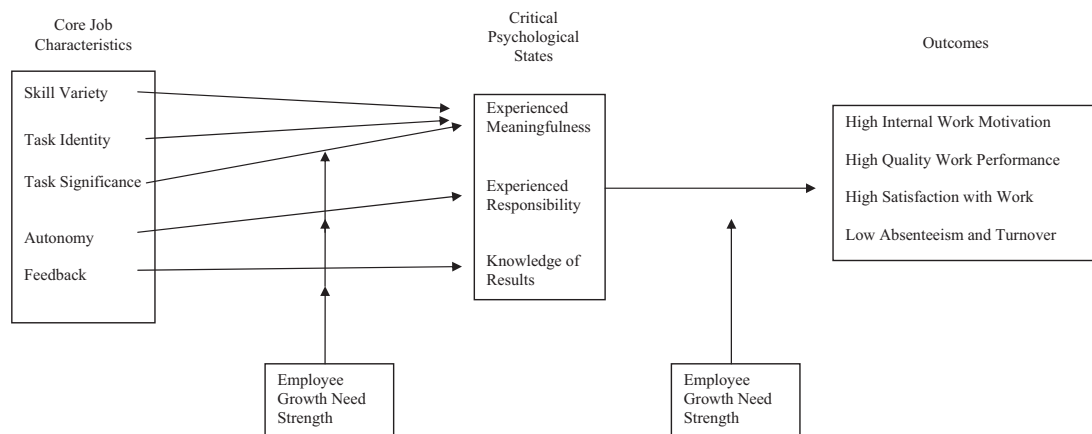


Figure 1. The original Job Characteristics Model

insight into the self-determination and intrinsic motivation effects that are associated with the administration of extrinsic rewards for work performed. Scholars (e.g., Brockner, 1988; Pierce & Gardner, 2004) working with self-esteem (i.e., global and organization-based) have noted the positive effects that complex jobs have upon the individual's self-concept and the mediating role played by organization-based self-esteem in the job design–employee response relationship (e.g., Pierce & Gardner, 2004). Hulin (2002), recently observed that work serves multiple psychological roles in the lives of people, for example: it gives life meaning and purpose, it is a source of feeling secure, and it gives activities such as leisure meaning.

Focusing on the relationship between job design and creativity, Elsbach and Hargadon (2006) suggest that three psychological states (i.e., positive affect, psychological safety, and cognitive capacity) play a central linking role. In addition, there has been scholarship (e.g., Gagne, Senecal, & Koestner, 1997; Kraimer, Seibert, & Liden, 1999; Liden & Arad, 1996; Liden, Wayne & Sparrowe, 2000) focused on the role played by psychological empowerment. The theoretical argument is straightforward—complex job design leads to employee psychological empowerment (i.e., meaning: value of work; competence: personal mastery, self-efficacy, or an effort-performance expectancy; self-determination: sense of having a choice in initiating and regulatory actions; and impact: feeling as though one can influence work outcomes) which in turn positively affects employee intrinsic motivation, work satisfaction, organizational commitment, and volitional and constructive work-related behaviors.

Through the JCM, Hackman and Oldham (1975) theorize that there is a positive and causal relationship between complex job design and three critical psychological states—experienced meaningfulness of work, experienced responsibility for work outcomes, and knowledge of results. It is these work-created psychological states that, in part, provides the individual with an awareness, thoughts, beliefs, and an arousal similar to Csikszentmihalyi's (1975) flow and Deci's (1975) intrinsic motivation.

Commenting further on the psychological states produced by complex job design, Hackman and Oldham (1975) note that *experienced meaningfulness of work* reflects the “degree to which the employee experiences the job as one which is generally meaningful, valuable, and worthwhile” (p. 162). Employees who experience their work as meaningful have come to see the work that they do as important *vis-a-vis* their own value system. They continue by observing that *experienced responsibility for work outcomes* addresses the “degree to which the employee *feels* personally accountable and responsible for the results of the work he or she does” (p. 162). Knowledge of results represents the last psychological state in their model. *Knowledge of results* represents “degree to which the employee knows and understands, on a continuous basis, how effectively he or she is performing the job” (p. 162). Finally, they posit that these psychological states mediate the relationship between five core job design dimensions (e.g., skill variety, autonomy, task identity, task significance, and feedback) and several employee responses (e.g., internal work motivation, job satisfaction, and quality work performance).

To date there have been a few empirical studies examining the mediating role of the critical psychological states in the job design–employee response relationship. These results appear to provide mixed support for the model (Behson, Eddy, & Lorenzet, 2000; Fried & Ferris, 1987; Humphrey et al., 2007; Johns, Xie, & Fang, 1992; Renn & Vandenberg, 1995). Results from Humphrey et al.'s (2007) meta-analyses of 259 studies suggests a modified mediational model in which the primary mediator of the job design–work outcome relationships is experienced meaningfulness. In addition, there is some empirical evidence supporting the mediational role played by psychological empowerment in the relationship between, for example, job design and work satisfaction (Liden et al., 2000). Similarly, Elsbach and Hargadon (2006) provide empirical support for their mediational model in the production of creativity.

### *Ownership as a psychological phenomenon*

Pierce, Rubenfeld, and Morgan (1991) in their review of the employee ownership literature suggested that ownership is “multidimensional in nature, existing as both a formal (objective) and as a psychologically experienced phenomenon” (p. 124). People, they claim, can come to a state where they experience a sense of ownership for objects whether or not they own them legally. Similarly, Etzioni (1991) noted that ownership is both “real” and something that can exist in the “mind.” It was on the heels of this work that organizational scholars have increasingly paid attention to the development of the theory of psychological ownership (e.g., Pierce, Kostova, & Dirks, 2003), and an exploration of its antecedents and consequences within the work and organizational context (e.g., Jussila & Puumalainen, 2005; O’Driscoll, Pierce, & Coghlan, 2006).

Building upon the work of Furby (1978), Dittmar (1992), Litwinski (1947), and Belk (1988), Pierce and his colleagues (2003) define **psychological ownership** as “that state where an individual feels as though the target of ownership or a piece of that target is “theirs” (p. 86).<sup>1</sup> As a part of their elaboration of the psychological ownership construct, they suggest that there are a large number of targets (e.g., objects which are both material [e.g., work, tools] and immaterial in nature [e.g., ideas, workspace]) to which feelings of ownership can develop. As objects become grounded psychologically, they become for the individual “mine” or “ours” as the individual finds him/herself present in them (Kline & France, 1899), and they become a part of the “extended self” (Belk, 1988).

Psychological ownership (i.e., the state of personal feelings of “mine-ness” and/or “our-ness”) is seen as a complex state composed of both a cognitive and affective core (i.e., the cognitive state of ownership is coupled with an emotional or affective sensation). Cognitively, it reflects an individual’s awareness, thoughts, and beliefs regarding the target of ownership. Affectively, feelings of ownership are said to be pleasure producing *per se* (Beggan, 1992; Furby, 1978; Nuttin, 1987; Porteous, 1976). In addition, Pierce and his colleagues (2003) distinguish between the “roots” of (i.e., the motives for), and the “routes” to (i.e., the experiences that give rise to) psychological ownership. The roots of psychological ownership help us understand “why” this state exists, and the routes provide insight into the question “how” does it come into being.

Current theoretical work (cf. Pierce et al., 2001, 2003) places the genesis of psychological ownership in three motives: (1) the motive for efficacy and effectance (White, 1959), (2) self-identity (Dittmar, 1992; Mead, 1934), and (3) having a place in which to dwell (home; Heidegger, 1967; Polanyi, 1962). As the primary reasons for experienced ownership, each of these motives is hypothesized to facilitate the development of the state of psychological ownership, as opposed to being the direct cause of its occurrence.

With feelings of ownership being rooted in this set of motives, it is assumed that individuals can develop feelings of ownership for a variety of objects so long as these objects allow this set of motives to operate and to be satisfied. Three major experiences have been identified as the “routes” through which psychological ownership emerges. Specifically, it has been theorized that with

<sup>1</sup>The conceptual and empirical distinctiveness of psychological ownership with several other constructs (e.g., organizational identification, organizational commitment, internalization, job involvement, and job satisfaction) that depict a psychological connection than an individual forms with one’s work and an organization has been addressed by Pierce, Kostova, and Dirks (2001) and Van Dyne and Pierce (2004). Specifically Pierce and his colleagues (2001) conceptually addressed the differences in terms of the conceptual core, question answered, motivational based, development, type of state, select consequences, rights, and responsibilities that are associated with each of these constructs. Additionally, Van Dyne and Pierce (2004) provide evidence from a panel of judges employing a Q-sort technique which demonstrates the discriminant validity of the items for the measurement of psychological ownership from popular measures of affective organizational commitment, organizational identification, internalization, job involvement, and job satisfaction. They also provide discriminant validity evidence from three distinct field studies discriminating psychological ownership from several of these constructs.

the exercise of control over the ownership target, objects become a part of the extended self and feelings of ownership emerge. The personalization of space, for example, can be seen as an individual's exercise of control over a territory which after a period of time enables the individual to satisfy their need for home and self-identity, thereby giving rise to feelings of ownership for that marked territory (cf. Porteous, 1976). In addition, coming to intimately know the target, and/or through an investment of the self into the target, feelings of personal ownership develop as one or more of the motives for ownership (i.e., efficacy and effectance, self-identity, and home) are stimulated and fulfilled (Pierce et al., 2003).

## Complex Job Design and the Motives for Psychological Ownership

In this section, we pose the question—Are the motives for psychological ownership more likely to be satisfied (fulfilled) by complex (enriched job design), than by a simplified, standardized, and short-time cycle job? It is envisioned here that each of the three motives mentioned above can operate and be satisfied through a complex job designed. Addressing target factors that appear to contribute to the emergence of psychological ownership, Pierce et al. (2003) note that minimally the target needs to be visible and attractive, as it must arouse the individual's interest and attention. Beyond this, target attributes of manipulability and accessibility (openness) play an important role for the stimulation and satisfaction of one or more of the three motives. If the target is going to serve the need for efficacy and effectance it needs to be accessible (i.e., the individual needs to be able to immerse him/herself into the work that they perform) and malleable. The target needs to be open (available, receptive, and hospitable) to the individual so that they can find home within it. Finally, service of the self-identity motive requires that the target is accessible, malleable, attractive, socially-esteemed, and self-revealing. To the extent that the target is visible and attractive, and accessible each of the three motives are likely to be activated and satisfied.

### *Control and effectance motive*

White (1959) addressed *control and effectance motivation*. The effectance motive reflects the individual's desire to interact effectively with his/her environment. It is aroused by differences in the environment, is sustained when one's actions (or the actions of others) produce further differences, and subsides when the environment has been explored to the point that no further differences are produced. White (1959) notes that exploration of and the ability to control one's environment gives rise to feelings of efficacy and pleasure, as both stem from "being the cause." It is reasoned here that complex rather than routine jobs provide the role incumbent with a greater opportunity for stimulation, exploration, the ability to produce differences, and to experience oneself as the cause; thereby, satisfying the need for control, effectance, and feelings of competence.

More specifically, simple jobs create conditions under which it is much more difficult for people to come to experience accomplishments as a function of their own skills and abilities, instead attributing successful task accomplishment to the routines (structures) that were created by others. In addition, the highly structured, routine, and repetitive job is seen as less accessible and malleable. As a consequence, the control and effectance motive is less likely to be satisfied. Complex tasks, on the other hand, present a greater challenge, are more open to the role incumbent's decisions and manipulation, require more skills and abilities, higher levels of motivation, persistence, and effort expended. It is under such

conditions that successful performance is likely to be attributed to the self, and feelings of efficacy and effectance realized.

### *Self-identity motive*

The second motivational underpinning for psychological ownership is the *need for self-identity* (Mead, 1934). The question here asks—Is the self-identity motive aroused and satisfied to a greater extent by enriched jobs than by standardized, simplified, and short-time cycle jobs? Accessibility and malleability appear to be two complex job characteristics that play a role in promoting feelings of ownership. While neither is seen as a direct cause, it is envisioned that both target characteristics enable the individual to develop the type of relationship with the job out of which the psychology of possession emerges leading to partial fulfillment of the self-identity motive. First, it is reasoned that complex jobs more than standardized, simplified, short-time cycle jobs are more accessible. The possibility both to intimately know the job and to personalize it comes from the fact that the job is less rigid or structured, whereas the standardization that characterizes the routine job restricts the accessibility (i.e., the individual's interactions with the job). If an individual cannot get “into” the job it becomes more difficult for him or her to integrate the job and the personality into one, making it a part of the extended self. Second, it is also reasoned that complex jobs are more malleable, thereby enabling the individual the opportunity to shape the job and work outcomes (i.e., personalize them) such that the product of one's labor is a reflection or extension of the self. As a result, a part of one's identity becomes embedded within the job.

Enriched jobs, especially those characterized by high skill variety, autonomy, and task identity, require that the individual invest more of him/herself into the job (i.e., more skills, imagination, time, effort, decision making, and problem solving) and in the process the job is likely to become more of “who and what” the individual is, thereby revealing their identity. As a result of the individual exercising greater control over the job and work completion, it is more likely to become a part of the extended self and thus a part of the individual's self-identity. This fusion of self and the job can be illustrated through the comparison of the carpenter who builds an entire house versus those involved in the mass manufacturing of modular dwellings by construction crews assigned to different stages of the construction process (e.g., framing, wiring, dry wall taping, and painting). Thus, we argue that complex jobs call upon more of the employees skills, provides opportunities for them to exercise discretion and make more decisions which results in their having a larger impact which ultimately results in the finished work being a reflection of the individual.

It also seems likely that complex jobs almost by definition have a greater likelihood of being self-revealing and thereby serving to satisfy the self-identity motive. The self-revealing aspect that appears to be associated with complex jobs stems from their use of more of the individual's skills, abilities, and energies, the fact that people perform whole and identifiable pieces of work, and the fact that one is required to exercise personal discretion in setting goals, solving problems, and determining work procedures. It would appear reasonable to assume, therefore, that the work that stems from complex jobs is more likely to reflect the individual who is performing the work, thereby contributing to self-identify through its self-revealing qualities.

### *Home (dwelling) motive*

*Home*, having a place in which to dwell, is the third motive that is suggested to serve as a reason for feelings of ownership. According to Heidegger (1967), dwelling, or being “at home in,” refers to

“being in the world.” It refers to the individual’s placement and understanding of him/herself in the time and space.

Dwelling exists in those instances where the individual has been successful infusing oneself in time and space, accompanied by the sense that one is “within” and a “part of” some particular place. It reflects the discovery of personal meaning and comfort in time and space. Home is, in part, achieved as a result of an individual’s interaction with his/her surroundings and the personalization of these surroundings (i.e., bringing to these surroundings qualitative properties flowing from the self) which promotes familiarity, a sense of being one with, and the discovery of oneself within. It is a relationship that pervades one’s relationship with other objects in the world (Dreyfus, 1991). At home in is realized when we inhabit something and it is no longer an object for us, instead it becomes part of us (Heidegger, 1967; Polanyi, 1962).

When an individual is at home in, for example, his/her work they have found a purpose of life and self in that work. “Being in” (i.e., at home in), for example, one’s language, beliefs, house, and community, in part, stems from an investment of the self into that context, an intimate knowing of that context, and/or the discovery of one’s personal identity within that context such that it is a reflection of the self. Having a place in which is it comfortable for one to dwell, according to the French philosopher Simone Weil (1949/1952) is an important “need of the human soul” (p. 41). It is assumed, for example, that “being” at home in one’s beliefs, language, food, and physical place provides familiarity, security, psychic comfort, and purpose.

The critical question here asks—Is the motive for home more likely to be activated and fulfilled on an enriched (i.e., complex) job, than a standardized, simplified, short-time cycle (i.e., routine) job? If being at home in is realized when we inhabit something and it no longer is an object for us, instead it becomes part of us (Heidegger, 1967; Polanyi, 1962)—Is this state of dwelling more likely to be realized on an enriched job or its counterpart?

Home, according to Porteous (1976), is more likely to be found in those possessions in which one has made a considerable emotional investment (i.e., in a place in which “meaningfulness” has been found). A condition much more likely to be realized in demanding, challenging, person and time consuming endeavors than in those that can be accomplished quickly, easily, and without the expenditure of time and self in the development of a relationship with the target. The answer is also and in part, to be found in task identity, feedback, and autonomy. Both task identity and feedback help the individual develop an understanding of and more complete familiarity with the job. It is this familiarity that promotes and/or accompanies feelings of being at home. The autonomy dimension of the complex job enables the individual to personalize the job and its context. With increasing personalization of one’s surroundings the sense of inhabiting is realized further. Finally, we reason that the more one’s environment becomes a part of (defines) the individual (as reflected by assimilation into a culture), and the more one can leave one’s mark on the environment (as in the personalization of space) the more one comes to be at home in. These are the very conditions that characterize the relationship between the individual and an enlarged and enriched job. More specifically, it is more difficult for the person and job to become intertwined, and for the individual to find meaning and a sense of purpose in those jobs that are shallow and narrow in scope.

In sum, we have proposed that enriched, as opposed to simple and routine jobs are more likely to create the conditions where the efficacy and effectance, self-identity, and home motives for psychological ownership can be aroused and satisfied. Thus, the complex job and these three proposed “roots of” psychological ownership are hypothesized to be congruent with one another. Next, we address the emergence of psychological ownership, and the relationship between complex jobs and the three “routes to” ownership feelings.



## Job Design and the Emergence of Job-based Psychological Ownership

In this section we explore the relationship between each of the five core job design characteristics presented in Hackman and Oldham’s (1975) Job Characteristics Model and the three “routes” to feelings of ownership. More specifically, we are asking—Do the core job design characteristics lead to psychological ownership, and through which route? Each of these five core job dimensions (cf. Hackman & Oldham, 1975) is seen as contributing to the emergence of job-based psychological ownership. In general, it is reasoned that complex jobs provide role incumbents with greater opportunities to exercise control over work-related activities, require that they invest more of themselves into the job, and results in a more intimate relationship with the job than that which is associated with standardized, simplified, short-time cycle jobs. It is these three experiences (i.e., control, investment of the self, and intimate association) that have been theorized (cf. Pierce et al., 2001) as the major “routes to” the emergence of psychological ownership (i.e., that personal sense of my- or our-ness).

The following discussion is intended to take a close look at an over arching proposition, namely, that there will be a positive relationship between complex job design and feelings of ownership for the job. In this section we will delineate the relationship between the core job design characteristics (i.e., those properties of work that shape how personal energies are channeled) and psychological ownership (see the depiction between three constructs—job characteristics, routes to psychological ownership, and psychological ownership depicted in Figure 2) by linking each job design characteristic with one or more of the three paths (i.e., control, intimate knowing, and/or investment of the self in the job) to ownership feelings.

### *Job dimensions enabling control over work*

Autonomy is the one job design characteristic that is most likely to influence employee experiences of job-related control (Pierce, O’Driscoll, & Coghlan, 2004; Tanaka & Yamauchi, 2000; Yamauchi,

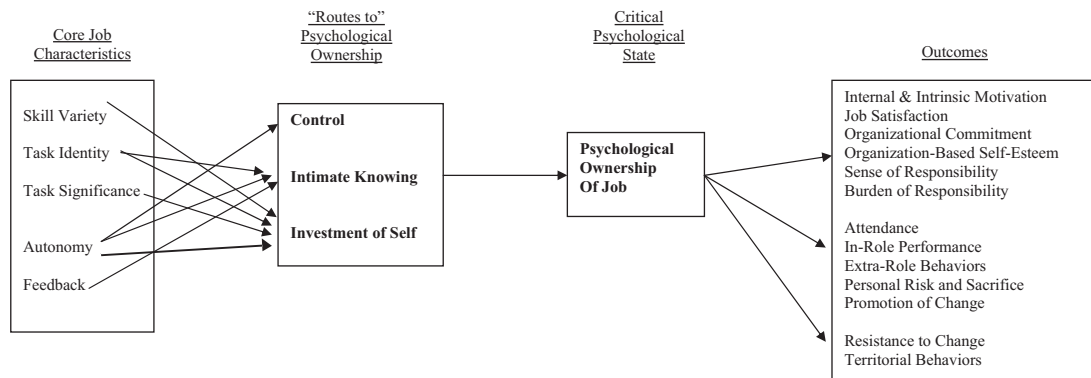


Figure 2. A psychological ownership-based revision of the Job Characteristics Model

Kumagai, & Kawasaki, 1999). The presence of autonomy implies that control and the *a priori* structuring of the job have not been imposed upon employees by other members of the social system. Thus, the autonomy job dimension provides employees with the opportunity to exercise discretion, freedom, and independence to make job-related decisions (e.g., scheduling of work and determining procedures to be used in carrying out work). Thereby creating the opportunity for satisfaction of an important self-related need (i.e., efficacy and effectance motivation and the concomitant development of the sense that “I am the cause”). Empirical evidence supports the relationships between autonomy and control, control and psychological ownership, and autonomy and psychological ownership (Brass, 1985; Pierce et al., 2004; Tanaka & Yamauchi, 2000; Yamauchi et al., 1999). Thus, it is proposed that autonomy will cause the emergence of job-based psychological ownership by operating through control exercised over the job.

### *Job dimensions enabling intimate knowing of the job*

A close reading of the theory upon which the JCM model is constructed (e.g., Hackman, 1987; Hackman & Oldham, 1975) provides the underpinnings for the intimate knowing proposition. Feedback seems to be an important job dimension promoting employees’ intimate association with their work. That is, jobs which are designed such that they provide role incumbents with information (i.e., feedback) about how well they are performing are likely to increase the employees’ knowing of the job.

Task identity, is another important attribute, as the opportunity to do a whole and identifiable piece of work, from a logical beginning to a logical ending point, provides employees with the opportunity to become familiar with each of the tasks that are associated with completing a piece of work. In addition, it affords the opportunity to see the sequencing of tasks, to come to understand those connections, and to develop an understanding of how the whole comes together. Job design autonomy is likely to increase both the level and depth of employee understanding of the job, as they will be required to make more job-related decisions which in and of themselves requires the gathering and processing of relevant job information. The job design attribute of autonomy should also contribute to the role incumbents’ intimate knowing of the job. As a result of this autonomy (i.e., freedom, independence and discretion exercised in the scheduling of work, determination of procedures to be used to complete work, and the necessity of solving work-related problems) opportunities are presented whereby the employees should become more familiar with the job. Under conditions where work scheduling, problem solving, and the determination of work procedures are handled by others we would expect that an employee will be less intimately connected to his/her job. Thus, it is proposed that feedback, task identity, and autonomy will give rise to feelings of job-based psychological ownership by operating through intimate knowing of the job.

### *Job dimensions and investment of the self into the job*

Four job design attributes are seen as affecting the extent to which employees invest themselves (i.e., invest their time, energy, skills/abilities, creative juices, and judgement) into the job. Task identity, is one of them. It entails the degree to which the job requires the individual to complete a “whole” and identifiable piece of work. Quite simply this means that employees produce (create) more of the final product, or the self is placed into a larger portion of the final product.

Skill variety is another job dimension that is likely to contribute to the extent to which an employee invests him/herself into the job. An increase in skill variety requires that individuals perform a number

of different activities using a broader array of skills and talents. Thus, with increasing skill variety employees are called upon to use more of themselves in the performance of the job.

Job design autonomy requires role incumbents to think about the work, the different procedures that might be employed in the performance of the job, and to solve job-related problems. Consequently, high as opposed to low autonomy jobs require employees to invest thought and decision into the job, and not just their physical energy toward job performance.

Finally, task significance refers to the degree to which the job has a substantial impact upon the lives or well-being of others. Hackman and Oldham (1975) envision task significance (along with skill variety and task identity) as having an influence upon the degree to which the employee experiences his/her job as one that is meaningful. While we do not envision that task significance will have a consistent, systematic, nor meaningful relationship with the experience of control, we do anticipate a weak and positive relationship with investment of the self especially for people who have a positive regard for others. Individuals who see that the consequence of their work-related effort will have an impact upon the lives, happiness, and/or well-being of others (especially their co-workers, team members) they will work more diligently, investing more care, giving a greater application of their skills and abilities, and a higher level of effort toward high and good quality performance than would be the case if they did not see that the results of their work made a real difference to others. Thus, it is proposed that task identity, skill variety, autonomy, and task significance will cause the emergence of job-based psychological ownership by operating through investment of the self into the job.

In summary and in reflection on job design and the three routes to psychological ownership we are reminded of employees at Butler Manufacturing. A small group of employees assemble a complete grain dryer, install it for the purchasing farmer, and then perform its initial operation to confirm that it is fully functional before the sale is complete. After the dryer is installed and fully functional this group of employees remains the primary contact between the farmer and Butler. While we don't have ownership data to support the following observation, these employees appear to have a very enriched job, one that is high in skill variety, autonomy, task identity, significance, and feedback. It is reasonable evident that the members of these teams have fairly high levels of control over the process; intimate knowing of the farmer's needs and the product that they are assembling for his/her needs, and an understanding of how their product is serving those needs; and an investment of themselves into the entire process from purchase, through design, manufacture and assembly, installation, and subsequent maintenance. We would therefore reason that there exists among the individuals who are involved, a strong sense of ownership for the grain dryers that they design, assemble, install, and maintain.

## Effects of the Job Design–Psychological Ownership Connection

While the job design literature has almost exclusively focused on positive effects stemming from jobs loaded on the five core job design characteristics in the JCM, the job design–psychological ownership connection advances our thinking about the effects of job design. Scholarly interest in the psychology of possession and property identifies both positive and negative effects, along with a set of territorial behaviors which have the potential to have both functional and dysfunctional effects. In this section, we provide a brief overview of observed and/or hypothesized individual-level effects associated with the psychology of possession and property as they have been elaborated elsewhere (e.g., Brown, Lawrence, & Robinson, 2005; Dirks, Cummings, & Pierce, 1996; Kostova, 1998; O'Driscoll et al., 2006; Pierce et al., 2001, 2003; VandeWalle, Van Dyne, & Kostova, 1995; Van Dyne & Pierce, 2004). Each of these effects needs to be integrated into a model depicting the job design–psychological ownership

relationship. In addition, recent scholarship focused on territorial behavior (Brown et al., 2005) which serves to highlight additional outcomes that may emerge as a result of the emergence of psychological ownership from enriched (complex) jobs.

Hackman and Oldham (1975) asserted that the effects (i.e., internal motivation, work satisfaction, quality performance, and attendance) proposed in their Job Characteristics Model emerged when the three psychological states (i.e., experienced work meaningfulness, experienced responsibility for work outcomes, and knowledge of results) exist, and that they are created by the five core job design characteristics. Thus, it is because of the causal relationship between job design and the three psychological states that the proposed set of personal and work outcomes are impacted. For example, it is because of the relationship that autonomy has with experienced responsibility for work outcomes that internal motivation and performance quality are impacted. The psychological state of experienced responsibility for work outcomes aids in our understanding of “how” autonomy positively affects internal motivation and quality performance. Paralleling the rationale employed by Hackman and Oldham (1975), we propose that there are a set of outcomes (some positive and some negative in nature) that emerge when psychological ownership for the job exists, and that this critical psychological state is created by the five core job design characteristics. Thus, it is because of the causal relationship between job design and job-based psychological ownership that the proposed set of outcomes are impacted.<sup>2</sup>

### *Territorial behavioral effects*

The recent work of Brown et al. (2005) reveals the connection between psychological ownership and a number of different behaviors that they refer to as territorial in nature. The majority of these behaviors, dependent upon to whom they are directed, and when and how they are applied, may be associated with functional or dysfunctional effects.

Brown et al. (2005) recently suggested that territorial behavior is an outcome of psychological ownership. Specifically, they define territoriality “as an individual’s behavioral expression of his or her feelings of ownership toward a physical or social object” (p. 578). They argue that there are several categories of territorial behavior, such as: behaviors used to communicate the boundaries of one’s territory to others, behaviors employed to maintain an attachment to an object, and behaviors that defend that toward which feelings of ownership have developed. We see territorial behavior as a special case. As noted earlier, there are those scholars (e.g., Porteous, 1976) who have suggested that the “marking” of objects (e.g., the personalization of space) is a way of exercising control which contributes to one’s attachment to an object and experienced psychological ownership. It is through such behaviors that an individual can come to feel psychic security and home, and the discovery of one’s self in the marked object.

In addition, Brown and his colleagues (2005) argue that psychological ownership also promotes defensive behaviors. Infringement (and/or fear of infringement) into one’s territory is seen to be associated with defensive behaviors. Anticipatory defensive behaviors (e.g., overt actions intended to communicate to others that someone has “claimed” the object as theirs) are routinely engaged in when one anticipates future infringement, while reactionary defenses are taken after an infringement has occurred. Reactionary defenses “function to provide an emotional expression of one’s feelings toward the infringement, to undermine the infringement, and to restore the territory to the actor” (p. 584).

<sup>2</sup>In typical intervening variable fashion, “an intervening variable [job-based psychological ownership] falls between an independent [the five core job design characteristics] and dependent variables [i.e., the effects discussed below], where the independent variable causes the intervening variable, which in turn, causes the dependent variable” (Kenny, 1979, p. 4).

Accompanying the act of infringement, we anticipate that jealousy may arise when someone develops an increasingly intimate knowing (a major “route” to psychological ownership) of the target of ownership, stemming from the fear of sharing and/or simply knowing that others may come to the sense of possession for an already claimed object.

### *Positive effects of the job design–psychological ownership relation*

As previously noted, Hackman and Oldham (1975) argue that complex jobs result in internal work motivation, work satisfaction, high quality work performance, and a reduction in absenteeism and turnover behavior. The emerging psychological ownership literature (e.g., Dirks et al., 1996; Kostova, 1998; O’Driscoll et al., 2006; Pierce et al., 2001, 2003; Van Dyne & Pierce, 2004; VandeWalle et al., 1995) argues that feelings of job-based ownership produces the same outcomes. It is reasoned that these same effects should continue to manifest themselves in a causal model where a sense of ownership is positioned as a mediating variable in the job design–employee response relationship.

Empirical evidence (e.g., Kostova, 1998; O’Driscoll et al., 2006; VandeWalle et al., 1995; Van Dyne & Pierce, 2004) provides support for a positive relationship linking psychological ownership with citizenship behavior and performance (e.g., earnings per employee and output per production employee). Among other positive effects that have been empirically observed is a relationship between psychological ownership and job satisfaction, organizational (affective) commitment, and organization-based self-esteem (e.g., O’Driscoll et al., 2006; VandeWalle et al., 1995; Van Dyne & Pierce, 2004). Among other outcomes that have been conceptually linked to psychological ownership are stewardship, personal sacrifice and risk, promotion of organizational change, caring and protective behaviors directed toward the target of ownership (Dirks et al., 1996; Pierce et al., 2003).

### *Negative effects of the job design–psychological ownership relation*

James (1890) argued that the loss or destruction of one’s possessions frequently results in an erosion of the self. According to Korman (2001) this stems from the operation of the self-protection motive. The self-protection motive acts as the “defense of the sense of oneself from threatening environmental or personal forces that, if unleashed, would result in the destruction of one’s sense of personal identity” (p. 123). Supporting this notion, there have been observations of serious debilitating effects that are associated with the movement of the elderly from their homes and possessions into nursing homes (Cram & Paton, 1993; Kamptner, 1989). Building upon these observations, it is reasoned that the individual who has developed a sense of job-based ownership will be motivated, for example, to assume responsibility for the target as a way of protecting the sense of self that has become intertwined with the target of ownership. This assumption of responsibility can, however, result in a burden of responsibility and a concomitant tiring effect, and feeling anger. Not only may anger find its origin in a burden of responsibility, it may also be an emotional response that arises when others tread upon and/or invade that for which a sense of ownership has developed such as one’s personal space and territory (cf. Altman, 1975).

Sampson (1978), Steele (1988), and Swann (1984) among others have noted that people are, at times, motivated to maintain stability of the self over time and across situations. As a consequence of the need to maintain stability in the relationship between the self-concept which is embedded in the target of ownership people are likely to resist relinquishing control over objects to which one’s self-identity is strongly attached. As a consequence, strong feelings of psychological ownership are likely to result in the lack of willingness to share those objects for which ownership is felt, thereby, impeding the sharing

of ideas, cooperation, creativity, and high quality work. In extreme cases employees feeling possessiveness toward certain organizational targets may disregard the rules of the organization, as well as those of the surrounding society in order to secure their association with the target. It is assumed that the fear of losing a psychologically important piece of the self may result in deviant behavior such as hiding or even theft. In addition, loss of such possessions may result in deviant reactionary behaviors such as destruction, sabotage, or vandalism directed toward the target—behaviors that attempt to prevent others from attaching (or disturb the attachment) to the target that one feels is his or her own (cf. Harper, 1990). Noteworthy, employee deviance may produce huge organizational losses.

In a somewhat similar vein, Brown et al. (2005) suggest that preoccupation and isolation are two territorial behaviors that can have important negative organizational effects. They write “to the extent that one is engaging in behaviors aimed at constructing, communicating, maintaining, and restoring his or her organizational territories, one has less time, energy, and capacity to focus on higher-priority issues regarding the job and organizational goals” (p. 587). With regard to isolation, they argue that feelings of ownership and territorial behaviors may result in individuals seeking less interaction with others as they are preoccupied with their target(s) of ownership. Similarly, territoriality may send “keep out” signals to others. Thus, their work leads to the proposition that psychological ownership and its consequent territorial behaviors increase the degree to which organizational members are isolated from one another.

In summary, as a result of the proposed job design–psychological ownership relationship we see an expanded set of possible job design effects. These effects are not to be seen as the direct effects of job enrichment (complexity), instead they are effects that are proposed to manifest themselves as a result of the job design–psychological ownership relationship.

## A Revised and More Parsimonious Job Characteristics Model

After having linked the five core job design characteristics to psychological ownership, and the job design–psychological ownership relationship to several effects, we offer a revision to the Job Characteristics Model. The central feature of this revision focuses on the role played by psychological ownership as the critical psychological state linking job design and its effects.

As previously noted job design scholars (e.g., Humphrey et al., 2007; Morgeson & Campion, 2003) have argued that the recent lack of attention to the theory of job design and associated empirical inquiry is troubling. The primary motivational model characterizing this work (i.e., the Job Characteristics Model) is seen as including an unnecessary number of mediating variables linking job design with its attitudinal, motivational, and behavioral effects. In addition, while there have only been a small number of empirical studies examining the mediating role of the three critical psychological states these results provide only limited support for the model (Morgeson & Campion, 2003). Thus, Morgeson and Campion (2003) and Humphrey et al. (2007) reasoned that there is a need for additional job design theory construction, in part aimed at uncovering the mediational mechanisms (i.e., psychological processes) that produces the motivational effects of the five core job design characteristics.

In response to Morgeson and Campion’s (2003) call for a more parsimonious theoretical explanation of job design effects, we propose that psychological ownership plays a more robust role than the three psychological states proposed by Hackman and Oldham (1975), or Morgeson and Campion’s (2003) alternative proposal for the mediating effects of psychological empowerment. Robust in the sense that psychological ownership (a) enables the prediction of the same outcomes (e.g., internal motivation, job satisfaction, work attendance, and quality work performance), (b) enables the prediction of additional

outcomes (e.g., territorial behavior, stress, promotion of change; personal sacrifice; nurturance and development of the target of ownership), (c) enables the prediction of some dysfunctional (i.e., counterproductive) organizational behaviors (e.g., resistance to change; unwillingness to give up control and share; anger, isolation, preoccupation, shrinkage of the self accompanying the destruction and/or loss of the target of ownership), and (d) we predict that once the outcome variance attributable to psychological ownership is accounted for, experienced meaningfulness, experienced responsibility for work outcomes, knowledge of results, and psychological empowerment will be unable to account for additional and unexplained variance in these outcomes.

We propose that the attitudinal, motivational, stress, and behavioral effects of job design exist when job-based feelings of ownership are present, and that this sense of job-based ownership is created by the five core job design characteristics. Thus, it is proposed that psychological ownership is the critical psychological state that mediates the effects of job design upon individual and work outcomes, thereby providing us with a parsimonious and robust model of job design effects. This revised Job Characteristics Model is presented in Figure 2.

## Conclusion

For nearly a century, scholars have focused on the structure of work assigned to individual employees. This work leaves us with a rich understanding of job design, as well as its attitudinal, motivational, and behavioral effects. Less well understood, however, is the psychology of job design and its associated mental processes. Virtually ignored is the role played by the psychology of possession and property within the job design experience. We believe that because of the close connection that people have with their jobs (cf. Hulin, 2002), feelings of ownership play a meaningful role linking the nature and character of the work that people are called upon to perform with subsequent work-related attitudes, motivation, and behavior.

In this paper, we explored the psychology of work in general and the role of psychological ownership in the job design–outcome response relationship in particular. We suggested that enlarged and enriched jobs structurally possess the conditions that both arouse and satisfy the motives for ownership feelings (i.e., the motive for efficacy and effectance, self-identity, and home). In addition, it was reasoned that complex jobs inherently call upon role incumbents to engage in the very activities (i.e., control, intimate knowing, and investment of the self) that gives rise to a sense of job-centered ownership.

Moving toward our revision of Hackman and Oldham's (1975) Job Characteristics Model, we suggested that as a result of the job design–psychological ownership relationship there are several emergent effects. At the individual-level the extant job design literature has almost exclusively focused on the positive effects that stem from job enrichment. The introduction of psychological ownership as a part of the psychology of job design, leaves us with the possibility that there may be a number of negative effects, such as: stress, burden of responsibility, unwillingness to share, resistance to change, isolation, anger, and a variety of defensive and deviant behaviors. There are also a number of positive effects that appear to be associated with complex job design as a result of the likely connection with psychological ownership, such as: quality in-role performance, citizenship behavior, stewardship, nurturance, and self-sacrificing and protective behaviors.

In addition and in terms of *future research*, we offer several observations. First and most importantly several propositions are implicit in our work. It is the authors' hope that these propositions will stimulate and guide more detailed theory construction and the development of the appropriate measures so that the full model suggested here can be empirically tested under longitudinal conditions. While

there exist construct valid measures for many of the variables presented in the model depicted in this paper, instrument development and construct validation work is needed in several areas (e.g., intimate knowing, investment of the self, and stewardship, territorial, and personal risk behavior) before the full model can be operationalized.

Second, we have witnessed during the past two/three decades an increasing number of organizations have experimented with and adopted the use of work teams. While Hackman and Oldham's (1975) model was "designed to apply only to jobs that are carried out by more-or-less independently by individuals" (p. 277), subsequent work by Hackman (1987), for example, focuses on the work (e.g., managerial and task performance) carried out by interacting teams (e.g., manager-led and self-governing).

With increased employee exposure to teamwork, we believe that it is necessary that consideration be given to ownership as a group-level phenomenon. We believe that work on collective psychological ownership should, in part, parallel the development of the psychological ownership construct with consideration given to its genesis, roots, routes, effects, and boundary conditions. Work focused on the psychology of "my" and "mine" should be expanded to a focus on the psychology of "us" and "ours." A rich context for both a conceptual and empirical exploration of that concept would be within a teamwork setting. Such grounding could possibly lead to an ever richer understanding of the work design and its organizational effects.

Third, an interesting conundrum has been presented that calls for scholarly attention. Psychological ownership appears to be associated with both organizationally positive and negative effects. This raises the interesting question, as to how managers can capture its functional while simultaneously avoiding, or at least minimizing, its dysfunctional effects. More specifically, we encourage scholarly attention be given to the identification of the conditions under which positive effects become negative and the conditions under which the negative effects occur.

Finally, we encourage the continuation of scholarly attention to individual differences in job/work design. To date, most of the scholarly attention has been given to the moderating effects of growth need strength in the JCM. While these results are generally supportive, the evidence also appears to suggest that the results of job redesign in accord with the JCM is positive for virtually all employees, with some employees responding more positively than others (Morgeson & Campion, 2003). Our proposed revisions to the JCM calls for (a) a continued examination of the moderating effects of growth need strength, (b) an examination of the condition that lead to positive and negative effects, and (c) consideration of the cultural values that promote (discourage) the development of a personal sense of ownership.

In closing, we turn our attention to the *managerial implications* that are associated with our work. We start with an important caveat. Our work is best described as being at the level of early theory construction. While Lewin (1945) observed that there is "nothing ... so practical as a good theory" (p. 129), Dubin (1976) also observed that "theory tries to make sense out of the observable world by ordering the relationships among elements that constitute the theorist's focus of attention in the real world" (p. 26). Dubin's (1976) comments are extremely applicable to our work. We are attempting to make sense of the process(es) through which job design effects are produced. At this stage our work reflects an attempt at coming to know through the application of logical verification, that is, our work reflects our attempt to weave together disparate pieces of information and opinion to arrive at an emergent belief, hopefully internally consistent, sound in its reasoning, and ultimately testable through application of the canons of the scientific method. Until tested, confirmed, and reconfirmed any managerial action guided by our work should proceed with caution.

With that caveat in mind, there are several managerial implications that can be drawn from our theoretical modification of JCM. As to those outcomes of job design that are desirable from management perspective (e.g., quality in-role performance, citizenship behavior, stewardship,



nurturance, and protective behaviors), our work suggests that organizations should focus on designing jobs that are complex rather than jobs that are characterized by a short-time cycle, standardization, and simplification. Increasing job complexity provides job incumbents with the possibility to tailor their work, personalize it, and to find a place within it to dwell (i.e., to find one's place); thereby contributing to the satisfaction of several important human motives (i.e., the motive for efficacy and effectance, self-identity, and home). Work that gets designed in such a fashion that it leads to feelings of ownership, that arouses and satisfies the motives that underpin psychological ownership is pleasure producing *per se*. We know from the organizational literature that work that is pleasure producing, has strong and positive motivational consequences, contributing to work attendance, reduction in turnover, high quality work performance, and frequent acts of good organizational citizenship behavior.

Where caution needs to be exercised stems from the negative effects that can be associated with strong feelings of ownership. Averting the onset of the "dark side" of psychological ownership may, in part, rest in creating opportunities where feelings of ownership are "shared" among a group of individuals especially with those upon whom one works closely and with whom one has an interdependent working relationship. This shared ownership among interdependent co-workers may (a) promote (encourage) sharing of the owned object, thereby reducing "selfish and controlling behavior"; (b) provide a cushion to absorb adverse effects that could stem from the loss, destruction, or imposed change upon the owned object; (c) reduce the fear of infringement upon the owned object stemming from one's co-workers and the resultant anger that stems from infringement; and (d) relieve the individual from the burden associated with the assumption of exclusive personal responsibility for the target of ownership.

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