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## **Workers' Definitions of the Characteristics That Comprise Good Work: A Qualitative Analysis\*\***

Managers and work design engineers seek to improve productivity while maintaining sustainable and viable organizations. This study provides new information for such practitioners to do that while informing theoretical reflections on what constitutes "good work". Using an inductive qualitative approach, we describe results of a study of 30 in-depth interviews with full-time workers in the Western United States representing a wide range of occupations. We allow workers to generate their concepts about what constitutes *good work* and compare this with their reactions to prompts derived from existing research. The three most common job characteristics that workers say are important are (1) positive interactions with people, (2) work that provides social value, and (3) control over work. This study adds to extant quantitative studies of work design characteristics because it provides workers' spontaneous yet coherent perspectives and demonstrates where those agree or not with prior findings. For example, our study reveals that workers strongly distinguish between two kinds of feedback at work: feedback from impersonal systems (e.g., equipment displays) and feedback from managers and other employees. Our study also finds newly emerging characteristics that have yet to be adequately addressed in assessing "*good work*": effective and ethical management, job stability, and mutual trust.

Keywords: work design, job characteristics, work characteristics, good work, meaningful work  
(JEL: J24, J28, J81)

### **Introduction:**

"Those three things – autonomy, complexity and a connection between effort and reward – are, most people agree, the three qualities that work has to have if it is to be satisfying. It is not how much money we make that ultimately makes us happy between nine and five. It's whether our work fulfills us."

— Malcolm Gladwell, *Outliers: The Story of Success*, (2008)

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Assertions like Gladwell's about what workers want often come from anecdotal observation, from experts' opinions, or from expressed grievances in contract disputes. Some aspects of work may be acceptable but not preferred, and others may be essential yet never given voice. What characteristics should managers, engineers, industrial and organizational psychologists, and the like consider to effectively design and redesign work that is meaningful, engaging, and promotes the well-being of employees? In other words, ought they design *good work*? *Good work*, in this context, is defined as, "work that satisfies physical, psychological, and social needs, and positively promotes health, quality of life, and social and cultural integrity for workers, stakeholders, and the broader society within which the organization exists" (Lee, 2014, p. 1).

Taylorism and the scientific management method of production (Taylor, 1911) was never about creating *good work*, nor satisfying workers nor taking into account their preferences. The primary focus was on motivating employees through monetary compensation. The Taylorist movement among managers, engineers and academics designed work to be specialized in terms of different tasks or duties that a worker would be required to perform (i.e. one worker does one thing all day, and does it to the best of her or his ability). Monetary compensation was considered to be workers' sole motivation for accepting and conducting this kind of work. The approach largely worked; such specialization proved to maximize efficiency of the workplace and be quite profitable, and workers came and did their work (Taylor, 1911).

Surprising now to some is the caveat that Taylor himself gave when advancing his theory of management: "...prosperity for the employer cannot exist through a long term of years unless it is accompanied by prosperity for the employee" (Taylor, 1911, p. 1). Taylor understood that organizations would fail in the long term if they did not consider their employees' prosperity, by which he meant "success" or "well-being" (Worcester, 1910) rather than merely financial gain. Hence, the now oft-maligned Taylor, responsible for mind-numbing, repetitive-motion disabling work, was quickly alert to the unsustainability of a purely mechanistic view (Campion, 1988) of workers as cogs in an industrial machine. Taylor understood that workers needed "*good work*" and that organizations would benefit from providing it.

Predictably, his caveats being ignored, Taylorism's specialization tended to result in decreased employee job satisfaction, increased turnover and absenteeism, and difficulties in managing employees (Lawrence, 2010). In addition, the limited consideration towards what motivates workers facilitated the design of dehumanizing work by failing to consider other characteristics of work beyond the compensation employees receive. These issues, along with numerous others, eventually motivated the academic and practical development and identification of characteristics (i.e., defined attributes of the job, task(s), and social and organizational environment) that motivate employees and promote healthy work outcomes (Hackman & Lawler,

1971; Morgeson & Humphrey, 2006). The resulting motivational characteristics of work now hold a central place in work design theory. However, the motivational characteristics were developed *a priori* by researchers (Stone & Gueutal, 1985) and have yet to be adequately validated via qualitative research methods (Parker, 2014).

With potentially invalid measures or naïve assumptions about what workers regard as elements of *good work*, it is impossible to design or redesign work that improves worker well-being. For example, consider the work characteristics of demand and autonomy: employees who have high demand (in terms of productivity expectations) and low autonomy (in terms of freedom and control to make decisions regarding their work) are at risk of psychological strain and physical illness (job examples include electronic assembler, waitress/waiter, garment stitcher). Employees' mental and physical health would improve with redesign of these jobs to have either less demand or more autonomy. But the effects of combined job characteristics are not always predictable. For example, interestingly, employees who have high demand and high autonomy are not at risk for the same negative health outcomes; instead these employees demonstrate a positive set of outcomes, such as expressing that they learn and grow through their employment (job examples include electrical engineer, professor, and physician) (Karasek & Theorell, 1990). These sorts of findings suggest that there is good reason to talk with employees about such complexities and about what they value most in their work.

The purpose of this research is to clarify and validate a set of work characteristics that can be used by researchers and practitioners intending to improve the sustainability of work. This pursuit addresses three related research questions. The first is "*what do employee's say are the most important characteristics of their work, and why?*" The second question is, "*how do employees perceive the importance of job characteristics that researchers say are important, and why?*" Finally, "*what are the similarities and differences between what employee's value and what researchers have said they value in 'good work'?*"

To begin, we describe the current state of the literature about work characteristics, starting with preliminary motivational characteristics and ending with a broad range of work characteristics. In so doing, we highlight the validity concerns and existing critiques of these investigations. We then present our research design implementing an inductive qualitative analysis. Next, we present our empirical findings, and then discuss the implications of our results and conclude with future research suggestions.

## **Work Design Characteristics: The Development of Theory**

### **Motivational Characteristics**

Work characteristics, or factors of work, are defined as the attributes of the job, task(s), and social and organizational environment (Morgeson & Humphrey,

2006). Motivational characteristics of work are factors intended to motivate workers to perform their work duties. Turner and Lawrence (1965) developed operational measures of six work task attributes (i.e., characteristics) that purport to be positively associated with worker satisfaction: variety, autonomy, required interaction, optional interaction, knowledge and skill required, and responsibility. The authors found mixed results supporting their theory. Workers who worked in a small town were motivated by an increase in work attributes and showed a positive correlation between work attributes and worker satisfaction (e.g., knowledge and skill required in the job lead to satisfaction). On the other hand, urban workers' satisfaction was negatively correlated, a finding implying that the cultural background of the workers moderated the effect of work attributes on satisfaction (Turner & Lawrence, 1965).

Hackman and Lawrence (1971) suggested that the characteristics of the work need to be considered simultaneously with the characteristics of the worker in order to predict the behavioral and motivational responses of workers. The authors suggested alleviating the problem of motivating workers through the implementation of five propositions.

1. Actions that the individual believes will result in a desired or valued outcome (intrinsic or extrinsic) will motivate that individual to perform those actions.
2. If there is no value in outcome there is no incentive; if outcomes are not linked to satisfaction the work task will not continue to be valued.
3. Work should be designed in such a way that workers benefit only when the organizational goals are also benefiting (i.e. do not reward incorrect or destructive behavior).
4. Higher order needs (Self-Esteem and Self-Actualization (Maslow, 1943, 1970)) should be considered, however not all employees will be equally motivated to achieve these higher order needs.
5. To establish internal work motivation the work must:
  - a. Permit workers to feel personally responsible for an identified and meaningful share of work.
  - b. Provide work outcomes that are experienced by the worker as worthwhile.
  - c. Provide feedback regarding performance effectiveness.

Hackman and Lawrence's five propositions led to the conclusion that it may be possible to achieve high employee satisfaction and high employee effort towards organizational goals by defining and thinking critically about constructs, known as characteristics or factors of work that motivate work efforts. However, it is not the objectively measured level of each characteristic that affects work outcomes; rather it is the perceived level that each worker feels they are receiving from each characteristic. The theory implies that satisfaction, performance, and attendance (work outcomes)

should be highest when the worker perceives that all motivational characteristics are addressed. In addition, the results indicate that the motivational potential of work can only be actualized by fitting jobs to people and people to jobs simultaneously and continuously as the organization and the workers change over time; i.e. there needs to be a continual work design and redesign process to achieve and sustain worker motivation (Hackman & Lawler, 1971).

Hackman and Oldham (1976) developed an expanded theory of workers' motivation towards jobs, where achieving high levels of intrinsic motivation in workers is hypothesized to result in the best overall outcome for the quality of work performed. They state that intrinsic motivation can only be achieved if workers reach three critical psychological states, which mediate the relationship between work characteristics and work outcomes. Again, it is how the workers perceive the work characteristic, not the objective level of that work characteristic, which predicts how motivated they are to work. The three mediating psychological states are "experiencing meaningfulness of the work", "experiencing responsibility for outcomes of the work," and "attaining knowledge of the actual results of the work activities."

Redesigning work by focusing on characteristics of skill variety, task identity, task significance, autonomy, and feedback is claimed to result in workers attaining the three psychological states. Workers that are motivated by the psychological states produce an increase in quality and quantity. The resulting increase of effectiveness provides the organizational benefits for redesigning work (Hackman & Oldham, 1976, 1980).

### Critiques of Focusing on Solely Motivational Characteristics

Motivational characteristics developed by Turner and Lawrence (1965), and subsequently by Hackman and Lawler (1971), have been critiqued for their *a priori* development (Stone & Gueutal, 1985), universal acceptance, and lack of questioning (Roberts & Glick, 1981). The characteristics were developed by searching the literature, reflectively reviewing their own ideas, and by trial and error. The result was a set of characteristics that may represent how the researchers perceived work more than the way workers in general perceive work. In order to provide solutions to this critique, Stone and Gueutal (1985) conducted a study to empirically derive the characteristics based on how individuals actually perceive work characteristics. Three broad characteristics named "job complexity, serves the public, and physical demand" resulted from the study (1985). One critique of this study is its utilization of students as participants upon which to derive characteristics of work. Using students as proxies for real workers makes the findings likely inapplicable to real work settings and workers (Peterson & Merunka, 2014).

Two issues have arisen due to the success of the motivational work design theory. First, the initial success of the motivational approach facilitated wide acceptance of the theory and thereby the decline of research starting in the 1980's. Secondly, the

theory focuses on a limited set of motivational work features, thereby leaving out social and contextual aspects of work, which have received less attention (Humphrey, Nahrgang, & Morgeson, 2007; Morgeson & Humphrey, 2006). These limitations inspired questions regarding what is missing from defined work characteristics that fall outside of the motivational framework, which then spawned efforts to identify a comprehensive way to understand and measure work characteristics (Morgeson & Humphrey, 2006).

### Comprehensive Work Design Characteristics

Morgeson and Humphrey's (2006) Work Design Questionnaire (WDQ) was developed to provide a comprehensive method to measure work characteristics that includes motivational, social, and contextual characteristics. The WDQ was created by reviewing the work design literature to identify key characteristics and the measures previously used. The authors used the following key words to identify related articles: *work design, job design, work characteristics, job characteristics, job demands, job content*. After a process of classification and sorting based on the underlying content of the characteristic, 21 work design characteristics were identified which fell into one of three major categories:

- Motivational characteristics (sub categories):
  - Task (concerned with how the work itself is accomplished)
  - Knowledge (knowledge, skill, and ability demands needed to accomplish the work)
- Social characteristics
- Contextual characteristics

The WDQ was validated utilizing data from 540 participants holding 243 different jobs. Results show that each one of the categories (motivation, social, and work context) has a different effect, at a potentially different level of explained variance, on work outcomes. While some work outcomes are affected by several different work characteristics (e.g., task and knowledge characteristics predicted job satisfaction), other outcomes are specific to a single characteristic (e.g., knowledge characteristics predicted compensation outcomes). The WDQ utilizing a more comprehensive set of work characteristics appears promising as a means to understand the nature of work and/or to design and redesign jobs to further employee success (Morgeson & Humphrey, 2006), however the findings are limited to data collected solely by surveys and hence ignores possible complexity, and certainly nuance, in the ways workers articulate their experiences of work.

In order to further test and extend a generalized work design theory focused on work characteristics, Humphrey et al (2007) conducted a meta-analytic study that integrated motivational, social, and work context characteristics. The study aggregated 259 studies with 219,625 participants and showed that 14 work characteris-

tics explained 43 % (on average) of the variance in the 19 worker attitudes and behaviors (work outcomes).

Results indicate that work design characteristics were interrelated; however, they were not so highly correlated as to be multiple indicators of the same construct. The motivational work characteristics were more correlated with each other than with the social or the work context characteristics, providing evidence that motivational, social, and work context are unique categories of characteristics. This review of the literature on work characteristics raises important questions. Have we documented and defined the most important characteristics from the employees' perspective? Why are the characteristics important to employees? Are there any similarities or stark differences in characteristics from their perspective? The answers to these questions are seen in our study of *good work*.

### Lee's 12 Characteristics

Lee (2014) proposed twelve work characteristics that were developed to understand the relationship between work characteristics and the psychological wellbeing of workers. Our project is inspired by an interest in validating those characteristics. The twelve characteristics were developed by an industrial engineer who selected them from a literature review that focused on identifying psychological factors of *good work*; or work that satisfies the physical, psychological, and social needs of workers while remaining beneficial to organizations. The characteristics needed to satisfy three criteria: ability to be applicable to a workplace, subject to manipulation, and contributions to worker satisfaction (Lee, 2014). Appendix 1 presents the extant characteristics being investigated, and their definitions.

### Vital Constructs of Good Work Beyond Defined Work Characteristics

There exists many vital facets, or constructs, beyond the work characteristics defined by Humphrey et. al. (2007) and Lee (2014) that must be considered to design and achieve *good work*. Namely, *job security/stability* (Munoz de Bustillo, Fernandex-Macias, Esteve, & Anton, 2011), *opportunities for career growth* (Munoz de Bustillo et al., 2011), *mutual trust* (Lewicki & Bunker, 1996; Lewicki & Wiethoff, 2000), *effective* (Stockard & Lehman, 2004) and *ethical* (Valentine, Godkin, Fleischman, & Kidwell, 2011) *management, creativity* (Madrid & Patterson, 2016), and *a work/life balance* (W. X. Chan et al., 2016; Haar, Russo, Suñé, & Ollier-malaterre, 2014; Kalleberg & Marsden, 2013; Karasek & Theorell, 1990; Kelliher & Anderson, 2010; B. G. Maxwell, Leonard, & Cornelius, 2008; Morrison & Thurnell, 2012; Surienty, Ramayah, Lo, & Tarmizi, 2014).

While the constructs are not currently recognized as work characteristics, they indeed should be as they are attributes of the job, task(s), and social and organizational environment of work, which fits the definition of work characteristics (Morgeson

& Humphrey, 2006). Many studies have been undertaken to investigate and illustrate the importance of each.

## Gap in Literature

One criticism of the work characteristics developed and examined in prior research is with regard to the methods used, which have customarily been quantitative. While these methods have been powerful in the development of the theory (e.g. Fried, 1991; Humphrey et al., 2007), they have been too narrow in perspective to contextualize the work characteristics. It has been noted that qualitative studies that provide contextualized accounts will likely be helpful in further elaborating a generalized work design theory (Parker, 2014).

Another criticism of some studies investigating *work characteristics* (e.g., Stone & Gueutal, 1985), but by no means is a criticism on all of the research into work, is the participants utilized, which are often university students. Students are said to be a representative sample of workers when in reality they are a convenient sample, as workers are an especially busy population and therefore more difficult to recruit for studies. Our study avoids these methodological concerns, while testing the validity of earlier proposed valued work characteristics that make work “good”.

## Method and Sample

### Method Selection

In order to identify previously unknown work characteristics that workers find to be important, and to understand the employment context of previously defined characteristics, 30 semi-structured, in-depth interviews with full-time workers were conducted in 2018. The interviews were guided by an interview plan containing research questions but were unstructured enough to facilitate the discovery of new ideas and themes regarding *good work*.

While others had called for more qualitative studies in understanding work design (Parker 2014), we used a qualitative analysis for two primary reasons. First, qualitative analysis lends itself to developing a deeper understanding of complexity in human relationships and, in this case, complexity in humans' relationship to their work (Creswell, 2013; Strauss & Corbin, 1990). By better describing workers' views about their relationship to their work, we are better positioned to see how valid are the characteristics heretofore suggested as important in work design theory. Second, and related to the first reason, to inductively examine unprompted comments from workers about what characteristics of work are important to them and why, a qualitative approach permits great opportunity to explore, probe, and understand.

## Sample

A stratified sample of workers was interviewed, with recruitment strata guided by the United States' Bureau of Labor Statistics' (BLS) Occupation Profiles (United States Department of Labor, 2018). Stratifying participants via Occupational Profiles was performed for two reasons. First, there was an explicit effort to interview an occupationally diverse sample of workers with considerable work experience. In addition, utilizing occupational profiles as the basis for classifying workers has been used in other studies concerning work characteristics and job satisfaction (e.g. Morgeson & Humphrey, 2006; Raymark, Schmit, & Guion, 1997)).

Participants were recruited via flyers and “researcher on the street technique” and offered a ten dollar bill as compensation for their time. All participants worked in the state of Oregon, on the Pacific coast of the United States. The state is less racially diverse than most others in the country, and receives many domestic immigrants from other parts of the country. The industrial base is a mix of agriculture and high-tech, with a declining extractive sector (forestry, mining, fishing, etc.). There is little reason to believe that the respondents in Oregon would differ significantly from those in other states with regard to favored work characteristics. We seek not to generalize numerically to all workers, but to sensitize researchers to emerging likely important work characteristics and to demonstrate the importance of undertaking additional examinations such as this.

All participants were full-time workers over the age of 18, and no university students were interviewed. We chose this restriction on participation to target people who spend a majority of their week working at an organization. We anticipated that workers spending the majority of the work week in their role as workers will have more stable and considered opinions about work characteristics as compared to people with less labor force attachment. The mean years of working experience was 26.6, with men and women equally represented. Half of the respondents were between 18 and 45 years old, and the other half 46 years old and older.

## Interview Format

The interviews, occurring at the participant's workplace or in a public space where they felt comfortable, lasted on average 75 minutes and had three connected sections: an open-ended section, a prompted section, and a comparing and contrasting section all of which were focused on discussing characteristics, or factors, of work. The open-ended section asked participants to suggest what they considered to be the most important characteristics, or factors, of *good work*, and which they considered to be the least important characteristics, in two distinct questions. Then the prompted section presented each participant with a set of Lee's 12 Work Characteristics and asked the participant to choose from the set and explain what he or she considered the top three most important characteristics and three least important characteristics were. The characteristics were presented on 3" by 5" note cards to

allow the interviewee a chance to view all characteristics simultaneously and neatly. The third section asked interviewees to compare and contrast the characteristics that developed from the open-ended section with the characteristics presented on note cards.

## Analysis

Immediately after each in-person interview, the first author wrote thorough interview notes/memos, which were then content analyzed. Research memos have been identified as a common way of getting ideas down on paper throughout the research process (Creswell, 2013; J. A. Maxwell, 2013). All handwritten notes and memos taken during the interviews were typed and entered into a Computer Assisted Qualitative Data Analysis program directly after each interview: the program selected was NVivo Pro 11. All interview notes and researcher memos were coded using a Grounded Theory approach (Creswell, 2013; Strauss & Corbin, 1990) to generate a theory, or context behind, workers' preferred work characteristics.

Themes, or patterns, were used as the basis for coding. Previously identified work characteristics and other keywords commonly found in the relevant literature (e.g. motivation (Maslow, 1970)) served as the initial codes. Secondary coding methods, including Axial coding where concepts and themes were related to one another (Saldana, 2009; Strauss & Corbin, 1990), was then conducted. Additionally, the second cycle coding included magnitude coding to establish if that code, or characteristic, helps a worker perform their work [+], or that code does not help a worker perform their work [-] (Saldana, 2009).

## Interview Findings

The results from the qualitative research described here reflect participants' experiences with characteristics of their preferred work and their reasons for these preferences. We discuss first what employees offered (without prompt) as important characteristics of work and then report how they responded to prompts based on earlier research. We end with comparing these two sets of responses.

### Employee Generated Preferred Characteristics of Good Work

#### Most commonly mentioned characteristics

Interviewees were asked the open ended question, "What characteristics, or factors, or work are most important to you?" Themes regarding the work characteristics considered most important by participants are listed from most commonly mentioned to least common below. All theme definitions are rooted in phrases used by the participants themselves, making the definition match directly with their answers to the interview questions. Context behind the importance of the characteristics are then summarized and when possible related to supporting literature.

All of the themes identified throughout the open-ended section of the interview are supported with prior studies and the authors have provided a small sample of studies that investigated the theme, which can be seen in Appendix 2.

**Positive interactions with people:** The most commonly identified characteristic that employees identified as important focused on communication and relationships with other workers. Effective communication, kindness, and/or teamwork comprise this theme. Workers want to give and receive respect and kindness in their interactions with others, while working as a team. Moreover, workers who spoke to communication universally stated that effective communication allowed them to do their job better. As one protective services employee said, *“Being clear, honest and open is very important. Having a job that allows and encourages open communication is one part of good work.”* For this Protective Service worker, knowing their interactions with people, both the public and other co-workers, are honest and forthright is crucial to what they see as the most critical task of their work: keeping the public safe. Conversely, participants disliked, felt stressed, or hated a job where there was tension among co-workers. Some participants shared they left their old job due to a lack of respect and kindness, even if it resulted in a pay decrease.

**Valuable work:** Almost half of the interviews indicated that it is important to them that their work benefits society, that a high quality product or service is produced by their work, that the work be rewarding to themselves and others, and/or that it be worthwhile. Workers want knowledge of how their work is helpful towards someone; it is this knowledge that provides motivation for them to perform the work to the best of their ability. A farmer indicated, *“I started to farm in order to help remove the injustice of the world; I saw food as the barrier between people. I need to do something with my time that is valuable, and I see growing food as very valuable.”* Such claims suggest that participants obtain a great sense of joy and fulfillment by providing value to others and often spoke to their personality as a giving person, and seeing their customer’s excitement and positive reaction provides great enjoyment.

Consistent with this theme, workers often felt obligated by their preference to provide value to others so much so they needed their performance/outcomes to be of high quality. A worker in a healthcare occupation said, *“I could not work for someone, or someplace, with poor quality. Ethically I cannot do this, as we are providing a health service to people.”* As someone who seeks healthy outcomes for their patients, this healthcare worker has a clear line in the sand when it comes the quality of their work and their unwillingness to compromise.

Of interest is the fact that the first two, most commonly mentioned work characteristics for workers have nothing to do with Tayloristic job design, but with qualities that are social and ethical in nature. However, the next three are consistent with more materialistic sources of work satisfaction, consistent with Taylor’s interests in both motivating employees with compensation, but also their own sense of ‘pros-

perity' (career growth) and even their own concerns about being controlled by their work.

**Control over work:** Almost half of the workers indicated that they want to have autonomy, flexibility, freedom, independence, responsibility, control, and/or decision making over their work. Employees indicated that autonomy often makes them feel needed at work. In addition, many studies have shown autonomy can help workers better manage their life outside of work (Karasek & Theorell, 1990; Lyness, Gornick, Stone, & Grotto, 2012; Saragih, 2011) [e.g. taking a longer lunch to run an errand and staying longer to finish the day's work] and can have positive effects on both learning related outcomes and strain (Holman & Wall, 2002). Autonomy was particularly important to participants who identified themselves to be an expert at their job. For example, a building and maintenance worker asserted, "*I need to be able to make the decisions regarding my expertise at work; I have been doing this a long time and I know what needs to be done*" In addition, participants use an increase in autonomy at work as an indicator of their success, it lets them know they are progressing in their career. Others spoke to needing high autonomy due to a personality trait: *do not like being told what to do*.

**Opportunities for career growth:** Workers want to have opportunities for promotion, advancement, and/or progress available to them. They do not want to feel stagnant. Often workers perceive opportunities for career growth as a motivating factor to do their work well, which promotes a higher quality of work. For example an office and administrative support worker stated, "*If I know there is nowhere to go, no room for growth within the company, or growth for me to obtain a higher position outside of this company, I do not enjoy working there*".

In addition, participants spoke to a feeling of commitment between them and their employer upon receiving career advancement opportunities, providing further evidence for the negative relationship between career growth and turnover intentions (Nouri & Parker, 2013): employers should facilitate and pay attention to providing employees opportunities to advance if they intend to retain the employee over time.

**Money and benefits:** The amount of money (salary or hourly pay), the quality of health insurance, and/or paid time off comprises this theme. This was often framed by a participant as necessary for the person to provide for her/his family, rather than for their own luxuries. When paid well, workers often want to rise to the challenges of the job and feel motivated; conversely, underpaid workers feel taken advantage of. An illustration of the importance of compensation can be found in the words of an installation, maintenance, and repair worker, "*A steady paycheck and good benefits for loved ones is very important. My wife would not be here today if we did not have the good [medical] insurance we have from this job. My job is the bedrock for our lives and I can provide for us with the job, this is very important*". Others spoke candidly about compensation being the main reason for putting the time and effort into the job, suggesting no one in the organization would show up if they were not paid.

The remaining valued work characteristics cover a range of topics, ranging again from ethics to personal development to social concerns of mutual trust to personal concerns of work-life balance to material concerns of job stability. We make no claims here about the relative weight of these other than to point out that non-material characteristics regularly appear in workers expressed preferences for valued characteristics of their work.

**Effective and ethical management:** Workers want to be managed effectively and ethically. Participants described effective management as people who are respectful, communicate well, are committed to the prosperity of employees, allow/encourage for suggestions of improvement, and/or are well organized. Participants often equated bad work with bad managers and *good work* with good managers, providing evidence of how impactful the people who manage others are. For example, a production worker stated, “*It is important for me to work for a company that effectively manages the staff. This management would take into consideration the personality of the workers and keep them on the same page, as in striving for the same goals and productivity of outcomes*”.

Ethical managers are described as people who do not cheat customers, are considerate towards the employees’ individual differences and problems, and/or promote competent workers, as opposed to promoting their friends and/or family. A design, entertainment, sports, and media worker said, “*If I knew that they [manager] is cheating, then I do not want to work for them. Cheating customers is not okay. I need to have a responsible and ethical manager for me to consider the work to be good*”.

**Overcoming challenges:** Workers want to be challenged at work. Solving and overcoming challenges through their efforts, either individually or as a team, has a positive effect on their attitude towards work. Participants felt engaged and had a sense of accomplishment at work by encountering a challenge they had the skills and abilities to overcome. However, overly challenging work can be seen as overwhelming. A manager stated, “*I have pride and a feeling of accomplishment in getting the hard work done. The work is technically challenging, and a well-respected profession. Solving mistakes and problems is great. Collaboratively solving problems is great*”.

Interestingly, participants spoke to a relationship between challenging tasks and compensation: they were more willing to subject themselves to challenging demands if the compensation they received matched the challenge, stating, “*I would see the work as a hindrance without the money and benefits*”. This finding relates to prior research that established a relationship between demands at work and engagement mediated by the type of demand: hindrance or challenge. Specifically, demands that employees perceive as challenging increase their engagement at work while demands employees perceive as hindrances decrease their engagement at work (Crawford, Lepine, & Rich, 2010). Money may provide a perception shift for some employees to see demands as challenging and not hindering.

**Mutual trust:** Workers want to feel trusted by management to do their job; they also want to be able to trust their fellow co-workers. Employees often spoke to how awkward social situations/interactions at work can be without trust in one another. In addition, people with dangerous jobs described trust as particularly important as often times they need to trust their life to their co-workers' competence. For example a maintenance, and repair occupation stated, *"I need to have a high degree of trust with whom I work with. Trust is a big deal, as our safety relies on it, and safety is critical. I need to trust to be safe"*.

**Variety:** Workers want a diversity of tasks to perform at work; most do not want to perform the same tasks day in and out, although some do. Some participants spoke to a feeling of boredom and/or stagnation at work without variety, for example a professional driver stated, *"I do not like driving the same route. I need to see new sights and have a change in my drive"*

**Pleasing atmosphere/environment:** Workers want to work in a clean well-organized environment. They want the machines to function properly and be well-maintained. In addition, they often describe working with esthetically pleasing materials as providing a sense of pleasure to their work (e.g., a woodcrafts person using quality wood or a jewelry maker using quality metals). Participants spoke about the positive affect a pleasant atmosphere has on them. A high-end store sales professional stated, *"I like working with beautiful well-crafted materials and tools"*.

**Recognition:** Workers want to be recognized, appreciated, and/or have a sense of affirmation for their efforts. This provides workers confirmation that their efforts are welcomed and appreciated, and allows them to grow and perform their job with more confidence. Participants spoke to how lost they felt without recognition/affirmation of their efforts at work. For instance, an arts, design, entertainment, sports, and media occupation worker said, *"I need to receive affirmation from my peers and supervisors that I am doing well. I need to know that I am not totally messing up. Knowing how I am doing helps me learn and improve and allows me to know what others think of my work"*.

**Job stability:** Workers want to have a job that is reliable and stable. They want to know their job is not at risk of termination due to factors outside of their control. Participants often described this characteristic as one of the primary reasons they chose their current job, e.g., the monetary compensation may be perceived as low, but the security of knowing they will have a job tomorrow supersedes the low pay. For example an administrative support worker said, *"I enjoy the job security, knowing that I am not going to lose my job is very important. My wages may not be that great, but having job security makes up for that"*.

In addition, some workers worry about the job stability changing due to technology/automation advancement, as was the case with a transportation and material moving occupation worker who was worried automated vehicles may replace

her/his job one day, “[high job stability] used to be the case with driving, who knows what it will look like in 30 years.”

**Learning opportunities:** Workers want the opportunity to learn new things at work that advance their knowledge of the industry and make them more valuable to the organization and/or to society. Some participants spoke to the ability to help their customers more effectively when they learn new skills, which aided in continuing to advance the value they see in their work. Other participants spoke to the incentive/motivation to keep working that is enhanced when they are provided with opportunities to learn at work, as illustrated by the words of an installation, maintenance, and repair worker, “*I need to have the opportunity to continue to learn and to improve the work and myself. Otherwise, I cannot think about growth and there is not an incentive to keep working*”.

**Creativity:** Creativity at work could be in terms of finding solutions to problems, designing a product or service, and/or building a product. Participants spoke to the engagement they feel with their creative tasks at work, and the disengagement with tasks they do not feel are creative. A professional educator stated, “*Having some creative outlet at work is important to me. Most of the time I do have some kind of creative outlet; I enjoy this. Creating an organizing method for tools, the right tool layout is very creative in nature. Designing a system that stays organized as it is used is creative. Creating learning activities that are challenging and not over the students' heads is fun*”.

**Work-life balance:** Workers need to be able to balance their lives at work and outside of work, to strive to create a balance between working and spending time with their family, friends, and hobbies. Participants spoke to the importance of flexibility at work so they can manage their responsibilities outside of work. For example, a life, physical, and social science worker stated, “*A job that provides me the ability to take a vacation and enjoy my life outside of work is very important*”.

#### Most mentioned characteristics workers consider unimportant

While workers may select their most valued work characteristics, it is possible that some work characteristics assumed by researchers to be important are not important to workers themselves. Intriguingly, and perhaps problematically, half of participants responded initially to the question of what were the least important work characteristics by stating it was a difficult question to answer. They had not thought much about what characteristics were least important to them prior to the interview, and often deferred to characteristics that caused them stress, as opposed to characteristics that were least important, a slight but potentially important distinction. In other words, the participants substituted an easier question, “what irritates you about work” instead of answering what is least important -- a common cognitive bias (Kahneman, 2013). Nonetheless, when workers did answer the question (even if they ignored its intent) they selected the following work characteristics. Thus, we caution that at least the first and third of these work characteristics may

not be things workers find least important, but in fact might be additional work characteristics they do find important because in the absence of them, they are irritated or dissatisfied by their work.

**Poorly Functioning Management:** Workers who spoke to this characteristic feel hindered by poorly functioning management, and often find their management to be the greatest source of discomfort at work. This includes micromanaging, a lack of follow-through on employee suggestions, favoring non-competent workers for promotion, and/or being disrespectful. In essence, it is the opposite of Effective and Ethical Management described previously. For example, a building and grounds maintenance worker stated, *“I am constantly being shut down on my improvement suggestions, yet they continue to ask for them and this frustrates me”*.

**Titles:** Some workers do not care about their job titles, notoriety, and/or how others perceive their job's prestige. For example, an education, training, and library worker said, *“I am skeptical of titles; they do not mean anything really”*.

**Hindrances:** Workers dislike excessive hindrances or perceived bureaucracy at work. This includes unnecessary and/or unused paperwork, or other tasks the workers deem as irrelevant, similar to hindrance demands, or demands seen as hindering work completion (Crawford et al., 2010). For example, healthcare professional said, *“I do not like doing tasks which are outside my job. Things that are bureaucratic in nature, like scheduling. I do not like to do things that are not in my job description. People with other training can do these things, and allow me to spend time with patients”*.

### Employee Responses to Characteristics Researchers Say Are Likely Preferences

Interviewees were shown 12 work characteristics identified in Lee's earlier research, presented on note cards and asked, “Out of the described list, what are the 3 most important characteristics in determining whether you would consider a job good? Why?” Followed by asking, “Out of the characteristics left, which three are least important in determining whether you would consider a job good? Why?” Of these prompted work characteristics, the ones considered most important by participants are listed below, organized from most to least commonly mentioned.

1. **Personal Growth:** Half of the participants rated personal growth and spoke to how they want to be better off as a person because of their work.
2. **Autonomy:** Half of the interviewees rated autonomy as important and find work easier to perform if they have influence over their work, and the responsibility provides motivation for them to work hard as they are personally invested in the outcomes of their own decisions.
3. **Value:** Interviewees who described value as important said they want their work to be beneficial or worthwhile towards something, or more often, someone and

spoke to the meaning they derive from their work due to knowing how it benefits others.

4. **Technical Growth:** Learning new work-related skills, knowledge, and abilities provides workers with the skills needed to enhance their competency at work. Often workers spoke to learning opportunities at work as proof that their employer cares about them as employees.
5. **Compensation:** The compensation received for work is one of the fundamental reasons people work, and many participants directly spoke to this motivation in terms of the money and the benefits they received from their job. Many stated that they would feel taken advantage of if they were not paid fairly for their efforts.
6. **Social Interaction:** Virtually all participants who identified social interaction as important spoke to how they considered themselves extroverts who get energy from being around people; they are social people.
7. **Variety:** Participants who rated variety in their top three most important characteristics often spoke of being bored at work without variety.
8. **Accomplishment:** Knowing their work was done well, and having a sense of satisfaction from a job well done was said to be pleasing and could positively affect other parts of their life.
9. **Aesthetics:** Some interviewees stated that having an aesthetically pleasing work environment was crucial towards their ability to perform their job; i.e. good lighting, well-organized tools, and/or a comforting environment.
10. **Safety:** If a participant noted safety as one of their top three most important characteristics, they had an inherently dangerous job where being unsafe often led to injury or death.
11. **Feedback:** All participants who rated feedback as important were concerned with receiving knowledge from customers and/or the system (e.g., equipment displays); no one appreciated or considered feedback from managers as important. This finding gives contextual evidence to splitting feedback into two distinct characteristics: feedback from the job/system (i.e., direct and clear information from the job about the effectiveness of task performance from the job itself and not from other coworkers and/or managers) and feedback from others (i.e., information regarding task performance from coworkers and managers), as is the case in Morgan and Humphry's WDQ (2006).
12. **Demand:** Demand was bimodal: one could have too much demand and feel burned out, or one could have not enough demand and be bored.

As expected, the ratings of the three least important characteristics were nearly opposite of the most important characteristics, with a few notable exceptions. Demand, both low and high levels, was the most commonly cited least important

characteristic. In explaining their reasoning, participants spoke to different levels of demand as unimportant (high, low, or either high or low). When a person rated safety as a least important characteristic, they spoke to how their job was not dangerous and therefore this was of no concern to them directly. People who rated social interaction as a least important characteristic explained how they did not like to socialize with people in general. When compensation was rated as a least important characteristic they clarified that they needed at least enough money to live, but did not consider it important beyond that. When workers rated feedback as a least important characteristic, they were referring to feedback from others, and did consider feedback from the system as very important. Value was never rated as a least important characteristic; everyone interviewed perceived value as at least somewhat important.

### Comparing and Contrasting Open-Ended Characteristics With Prompted Characteristics

In the third section of the interview, participants were asked, "Do you see any similarities between the characteristics you identified and the characteristics presented on the note cards?" The participants were able to move the note cards containing characteristics around to physically interact with the terms, providing a useful tactile method for comparisons. Many of the open ended characteristics were clearly in the set of extant characteristics (e.g., autonomy and variety), while others were not included and therefore emerged from the participant's own preferences. All emerging characteristics are indeed well studied terms/topics in the pursuit of knowledge regarding people at work, even though they may not be currently considered and defined as a *work characteristic* (Humphrey et al., 2007; Morgeson & Humphrey, 2006).

#### Similarities between open ended inquiry results and existing literature

Participants in our study identified multiple similarities between the characteristics they felt were important (open-ended) to them and the ones previously identified in the literature (prompted), illustrating the current set of characteristics is near exhaustive. Money and benefits was related to Compensation, Control over work was related to autonomy, Positive interactions with people was related to Social interaction, Variety was related to Variety, and Valuable work was related to Value.

#### Emerging Characteristics

Figure 1 details the emerging characteristics, ones identified by participants as completely different from those presented as extant characteristics. That is not to say these are new keywords or constructs that have not been investigated, rather these are not currently defined as work characteristics in the literature regarding work design. The most common emerging characteristic was Effective and Ethical Management. Opportunities for career growth was seen as new by 33 % of the participants

who identified it as an important characteristic; the other 66 % said it was similar to technical and personal growth. Of those who did not relate opportunities for career growth to either technical or personal growth explained that providing training and growth as a person may not lead to progress in their career. They suggest that it is the ability to be promoted in their career that was important to them, not the mere availability of learning opportunities.

## Discussion

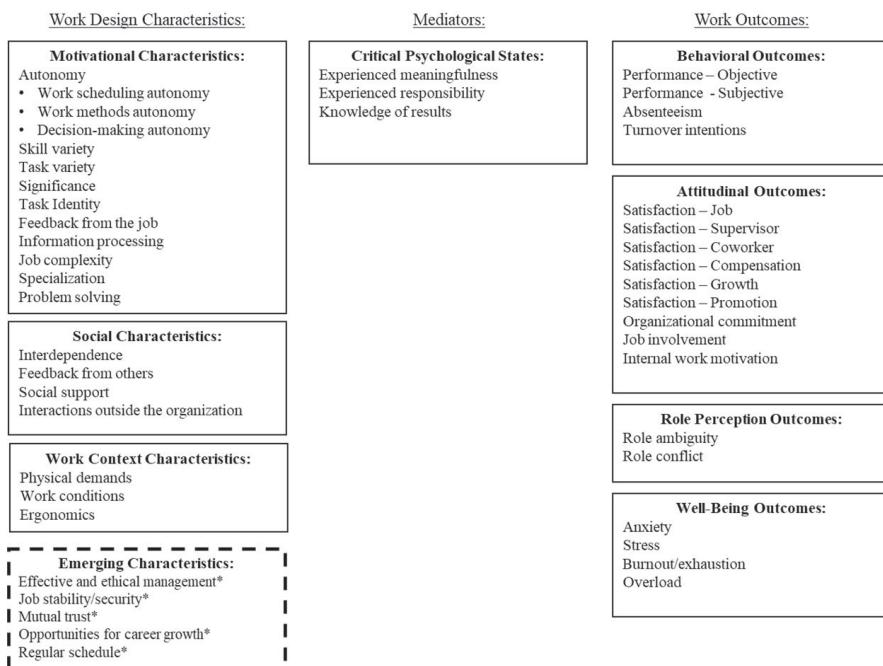
One finding from these results is evidence that people have different preferences regarding what work characteristics are important to them. All of the presented characteristics were rated in the top three most important characteristics at least twice. This finding suggests two things. First, any work design, or redesign efforts will need to cater to a specific group of employees, or even to an individual employee, rather than create a uniform protocol for improving workers' perceptions of their work. For example, "increasing workers' autonomy will always increase their motivation to perform the work" would be an incorrect assessment of that characteristic, as there are some workers who do not want autonomy. In reference to autonomy being one of her least important characteristics a sales and related occupation worker said, *"I like to have direction. I like outlines. I do not want a blank slate."*

Secondly, some characteristics are bimodal and some are unimodal. The bimodal characteristics are ones where some participants would enjoy an increase in that characteristic and others would not (e.g., autonomy). A unimodal characteristic would be one where an increase would never be seen as harmful, but may be perceived as motivating. One unimodal characteristic is value, which was regularly rated as important, and was never rated as unimportant. Increasing value would benefit some employees but would not harm others. Employers could help alleviate worker distress by showing employees the value of their work towards someone.

While these warnings may seem obvious, they are often not heeded in practice. Due to the specialization that the modern workplace utilizes in job design (referring back to Taylorism), workers at the beginning of the process often do not understand what happens at the end of the process, nor do they see who uses the product or service once it is finished. In this study, one production worker spoke to a prior job where they did not know what happened to the small subassembly they were building once it left her area. It was not until an end user took a shop tour and spoke with her about how the product greatly improved their and their family's lives, that she understood the meaning of her work. She stated that discovering the value of her work to others was a turning point in her attitude at work; just knowing how her work benefited others alleviated the feeling of a lack of meaning and improved her motivation on the job.

Some limitations of this study and a future research suggestion need to be noted. One limitation is the generalizability of the findings, as they represent the partici-

pants' experiences and preferences and not those of all workers. A larger scale study would be needed to generalize to all workers. A second limitation is in regards to the candor of the participants. They were speaking one-on-one to another person and potentially influenced by responding to questions with answers they wanted the researcher to hear, as opposed to what they actually thought (e.g., responding to questions regarding the importance of compensation may have been downplayed to seem less "greedy"). Despite these shortcomings, the new or emerging characteristics (identified with an asterisk \* in Figure 1) should be considered in future developments of work characteristics. Planned future research is underway to take the findings from this study to guide a longitudinal work redesign study, where an engineered work improvement process will be investigated.



**Figure 1. Expanded work design model (Adapted from Humphrey et al., 2007)**

## References

Böckerman, P., Ilmakunnas, P., & Johansson, E. (2011). Job security and employee well-being: Evidence from matched survey and register data. *Labour Economics*, 18(4), 547–554. <https://doi.org/10.1016/j.labeco.2010.12.011>

Campion, M. A. (1988). Interdisciplinary approaches to job design: A constructive replication with extensions. *Journal of Applied Psychology*, 73(3), 467–481. <https://doi.org/10.1037/0021-9010.73.3.467>

Chan, C. K.-C., & Ngai, P. (2009). The Making of a New Working Class? A Study of Collective Actions of Migrant Workers in South China. *The China Quarterly*, 198, 287. <https://doi.org/10.1017/S0305741009000319>

Chan, W. X., Kalliath, T., Brough, P., Siu, O., O'Driscoll, M. P., & Timms, C. (2016). Work – family enrichment and satisfaction: the mediating role of self-efficacy and work – life balance. *The International Journal of Human Resource Management*, 27(15), 1755–1776.

Crawford, E. R., Lepine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, 95(5), 834–848. <https://doi.org/10.1037/a0019364>

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). Los Angeles: SAGE Publications.

Drobnič, S., Beham, B., & Prág, P. (2010). Good Job, Good Life? Working Conditions and Quality of Life in Europe. *Soc Indic Res*, 99, 205–225. <https://doi.org/10.1007/s11205-010-9586-7>

Gallie, D. (2013). Direct participation and the quality of work. *Human Relations*, 66(4), 453–473. <https://doi.org/10.1177/0018726712473035>

Gladwell, M. (2008). *Outliers: The Story of Success*. Ney York: Back Bay Books/ Little Brown Company.

Haar, J. M., Russo, M., Sufie, A., & Ollier-malaterre, A. (2014). Outcomes of work – life balance on job satisfaction, life satisfaction and mental health : A study across seven cultures. *Journal of Vocational Behavior*, 85(3), 361–373. <https://doi.org/10.1016/j.jvb.2014.08.010>

Hackman, J. R., & Lawler, E. E. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology*, 55(3), 259–286. <https://doi.org/10.1037/h0031152>

Hackman, J. R., & Oldham, G. R. (1976). Motivation Through the Design of Work: Test of a Theory. *Organizational Behavior and Human Performance*, 16(2), 250–279.

Hackman, J. R., & Oldham, G. R. (1980). *Work Redesign*. Reading, Mass: Addison-Wesley.

Holman, D. J., & Wall, T. D. (2002). Work Characteristics, Learning-Related Outcomes, and Strain : A Test of Competing Direct Effects, Mediated, and Moderated Models. *Journal of Occupational Health Psychology*, 7(4), 283–301. <https://doi.org/10.1037/1076-8998.7.4.283>

Humphrey, S., Nahrgang, J., & Morgeson, F. (2007). Integrating Motivational, Social, and Contextual Work Design Features: A Meta-Analytic Summary and Theoretical Extension of the Work Design Literature. *Journal of Applied Psychology*, 92(5), 1332–1356.

Kahneman, D. (2013). *Thinking, fast and slow*. New York: Farrar, Staus and Giroux.

Kalleberg, A. L., & Marsden, P. V. (2013). Changing work values in the United States, 1973–2006. *Social Science Research*, 42(2), 255–270. <https://doi.org/10.1016/j.ssresearch.2012.09.012>

Karasek, R., & Theorell, T. (1990). *Healthy work: stress, productivity, and the reconstruction of working life*. New York: Basic Books.

Kelliher, C., & Anderson, D. (2010). Doing more with less? Flexible working practices and the intensification of work. *Human Relations*, 63(1), 83–106. <https://doi.org/10.1177/0018726709349199>

Lawler, E. E. (1969). Job design and employee motivation. *Personnel Psychology*, 22(4), 426–435. <https://doi.org/10.1111/j.1744-6570.1969.tb00343.x>

Lawrence, P. (2010). The key job design problem is still Taylorism. *Journal of Organizational Behavior*, 31(2), 412–421.

Lee, W.-T. (2014). *About Good Work*. Oregon State University.

Lewicki, R., & Bunker, B. (1996). Developing and Maintaining Trust in Working Relations. *Trust in Organizations: Frontiers of Theory and Research*, 114, 139. <https://doi.org/10.4135/9781452243610.n7>

Lewicki, R., & Wiethoff, C. (2000). *Trust, Trust Development, and Trust Repair. The handbook of conflict resolution: Theory and practice* (Vol. 1).

Lyness, K. S., Gornick, J. C., Stone, P., & Grotto, a. R. (2012). It's All about Control: Worker Control over Schedule and Hours in Cross-National Context. *American Sociological Review*, 77(6), 1023–1049. <https://doi.org/10.1177/0003122412465331>

Madrid, H. P., & Patterson, M. G. (2016). Creativity at work as a joint function between openness to experience, need for cognition and organizational fairness. *Learning and Individual Differences*, 51, 409–416. <https://doi.org/10.1016/j.lindif.2015.07.010>

Maslach, C., & Goldberg, J. (1998). Prevention of burnout: New perspectives. *Applied and Preventive Psychology*, 7(1), 63–74. [https://doi.org/10.1016/S0962-1849\(98\)80022-X](https://doi.org/10.1016/S0962-1849(98)80022-X)

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396. <https://doi.org/10.1037/h0054346>

Maslow, A. H. (1970). *Motivation and Personality* (2nd ed.). New York: Harper & Row.

Maxwell, B. G., Leonard, S. H., & Cornelius, C. J. (2008). Case Study Series on Work-Life Balance in Large Organizations. *Society for Human Resource Management*.

Maxwell, J. A. (2013). *Qualitative Research Design* (3rd ed.). Thousand Oaks, California: SAGE Publications.

Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91(6), 1321–1339. <https://doi.org/10.1037/0021-9010.91.6.1321>

Morrison, E., & Thurnell, D. (2012). Employee preferences for work-life benefits in a large New Zealand construction company. *Australasian Journal of Construction Economics and Building*, 12(1), 12–25.

Munoz de Bustillo, R., Fernandex-Macias, E., Esteve, F., & Anton, J.-I. (2011). E pluribus unum? A critical survey of job quality indicators. *Socio-Economic Review*, 9, 447–475.

Nouri, H., & Parker, R. J. (2013). Career growth opportunities and employee turnover intentions in public accounting firms. *The British Accounting Review*, 45(2), 138–148. <https://doi.org/10.1016/j.bar.2013.03.002>

Origo, F., & Pagani, L. (2009). Flexicurity and job satisfaction in Europe: The importance of perceived and actual job stability for well-being at work. *Labour Economics*, 16(5), 547–555. <https://doi.org/10.1016/j.labeco.2009.02.003>

Parker, S. K. (2014). Beyond Motivation: Job and Work Design for Development, Health, Ambidexterity, and More. *Annual Review Psychology*, 65, 661–691. <https://doi.org/10.1146/annurev-psych-010213-115208>

Peterson, R. A., & Merunka, D. R. (2014). Convenience samples of college students and research reproducibility. *Journal of Business Research*, 67(5), 1035–1041. <https://doi.org/10.1016/j.jbusres.2013.08.010>

Rau, R. (2006). Learning opportunities at work as predictor for recovery and health. *European Journal of Work and Organizational Psychology*, 15(2), 158–180. <https://doi.org/10.1080/13594320500513905>

Raymark, P. H., Schmit, M. J., & Guion, R. M. (1997). Identifying potentially useful personality constructs for employee selection. *Personnel Psychology*, 50(3), 723–736. <https://doi.org/10.1111/j.1744-6570.1997.tb00712.x>

Roberts, K. H., & Glick, W. (1981). The Job Characteristics Approach to Task Design : A Critical Review. *Journal of Applied Psychology*, 66(2), 193–217.

Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>

Saragih, S. (2011). The Effects of Job Autonomy on Work Outcomes: *International Research Journal of Business Studies*, 4(3).

Schumacher, E. (1979). *Good Work*. New York, NY: Harper & Row.

Stockard, J., & Lehman, M. B. (2004). Influences on the Satisfaction and Retention of 1st-Year Teachers : The Importance of Effective School Management. *Educational Administration Quarterly*, 40(5), 742–771. <https://doi.org/10.1177/0013161X04268844>

Stone, E. F., & Gueutal, H. G. (1985). An Empirical Derivation of the Dimensions along Which Characteristics of Jobs Are Perceived. *The Academy of Management Journal*, 28(2), 376–396.

Strauss, A., & Corbin, J. M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, California: SAGE Publications.

Surienty, L., Ramayah, T., Lo, M. C., & Tarmizi, A. N. (2014). Quality of Work Life and Turnover Intention: A Partial Least Square (PLS) Approach. *Social Indicators Research*, 119(1), 405–420. <https://doi.org/10.1007/s11205-013-0486-5>

Tavares, S. M. (2016). How Does Creativity at Work Influence Employee's Positive Affect at Work? *European Journal of Work and Organizational Psychology*, 25(4), 525–539.

Taylor, F. W. (1911). *Principles of scientific management*. New York: Harper.

Turner, A., & Lawrence, P. (1965). *Industrial jobs and the worker; an investigation of response to task attributes*. Boston: Harvard University, Division of Research, Graduate School of Business Administration.

United States Department of Labor. (2018). Occupational Employment Statistics: May 2017 Occupational Profiles. Retrieved from [https://www.bls.gov/oes/current/oes\\_stru.htm](https://www.bls.gov/oes/current/oes_stru.htm)

Valentine, S., Godkin, L., Fleischman, G. M., & Kidwell, R. (2011). Corporate Ethical Values, Group Creativity, Job Satisfaction and Turnover Intention : The Impact of Work Context on Work Response. *Journal of Business Ethics*, 98(3), 353–372. <https://doi.org/10.1007/s10551-010-0554-6>

Van der Sluis, L., & Poell, R. F. (2003). The Impact on Career Development of Learning Opportunities and Learning Behavior at Work. *Human Resource Development Quarterly*, 14(2), 159–179.

Worcester, J. E. (1910). *Worcester's academic dictionary : A new etymological dictionary of the English language* (Rev. ed). Philadelphia: Lippincott.

## Appendices

### Appendix 1: Work Characteristics Identified in Previous Literature

Characteristic	Definition	Example Source(s)
<b>Task (Motivational)</b>		
Work scheduling autonomy	Control over scheduling work.	(Humphrey et al., 2007; Kelliher & Anderson, 2010)
Decision-making autonomy	Control over decision-making.	(Humphrey et al., 2007)
Work methods autonomy	Control over methods to perform work.	(Humphrey et al., 2007)
Autonomy/Job Control (general)	The freedom and control workers can exert over their work.	(Gallie, 2013; Holman & Wall, 2002; Karasek & Theorell, 1990; Maslach & Goldberg, 1998; Morgeson & Humphrey, 2006; Munoz de Bustillo et al., 2011)
Task variety	Range of tasks on the job.	(Humphrey et al., 2007)
Task significance	Influence on the lives or work of others.	(Humphrey et al., 2007)
Task identity	Involving a whole piece of work, the results of which can be easily identified.	(Humphrey et al., 2007)
Feedback from the job	Direct and clear information about the effectiveness of task performance that is not from other coworkers and managers.	(Hackman & Oldham, 1976, 1980; Humphrey et al., 2007; Lawler, 1969; Morgeson & Humphrey, 2006)
<b>Knowledge (Motivational)</b>		
Job complexity	Complex and difficult to perform.	(Humphrey et al., 2007)
Information processing	Attending to and processing data or other information.	(Humphrey et al., 2007)
Problem solving	More active cognitive processing requirements of a job.	(Humphrey et al., 2007)
Skill variety	Variety of different skills to complete the work.	(Gallie, 2013; Humphrey et al., 2007; Morgeson & Humphrey, 2006)
Specialization	Specialized tasks or possessing specialized knowledge and skill.	(Humphrey et al., 2007)
<b>Social</b>		
Social support	Opportunities for advice and assistance from others.	(Humphrey et al., 2007)
Initiated interdependence	Work flows from one job to other jobs.	(Humphrey et al., 2007)
Received interdependence	Affected by work from other jobs.	(Humphrey et al., 2007)
Interactions outside organization	Required interaction and communication with individuals external to the organization.	(Humphrey et al., 2007)
Feedback from others	Others in the organization provide information about performance.	(Humphrey et al., 2007)

Characteristic	Definition	Example Source(s)
Social interaction	Interact with other coworkers during the course of their work.	(Hackman & Oldham, 1980; Karasek & Theorell, 1990; Maslach & Goldberg, 1998; Morgeson & Humphrey, 2006; Ryan & Deci, 2000)
<b>Contextual</b>		
Ergonomics	Appropriate posture and movement.	(Humphrey et al., 2007)
Demand	Physical and psychological activity or effort required in the job.	(Holman & Wall, 2002; Humphrey et al., 2007; Karasek & Theorell, 1990; Maslach & Goldberg, 1998; Morgeson & Humphrey, 2006)
Work conditions	Environmental conditions (temperature, health hazards, noise, cleanliness, etc.)	(Humphrey et al., 2007)
Aesthetics	Exposure to beauty and creativity while performing work.	(Lee, 2014)
Equipment use	Complexity of the technology and equipment used.	(Humphrey et al., 2007)
<b>Other (un-categorized)</b>		
Accomplishment	Feeling of satisfaction towards one's contribution to an organization.	(Kalleberg & Marsden, 2013; Lee, 2014; Maslow, 1943, 1970)
Compensation	All the material gains workers can obtain by performing their assigned work. Often measured as an outcome, rather than a characteristic.	(C. K.-C. Chan & Ngai, 2009; Hackman & Lawler, 1971; Kalleberg & Marsden, 2013; Lee, 2014; Maslow, 1943, 1970; Morgeson & Humphrey, 2006; Munoz de Bustillo et al., 2011; Taylor, 1911)
Safety	Protection from physical harm while performing their work.	(Lee, 2014; Maslow, 1943, 1970; Morgeson & Humphrey, 2006)
Value	The significance of one's role and its impact within and beyond the organization.	(Lee, 2014; Maslow, 1943; Munoz de Bustillo et al., 2011)
Technical Growth	Opportunities available to workers to obtain work-related skills and knowledge.	(Hackman & Oldham, 1980; Lee, 2014; Maslow, 1943; Ryan & Deci, 2000)
Personal Growth	Ability to further themselves according to their personal beliefs, values, and aspirations.	(Lee, 2014; Maslow, 1943, 1970; Schumacher, 1979)

**Appendix 2: Relating Participants' Open-Ended Characteristics With Extant Characteristics**

Open-ended Characteristic	Sample of Extant Investigations
Positive interactions with people	<ul style="list-style-type: none"> <li>■ Required interaction (Turner &amp; Lawrence, 1965)</li> <li>■ Optional interaction (Turner &amp; Lawrence, 1965)</li> <li>■ Social Support (Morgeson &amp; Humphrey, 2006)</li> <li>■ Interactions outside organization (Morgeson &amp; Humphrey, 2006)</li> </ul>
Valuable work	<ul style="list-style-type: none"> <li>■ Task significance (Morgeson &amp; Humphrey, 2006)</li> <li>■ Work that is important (Kalleberg &amp; Marsden, 2013)</li> </ul>
Control over work	<ul style="list-style-type: none"> <li>■ Autonomy [Schedule, Decision, Work methods] (Morgeson &amp; Humphrey, 2006)</li> <li>■ Autonomy (Turner &amp; Lawrence, 1965)</li> <li>■ Control (Holman &amp; Wall, 2002; Karasek &amp; Theorell, 1990)</li> </ul>
Opportunities for career growth	<ul style="list-style-type: none"> <li>■ Esteem (Maslow, 1943, 1970)</li> <li>■ Career prospects (Drobnič, Beham, &amp; Prág, 2010)</li> <li>■ Opportunities for career growth (Kalleberg &amp; Marsden, 2013; Munoz de Bustillo et al., 2011; Nouri &amp; Parker, 2013)</li> </ul>
Money and benefits	<ul style="list-style-type: none"> <li>■ Safety needs (Maslow, 1943)</li> <li>■ Compensation/pay (Taylor, 1911)</li> <li>■ High income (Kalleberg &amp; Marsden, 2013)</li> </ul>
Effective and ethical management	<ul style="list-style-type: none"> <li>■ Effective management (Stockard &amp; Lehman, 2004)</li> <li>■ Ethical management (Valentine et al., 2011)</li> </ul>
Overcoming challenges	<ul style="list-style-type: none"> <li>■ Job complexity (Morgeson &amp; Humphrey, 2006)</li> <li>■ Problem solving (Morgeson &amp; Humphrey, 2006)</li> </ul>
Mutual trust	<ul style="list-style-type: none"> <li>■ Trust in working relationships (Lewicki &amp; Bunker, 1996; Lewicki &amp; Wiethoff, 2000)</li> </ul>
Variety	<ul style="list-style-type: none"> <li>■ Variety (Hackman &amp; Lawler, 1971; Morgeson &amp; Humphrey, 2006; Turner &amp; Lawrence, 1965)</li> </ul>
Pleasing Atmosphere/environment	<ul style="list-style-type: none"> <li>■ Work conditions (Morgeson &amp; Humphrey, 2006)</li> </ul>
Recognition	<ul style="list-style-type: none"> <li>■ Feedback from others (Morgeson &amp; Humphrey, 2006)</li> </ul>
Job stability	<ul style="list-style-type: none"> <li>■ Job security (Böckerman, Ilmakunnas, &amp; Johansson, 2011; Kalleberg &amp; Marsden, 2013; Munoz de Bustillo et al., 2011; Origo &amp; Pagan, 2009)</li> </ul>
Learning opportunities	<ul style="list-style-type: none"> <li>■ Learning opportunities (Rau, 2006; Van der Sluis &amp; Poell, 2003)</li> </ul>
Creativity	<ul style="list-style-type: none"> <li>■ Creativity at work (Madrid &amp; Patterson, 2016; Tavares, 2016)</li> </ul>
Work-life balance	<ul style="list-style-type: none"> <li>■ Work-life balance (W. X. Chan et al., 2016; Haar et al., 2014; Karasek &amp; Theorell, 1990; B. G. Maxwell et al., 2008; Morrison &amp; Thurnell, 2012; Suriency et al., 2014)</li> <li>■ Short working hours/ free time (Kalleberg &amp; Marsden, 2013)</li> </ul>