Selecting for Polychronicity: Bringing Out the Best in People

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A popular means of predicting multitasking success is measuring individuals’ polychronicity, which is the preference for multitasking instead of focusing on single tasks in a linear fashion. An experimental investigation of the potential problems of using polychronicity measures for personnel selection purposes was conducted. The present study discovered that measures of polychronicity are seriously flawed for use in personnel selection. Due to the ease with which the intention behind the questions can be determined, individuals are able to distort their responses to match what the job requires. Practical issues and implications for personnel selection are discussed.

“When you are asked if you can do a job, tell ’em, ‘Certainly I can!’ Then get busy and find out how to do it.”

-Theodore Roosevelt

The incessant demands of the global market, as well as the ubiquity of technology, have propelled multitasking into the workplace. In organizational settings multitasking is often defined as performing multiple tasks in the same general time period by switching between them, such as juggling numerous demands within the span of a minute, an hour, or a morning (Delbridge, 2000). Because the multitasking phenomenon is pervasive in the workplace, organizations are incorporating the skill to multitask into their conceptions of a desirable employee. This search for “multitaskers” has led to the creation of selection tools that seek to predict multitasking performance.

Consultants are communicating that an increasingly popular construct for predicting multitasking ability is polychronicity, the preference for multitasking (König & Waller, 2010). Persons who are polychronic prefer to work on multiple tasks at the same time instead of focusing on one task until reaching completion. While there has been concern that polychronicity may not predict performance in multitasking environments due to conflicting findings (Conte & Gintoft, 2005; Kinney, 2007; König, Bühner & Mürling, 2005), recent work by Kantrowitz, Grelle, Beaty, and Wolf (2012) demonstrated that polychronicity is predictive of job performance in contexts where multitasking is relevant (i.e., a call center). The findings of Kantrowitz and colleagues (2012) supported the supposition of König & Waller (2010) that polychronicity should only facilitate job performance in environments that are characterized by a need for multitasking. While the work by Kantrowitz and colleagues (2012) is very encouraging for the usefulness of this construct in personnel selection, there are additional concerns regarding polychronicity. As polychronicity is a self-reported personality dimension, it is inherently subject to
socially desirable responding. In fact, it is possible that individuals may purposefully enhance their preference for polychronicity as a form of impression management.

In a culture that implores individuals to “put their best foot forward” it comes as little surprise that this foot is not always a perfectly accurate representation of the whole entity that it is representing. Impression management (IM) encapsulates both verbal and nonverbal techniques used consciously by individuals to control others’ perceptions of them (Gardner & Martinko, 1988). The type and purpose of IM is dictated by a combination of the context and the individual’s motivations. IM is often used in situations that could be referred to as novel or high stakes, such as in the job application context. Depending on the type of selection process (e.g., interview versus written exam), individuals will shape their IM tactics to match the demands of the situation. In the selection context the most applicable type of IM is self-presentational; that is, IM focused on making one appear in a positive light to others. While the type of IM may depend on the demands of the situation and the motivations of the individual, the ultimate success of IM may largely be dictated by individuals’ self-regulatory abilities (Snell, Sydell & Lueke, 1999).

Skillfully executed impression management is related to job interview success, as well as promotion (Barrick, Shaffer & DeGrassi, 2009; Gardner & Martinko, 1988; Morgeson, Campion, Dipboye, Hollenbeck, Murphy & Schmitt, 2007); however, IM may elevate performance scores based upon self-regulatory ability, which while often useful, may not be the competency of interest. This unwanted distortion of the selection system earns IM exhibited by applicants the negative label “applicant faking”. Faking on personality tests is a salient concern for personnel selection experts because this response distortion may affect the validity of the system with regard to a critical practical outcome – altered hiring decisions (Morgeson et al., 2007). If hiring decisions are manipulated by response distortion, then the overall predictive validity of the selection system is likely to be compromised.

The IM and applicant faking literatures do not predict a rosy future for the use of personality measures in personnel selection. Leading to further cause for alarm regarding measures of polychronicity is the transparency of the measures. In addition to being self-reported, measures of polychronicity are particularly high in face validity (i.e., they appear valid because the questions are clearly gauging preference for multitasking). Highly transparent scales may increase the ease with which applicants distort their responses (Bornstein, Rossner, Hill & Stepanian, 1994); therefore polychronicity may be particularly ill suited for use in selection tests.

Despite polychronicity’s increased usage as a means of predicting multitasking success in the field and the laboratory (Kinney, 2007; König et al., 2005), the potential issues regarding distortion have not been investigated. The present study sought to address three primary topics. First, using the traditional faking study methodology, general perceptions regarding how employers view polychronicity were investigated. Second, applicant response distortion regarding polychronicity was explored. And third, individual difference factors potentially affecting faking were explored.

BACKGROUND OF POLYCHRONICITY

To most effectively explore best practices for utilizing polychronicity in personnel selection, a brief history of the construct’s evolution is useful. The concept of polychronicity originated from anthropologist E.T. Hall, whose emphasis was on describing and defining a cultural level phenomenon regarding conceptions of time and time usage preferences. The influence of Hall (1959) has been extensive, serving as the foundation for the measurement scale created by Bluedorn, Kalliath, Strube and Martin (1999). Their polychronicity scale, the Inventory of Polychronic Values (IPV), captures Hall’s cultural level definition of polychronicity by measuring people’s perceptions of whether their culture prefers multitasking, whether they also believe that this preference reflects a best practice for time management.

Measuring polychronicity as a cultural level variable may cause measurement error. First, presently the cultural level perspective on polychronicity in the United States appears to be in flux. The media, fueled by conflicting definitions and streams of multitasking research, paints an abstract image of
multitasking, which may subsequently affect individuals’ ability to discern whether their culture values polychronic persons, or condemns them. Inquiring about the cultural view on time usage may invoke responses based upon media exposure, instead of an individual’s unique preferences. Partially as a reaction to this growing concern, polychronicity has been recently redefined as “a noncognitive variable reflecting an individual’s preference for shifting attention among ongoing tasks, rather than focusing on one task until completion and then switching to another task” (Poposki & Oswald, 2010, p.250). There are two points to bear in mind with this definition. This definition emphasizes that polychronicity is a preference for exhibiting multitasking behaviors, opposed to an ability, which differentiates this construct from that of multitasking (i.e., a behavioral construct). Second, the Poposki and Oswald definition is a move toward a focus on the individual, in contrast to the original cultural conception of polychronicity. Based upon their definition of polychronicity, Poposki and Oswald recently developed a new polychronicity scale, the Multitasking Preferences Inventory (MPI).

POLYCHRONICITY AND INDIVIDUAL DIFFERENCES

The nomological network surrounding polychronicity has received inconsistent attention. A variety of constructs have been examined as correlates of polychronicity, such as punctuality values (Benabou, 1999), subcomponents of the Type-A behavior pattern (Conte, Rizzuto & Steiner, 1999), behaviors and attitudes toward time management (Kaufman-Scarborough & Lindquist, 1999), goal orientation (Schell & Conte, 2008), the Big 5 personality dimensions (Conte & Jacobs, 2003; Conte & Gintoft, 2005; König et al., 2005), and cognitive ability (Conte & Jacobs; König et al.). Despite the range of constructs investigated, there has been little replication of results. Moreover, when replication has been attempted, such as in regard to the Big 5, the findings have been inconsistent across studies. Notably, it is unclear whether extraversion is correlated with polychronicity.

Theoretically it could be argued that extraversion and polychronicity should be positively correlated because extraverted individuals are thought to enjoy more stimuli (vs. introverts) and performing multiple tasks could be considered a form of increased stimuli. Extraverted persons are characterized as spirited and spontaneous (Goldberg, 1990), as well as desiring higher levels of stimulation and activation (Rusting & Larsen, 1995). One way that a person might achieve such stimulation is by working on multiple tasks simultaneously and switching amongst a variety of tasks. Both Conte and Jacobs (2003) and Conte and Gintoft (2005) found a positive correlation between polychronicity and extraversion \(r = .21, p < .01\) and \(r = .22, p < .01\), respectively) when studied in field samples of train conductors and retail associates. König and colleagues (2005), however, did not find a significant relationship between polychronicity and extraversion \(r = .15, ns\) when assessed in a laboratory study of German students; therefore, the nature of this correlation has not been explicated as of yet.

As personality variables are widely used in personnel selection, it is important to further explore their relationships with polychronicity in order to understand the implications of introducing polychronicity into selection systems. The mixed conclusions regarding the polychronicity-extraversion relationship clearly call for empirical clarification. Possessing solid conclusions from which to build upon is wise; therefore, in the present effort personality variables were the main correlates explored. Evans (2002, as cited in Heslin, Latham & Vandewalle, 2005) noted that “without replication our findings are built on fragile foundations”, thus arguing that there is value to replication and clarification of results. More specific to the present effort, Hesketh (2004, as cited in Heslin et al., 2005) has strongly argued for “more replications and extensions in I/O psychology”. In align with these suggestions, the present effort aims to add clarification by exploring polychronicity’s relationships with the Big 5 personality variables in a range of experimentally controlled contexts. The findings regarding polychronicity and extraversion currently vary based on the nature of the experiment (i.e., field vs. laboratory), which suggests that the situation may impact this relationship. The six experimental conditions allow for further examination of the effect of the situation, while keeping the sample constant. Therefore, in an effort to bring clarity to the literature, the following hypothesis is put forth.
Hypothesis 1: Polychronicity will be positively correlated with extraversion, such that individuals who report polychronic preferences will also report higher extraversion.

POLYCHRONICITY & FAKING

The strong possibility of distortion on measures of polychronicity is a cause for concern to those interested in utilizing polychronicity in personnel selection. The previously untested interactional model of applicant faking (Snell et al., 1999) will serve as a framework for this argument. Snell and colleagues sought to help organize the relatively atheoretical research on applicant faking by proposing an interactional model based on empirical findings and theoretical arguments. The model proposes that successful faking depends on applicants’ ability to distort their responses as well as motivation to do so (Snell et al.). These boundary conditions on faking are further broken down into factors and characteristics of the individual applicant, the test, and the testing environment that affect both ability and motivation to engage in impression management in the form of response distortion.

Ability. The ability to distort responses may depend upon both dispositional factors of the applicants and characteristics of the test (Snell et al., 1999). Research on impression management (IM) in personnel selection processes (i.e., interviews and pencil-and-paper tests) suggests that differences in personality are related to the frequency of IM usage as well as the type of IM utilized (Barrick & Mount, 1996; Gardner & Martinko, 1988; Kristof-Brown, Barrick & Franke, 2002; Weiss & Feldman, 2006). Specifically, this body of research has suggested that there is a relationship between individuals’ extraversion and their likelihood of using IM techniques during selection tests.

Kristof-Brown and colleagues (2002) found that extraversion was related to self-promoting forms of IM during job interviews (e.g., enhancing other’s perceptions of themselves), while not related to other-promoting IM (e.g., flattery). Applicants’ use of IM was correlated with interviewers’ decisions regarding person-environment (P-E) fit such that those who correctly managed their impressions were deemed a stronger fit. This can have serious ramifications, particularly in the instance of equally qualified candidates. When candidates are equally qualified for a position, hiring decisions can be based on perceptions of fit; therefore potentially rewarding the individuals who engaged in faking. An additional nail in the coffin comes from the work of Weiss and Feldman (2006). In their research, extraversion positively correlated with both the number of lies told ($r = .30, p < .05$) and with the use of self-promotion tactics ($r = .37, p < .05$) during a simulated selection process involving both an interview and a pencil-and-paper test. It appears that extraverted applicants are able to distort responses in a desirable direction on a variety of personality measurement methods. Therefore, consistent with the extant literature, the following hypothesis is put forth.

Hypothesis 2: Extraversion will be positively correlated with socially desirable responding, such that individuals who report extraverted tendencies will demonstrate higher social desirability.

Also relating to ability to distort responses are test characteristics (Snell et al., 1999). Polychronicity, as an individual preference, is currently assessed with self-report measures, such as the aforementioned IPV and MPI. Despite the appropriateness of self-report techniques for assessing polychronicity, a likely threat to self-report measures of preferences is socially desirable responding, or faking via IM. Applicants are becoming increasingly savvy regarding employers’ preferences due to the wealth of information available about company culture, as well as the surplus of advice on positive skills to demonstrate when searching for a job. Because multitasking has invaded the media as popular buzzword, persons may be developing attitudes regarding multitasking, or as Kinney, Reeder, and O’Connell (2008) noted, we may be living in “the midst of a multitasking revolution”. The manner that the media portrays multitasking, however, is inconsistent; therefore it is difficult to predict what the predominant attitude toward multitasking may be.
Regardless of individuals’ perceptions regarding the societal view on multitasking, measures of polychronicity are likely susceptible to efforts to align one’s responses with these views. Both the MPI and the IPV are highly transparent (i.e., face valid) questionnaires, suggesting that it would be easy to manipulate one’s responses to match what one believes employers desire in an employee. While the presence of evident face validity may be considered a strength of the measure in regard to applicant reactions to the selection system (e.g., perceptions of procedural fairness), it also enhances the potential for applicant faking (Bornstein et al., 1994). As the threshold for determining the purpose of the questions decreases, the applicants’ ability to distort their responses in a desirable direction increases.

In order for individuals to fully utilize face validity to their advantage, they must also be able to determine the correct answer. Comprehending the construct of interest is not enough; one must also be able to deduce what the employer is looking for in order to successfully distort responses in the desired direction. In the case of polychronicity, if individuals were motivated to seek information regarding the temporal demands of the job, their ability to take advantage of the test characteristics would be enhanced. This illustrates the interactional affect of ability and motivation on applicant faking.

**Motivation.** According to Snell and colleagues (1999) personality and perceptual factors may influence applicants’ motivation to distort their responses. As has been discussed, extraversion is hypothesized to be correlated with socially desirable responding (i.e., the tendency to provide responses that portray the respondent in a positive manner, Paulhus, 1991) in a selection context. Additionally, there are other Big 5 personality traits that have been established as correlated with socially desirable responding in non-selection contexts (i.e., conscientiousness and emotional stability; Ones, Viswesvaran & Reiss, 1996). As it is a self-reported personality variable, polychronicity has also been studied in this capacity ($r = .03$, ns; Bluedorn et al., 1999). At the construct level, a preference for multitasking and a tendency toward presenting one’s self in a positive manner do not have a theoretical reason to be related; therefore, the lack of correlation is not surprising. Moreover, it may even be taken as an encouraging sign for utilizing polychronicity in personnel selection; however, the characteristics of the situation should be taken under consideration.

When one is not concerned about others’ perceptions of him/her it follows that one’s responses on a polychronicity questionnaire would be an accurate self-representation, and that subsequently there would not be a relationship with socially desirable responding. In the context of applying for a job, however, that is not necessarily the case. A relationship between polychronicity and socially desirable responding that would not naturally occur could potentially emerge in a selection context due to applicants’ ability and motivation to engage in IM. More specifically, if a job clearly requires multitasking, then it may be those who are highest on socially desirable responding that report the highest polychronicity, not driven by a true relationship between polychronicity and tendency to respond in socially desirable manner, but because of motivation to appear in a positive manner (e.g., in order to acquire the position).

Job applicants are typically motivated to acquire the position to which they are applying, which could lead to purposeful response distortion to increase the chances of being perceived as an ideal job candidate. Research has demonstrated that merely priming individuals with the context of a job application leads them to distort their responses to questions regarding the Big 5 personality dimensions in a socially desirable direction (i.e., more agreeable and less neurotic; Kristof-Brown et al., 2002; Weiss & Feldman, 2006). As a non-cognitive variable, polychronicity falls into this realm of self-reported individual difference constructs, thus it is reasonable to conclude that applicants may also be motivated to falsify their polychronicity scores.

Individuals may be motivated to obtain a job for numerous reasons, one of those being anticipating enjoyment of the job; or in other words, intrinsic motivation. Self-determination theory and theories of intrinsic motivation purport that individuals are motivated to perform well when driven by intrinsic motivation, that is a personally dictated interest and enjoyment in the task (Deci & Ryan, 1985). Possession of intrinsic motivation for a job could lead to perceptions of P-E fit – which is a potential motivating factor that, while not explicitly discussed by Snell and colleagues (1999), would fall under their category of perceptual factors. P-E fit refers to the general concept that it is important for people and their environment to be compatible on certain variables, such as preferences and environmental
opportunities for multitasking. This assertion is built upon the premise that it is an interaction between both the individual and the environment that leads to the individual’s attitudes and behaviors (Edwards, 1996). Predictors of P-E fit vary based on the specifics of the workplace/job context, however there are several consistent outcome variables, such as job satisfaction, performance, organizational commitment, employee well-being, and turnover (Arndt, Arnold & Landry, 2006; Edwards, Cable, Williamson, Lambert & Shipp, 2006).

Recent research by Poposki and Oswald (2010) demonstrated that MPI scores were correlated with self-reported ratings of enjoyment during a multitasking simulation as well as the number of tasks participants freely chose to perform during a subsequent simulation (r = .28, p < .05; r = .17, p < .05, respectively). These findings provide preliminary evidence that polychronic persons have a higher level of satisfaction during multitasking situations than monochronic persons and may choose to seek out multitasking situations. The possibility of enjoyment may intrinsically motivate polychronic individuals to obtain jobs that require multitasking.

Along the same lines, the popular notion of the “happy-productive worker” may draw applicants’ attention to instances of strong P-E fit. Many laypersons believe in a correlation between happiness/job satisfaction and job performance (Fisher, 2003). More realistically, it is likely that people are motivated to do things that they enjoy, and performing well at these activities then reinforces feelings of satisfaction and perpetuates the happy-productive cycle, or that people simply draw satisfaction from performing well because of reductions in goal-performance discrepancies (Diefendorff & Chandler, 2010). Regardless of the actual mechanisms, the prospect of a job in which one may be happy and successful may be highly motivating. Therefore, perceptions of future P-E fit may increase individuals’ motivation to do well on selection tests, which could have the unintended side effect of motivating individuals to purposefully distort responses on all aspects of the selection test. The following hypothesis is proposed.

**Hypothesis 3:** When applicants are motivated to acquire a position because of perceived person-environment fit, they will respond to questions regarding their polychronicity consistently with the information provided regarding the temporal demands of the position.

**METHOD**

**Present Study**

A between subjects laboratory experiment was constructed to investigate the risks of applicant faking when using measures of polychronicity in a selection context. In this experiment the two independent variables were the temporal demands of the job and P-E fit, while the dependent variable was polychronicity. The participants’ perceptions of the temporal demands of the job were systematically varied, as were their perceptions of P-E fit. The result of the manipulations was a 2 (high or low multitasking) x 2 (high or low P-E fit) between subjects design with two control groups.

The double control group design employed in the present study is based on the common method used to assess faking (e.g. the Jackson, Wroblewski & Ashton (2000) “straight-take” vs. job application design). In studies of faking it is typical to have a control condition in which participants are encouraged to respond honestly, and then a second condition in which they are induced to respond in a manner that would increase their chances of acquiring a job. As studies employing such procedures are oft criticized as not being realistic due to the strong manipulations, a different technique was utilized in the present study. The two conditions that typically fully comprise a study on faking were morphed into a double control group design. More specifically, in one control group the participants were simply given a survey to complete (i.e., the “straight-take” condition), whereas in the other control group the survey was presented as a job application and the participant was asked to respond as a job applicant (i.e., the job application condition). Neither information nor guidelines regarding the job or how to answer the questions was provided. The straight take control condition provided a comparison for the four experimental conditions, while the job application control condition provides a stepping-stone toward a
greater understanding of how job seekers perceive polychronicity in comparison to the Big 5 personality variables.

Participants
The participants in this study were undergraduate psychology students attending a large public university in the Northeastern United States (n = 1,184). The sample was largely female (75%) and Caucasian (78%) with a mean age of 19 years (SD = 1.45), which was consistent with the psychology subject pool population at the university. The students were given credit toward a course research requirement in exchange for their participation.

Procedure
The participants were recruited from the university’s psychology subject pool and the experiment was completed online. Upon entering the online experiment, participants were presented with a brief scenario. In the straight-take control condition the participants were told that they were to complete the following survey, whereas in the job application control condition the participants were told that they were to complete the following job application. In neither control condition was additional information provided about the purpose of the survey or job application. In the experimental conditions the instructions asked the participants to imagine that they were applying for a job. The participants then read a description of this job that included minimal information regarding the temporal demands of the job, as well as the participant’s motivation for applying. In order to assist the participants’ comprehension of the scenario, in all conditions the participants listened to a voice recording of the same instructions and scenario that they had just read.

The participants then completed a survey-style selection test. The selection test included self-reported demographic information and measures designed to assess cognitive ability, as well as inventories to assess polychronicity, Big 5 personality and socially desirable responding. In all conditions the reports of cognitive ability took place in a separate section in which the participants were instructed that the selection test had ended and that they were to truthfully report their demographic information and cognitive ability. In all conditions the selection test section consisted of the personality variables only: polychronicity, the Big 5 and socially desirable responding.

Manipulations

**Person-Environment fit.** The participants’ motivation surrounding the completion of the selection test was manipulated based upon provided perceptions of person-environment fit. These manipulations were not intended to be strong or necessarily specific to the temporal demands of the job (e.g., polychronicity or multitasking). In the high P-E fit conditions the scenario read, “This is a job that you are very excited about since it allows you to utilize your education, abilities and experiences. You feel that this job would be a great fit for you, and the career center is strongly suggesting that you apply.” In the low P-E fit conditions the scenario read, “This is not a job that you are very excited about because it would not allow you to utilize your education, abilities and experiences. You feel that this job would be a poor fit for you, however due to the current economic conditions you realize that you do not have the privilege of being overly picky.” Finally, in the job application control condition there was no mention of the participant’s motivations for applying for the position or their perceptions of P-E fit and in the straight take control condition there was no mention of a job application, or motivations.

**Temporal demands.** The job description was manipulated such that the job appears to either have an emphasis on multitasking behaviors or monotasking behaviors. In the high multitasking conditions the job description read, “If you were to get this job you would be working in a fast-paced, stimulating environment. You would have the opportunity to be involved in multiple projects and juggle simultaneous demands.” In the low multitasking, or monotasking, conditions the job description read, “If you were to get this job you would be working in a very methodical and organized environment. You would have the opportunity to focus on one project at a time and address demands sequentially.” Finally, in the job application control condition there was no mention of the temporal demands of the position, thus leaving
the need for multitasking or monotasking behaviors ambiguous. In the straight take condition there was no mention of a job at all, therefore no description of temporal demands.

**Measures**

*Temporal behavior preferences.* Participants completed two polychronicity scales: the 14-item MPI (Poposki & Oswald, 2010) and the 10-item IPV (Bluedorn et al., 1999). For both scales, responses were given using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The MPI had an internal consistency alpha of .94. Items included: “I prefer to work on several projects in a day, rather than completing one project and then switching to another” and “When I have a task to complete, I like to break it up by switching to other tasks intermittently”. The IPV had an internal consistency alpha of .95. Items included: “I like to juggle several activities at the same time” and “I believe it is best for people to be given several tasks and assignments to perform at the same time.”

*Personality.* Participants completed the 44-item Big Five personality inventory (BFI) as a measure of personality (John, Donahue, & Kentle, 1991; John, Naumann, & Soto, 2008). The BFI is widely considered to be a standard measure of personality (John & Srivastava, 1999). The five subscales of the BFI had internal consistency alphas ranging from .84 to .90. A 5-point Likert scale ranging from 1 (disagree strongly) to 5 (agree strongly) was used for participants to rate items for extraversion, agreeableness, conscientiousness, openness, and neuroticism. Sample items included: “I am a person who…” (a) Extraversion: “Is talkative” (b) Agreeableness: “Is helpful and unselfish with others” (c) Conscientiousness: “Does a thorough job” (d) Openness: “Is original, comes up with new ideas” and (e) Neuroticism: “Can be tense”.

*Socially desirable responding.* The Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960) was included to assess the participants’ proclivity toward responding based upon their perceptions of socially desirable responses. This 33-item scale was deemed appropriate for this study because it was originally created especially for usage with normal populations, such as college students (Crowne & Marlowe, 1960). In the present sample the internal consistency coefficient was .92. Responses to this scale were made by reporting either True or False to each statement. Sample items included: (a) “I never hesitate to go out of my way to help someone in trouble” and (b) “I sometimes try to get even rather than forgive and forget.”

*Demographic information.* Participants were asked to report their age, gender and race.

*Cognitive ability.* Participants were asked to report their high school and cumulative grade point averages (GPA), as well as their Scholastic Achievement Test (SAT) scores and/or ACT scores as proxies for measuring cognitive ability.

*Manipulation check.* To ensure that the participants understood the temporal demands of the job described in the scenario, two manipulation check questions were included. First, across the four experimental conditions all participants were asked to rate the extent to which the job they applied for would have required multitasking. The second question sought to assess whether participants understood the temporal demands of the condition to which they had been assigned; therefore, the details of the condition specific question were varied to match the condition to which the participant was assigned. For this question all participants were asked whether the job that they had applied for involved the type of temporal environment depicted in the job description in their respective experimental condition. A 5-point Likert scale ranging from 1 (disagree strongly) to 5 (agree strongly) was used for all manipulation checks.

**RESULTS**

**Descriptive Statistics**

The means, standard deviations, correlations and alpha coefficients of study variables are presented in Table 1.
Manipulation Checks
The manipulation check questions were examined as a reflection of the temporal demand manipulation’s effectiveness. As the participants’ perceptions of the job application scenario were central to hypothesis four, it was crucial to ensure that the manipulations had the intended effects. For the first manipulation check question (i.e., I believe that the job described in the experiment would have required multitasking) an independent samples t-test was conducted to compare the mean of the high multitasking conditions (M = 4.48, SD = .94) to that of the low multitasking conditions (M = 2.89, SD = 1.48). A significant difference in the expected direction was found (t(453) = 13.80, p < .01, η_p^2 = .30). A second independent samples t-test was conducted to explore the manipulation check question that sought to test the strength with which participants recognized the job environment as described (i.e., The job that I applied for would have required me to work in a fast-paced environment vs. a methodical environment). The analysis suggested that the high multitasking condition (M = 4.60, SD = .71) description had a slightly larger impact on participant’s memory than did the low multitasking condition (M = 4.46, SD = .91; t(452) = 2.02, p = .04, η_p^2 = .01), however, given that only 1% of the variance is explained, the practical significance of this finding should be evaluated in light of the very large sample size.

### TABLE 1

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<td>Polychronicity (MPI)</td>
<td>2.73</td>
<td>.91</td>
<td>-.05</td>
<td>(.14**)</td>
<td>-.12**</td>
<td>-.03</td>
<td>(.16**)</td>
<td>(.94)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Polychronicity (IPV)</td>
<td>2.68</td>
<td>.98</td>
<td>-.02</td>
<td>(.20**)</td>
<td>-.06</td>
<td>-.09**</td>
<td>.10**</td>
<td>.90**</td>
<td>(.95)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Social Desirability</td>
<td>2.14</td>
<td>7.83</td>
<td>(.58**)</td>
<td>(.37**)</td>
<td>(.66**)</td>
<td>-.63**</td>
<td>.35**</td>
<td>-.10**</td>
<td>-.03</td>
<td>(.92)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>High School GPA</td>
<td>3.72</td>
<td>.37</td>
<td>.05</td>
<td>-.01</td>
<td>(.11**)</td>
<td>-.03</td>
<td>(.00)</td>
<td>-.02</td>
<td>-.02</td>
<td>.08**</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>SAT Score</td>
<td>1746.38</td>
<td>235.58</td>
<td>-.10**</td>
<td>-.04</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
<td>-.04</td>
<td>-.03</td>
<td>-.03</td>
<td>.23**</td>
<td>--</td>
</tr>
<tr>
<td>11</td>
<td>Gender</td>
<td>75%</td>
<td>Fem.</td>
<td>-.17**</td>
<td>-.13**</td>
<td>(.14**)</td>
<td>.01</td>
<td>-.08*</td>
<td>.02</td>
<td>.02</td>
<td>-.09**</td>
<td>-.09**</td>
<td>.14**</td>
</tr>
</tbody>
</table>

*Note.* n= 1068-1098. Values along the diagonal are alpha coefficients. SD= standard deviation.

*p<.05

**p<.01, two-tailed.

Covariate
There was a small, but statistically significant, correlation between socially desirable responding and polychronicity as measured by the MPI (r = -.10, p < .01); therefore, socially desirable responding was included as a covariate during hypothesis testing.

Tests of Hypotheses
As shown in Table 1, there was a high correlation between the polychronicity scales, the MPI and the IPV (r = .90, p < .001). Due to the strength of this intercorrelation, as well as nearly identical correlations with the other measured variables, the decision to identify a single polychronicity scale for hypothesis testing was made. The MPI was designed to overlap with the IPV, yet focus on a narrower definition of polychronicity, namely preferences of individuals. As this was the focus on the present study, the MPI was retained as the scale of primary interest.

Hypothesis one, a positive correlation between polychronicity and extraversion was supported (r = .14, p < .01), yet while the correlation is statistically significant, it is small in magnitude. Support for hypothesis two, the positive correlation between extraversion and socially desirable responding, was also found (r = .37, p < .01).

Supplemental analyses were conducted to further explore the relationship between extraversion and polychronicity (hypothesis one). First, a regression analysis was conducted to examine the effect of controlling for participants’ social desirability scores. The semi-partial correlation was .20 (t(1134) =
demonstrating that extracting the variance accounted for by social desirability strengthened the relationship due to social desirability’s differential relationships with the two variables of interest. Further supplemental analyses revealed that this correlation was solely driven by the high multitasking conditions, and that it was in fact nonsignificant in the low multitasking as well as the control conditions (See Figure 1). This suggests that the presence of demand for multitasking moderated the relationship between extraversion and polychronicity. In order to test for moderation a moderated multiple regression analysis was conducted. Polychronicity was regressed upon multitasking, PE-fit, and extraversion in the first step, and the interaction terms were added in subsequent steps (See Table 2.) Potential explanations and implications of this moderated relationship are addressed in the discussion section.

FIGURE 1
COMPARISON OF EXTRAVERSION-POLYCHRONICITY CORRELATIONS BY CONDITION

TABLE 2
MULTIPLE REGRESSION FOR MODERATION
(Polychronicity as the Dependent Variable)

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
<th>Step 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MT</td>
<td>0.34*</td>
<td>0.17*</td>
<td>0.18*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fit</td>
<td>-0.09</td>
<td>-0.26</td>
<td>-0.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.19*</td>
<td>-0.10</td>
<td>-0.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>MTxFit</td>
<td>0.24*</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTxExtraversion</td>
<td>0.27*</td>
<td>0.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FitExtraversion</td>
<td>0.12*</td>
<td>0.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTxFitExtraversion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.05</td>
<td></td>
</tr>
<tr>
<td>R-Square</td>
<td>0.17</td>
<td>0.24</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p<.01
Evidence of the proposed interaction between temporal demands and P-E fit on polychronicity was discovered, thus providing support for hypothesis three. The presence of this interaction was determined using a two-way ANCOVA with socially desirable responding as the covariate ($F(1,750) = 41.57, p < .001$; See Figure 2). The results of planned comparisons tests showed that the majority of experimental conditions significantly differed ($p < .01$) from the control group (n.b., the two control groups were combined for this analysis because they were statistically identical in regard to the focal variable) on participants’ reported polychronicity. The exception was the low multitasking/low P-E fit group, which did not significantly vary from the control condition ($t(559) = .63, p = .53$).

**FIGURE 2**
TEMPORAL DEMANDS X P-E FIT INTERACTION

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**Exploratory Results**

While the straight take and job application control conditions did not vary on the focal variable (i.e., polychronicity $t(394) = .01, p = .99$), they did however appear to vary on all of the Big 5 personality variables, as well as socially desirable responding. A MANOVA was conducted to further explore these differences. Despite random assignment, the control two groups did in fact have significant differences on all six variables ($p < .03$). Moreover, the differences were all in the directions that would be expected for persons attempting to acquire a job, versus people simply sharing their personality dimensions. Of particular note, neuroticism was lower ($F(1, 382) = 61.55, p < .001$), conscientiousness and agreeableness were higher ($F(1, 382) = 93.55, p < .001$ & $F(1, 382) = 48.99, p < .01$, respectively) and socially desirable responding was higher ($F(1, 382) = 103.07, p < .001$) in the job application control group, compared to the straight take control group.

**DISCUSSION**

The goal of the current study was to further explore polychronicity as a variable to aid in the personnel selection process. In addition to support for each hypothesis, unanticipated, but very important, findings were uncovered. This effort makes three primary contributions to the literature. First, that the relationship between polychronicity and extraversion is more complex than was originally hypothesized,
which may explain the mixed findings in the literature. The present findings suggest that this correlation may be context dependent, more specifically, dependent upon the presence of a need for multitasking or at the very least, dependent upon more complex job demands. Second, that measures of polychronicity are subject to faking when used in a personnel selection context. And third, that the mere demand characteristic caused by a job application is enough to influence participants’ responses in a socially desirable direction as measured by both the inflation in social desirability scores, as well as the significant differences in personality scores.

**Theoretical Contributions**

In the present effort to clarify the relationship between polychronicity and extraversion a previously hidden layer of influential factors was revealed. The presence of an overall correlation between polychronicity and extraversion, and the lack of correlation between these variables in the straight take condition indicates that there is not a simple linear relationship at play. That there was only a significant correlation between polychronicity and extraversion in the experimental conditions in which multitasking was desired, suggests that this relationship may depend on contextually driven factors.

**Impression Management.** The results of the present study correspond well with the previous research on extraversion and IM. As predicted, there was indeed a relationship between extraversion and socially desirable responding, thus showing extraverts’ tendency toward self-promotion. The discontinuity lies in the context dependent relationship between polychronicity and extraversion. The relationship between extraversion and polychronicity should have been consistent across conditions because the same amount of information was provided regarding temporal demands in each condition. There was, however, only a correlation between extraversion and polychronicity in the high multitasking conditions. Therefore, the results suggest that the presence of a demand for multitasking moderated the relationship between extraversion and polychronicity, thus imposing a situational boundary condition on this relationship. Trait activation theory may hold the key to understanding this boundary condition.

**Trait Activation Theory.** Tett & Guterman (2000) posited a theory of trait activation that takes into account that both traits and situations can affect individuals’ behavior. In this interactionist approach the authors propose that behaviors may be based on situation-trait interactions occurring due to situational cues activating latent traits. A person may possess a trait and yet only exhibit trait-related behaviors in situations that activate expressions of that trait (Tett & Guterman). This theory has been used to explain the discrepancies between ratings that can occur in assessment centers involving various activities measuring the same traits. According to trait activation theory, the cues present in the different activities may cause the participants to demonstrate their traits differently based on the varying situations. In terms of the interactional model of applicant faking (Snell et al., 1999), the trait activation could affect individuals’ ability to fake because the trait may be manifested by way of IM.

While trait activation theory may lend itself best to within-subjects examples, it can also be applied to the between-subjects experiments. Applying trait activation theory to the present study involves the following connections. Instead of traits being differentially activated across situations, in this example they are being differentially activated across experimental conditions. Following the trait activation theory logic, in this experiment the two conditions (i.e., situations) are high versus low demand for multitasking in the context of a job application. The trait that is being differentially activated between the two conditions is extraversion; likely because of extraversion’s relationship with higher need for stimulation, which could be provided by a job involving multitasking. And lastly, the trait expression in the form of a behavior would be whether or not self-promoting IM was utilized to report high levels of polychronicity.

In the conditions in which the job requires high levels of multitasking, it appears that there were clear conditional (i.e., situational) cues that polychronicity was required; therefore, extraverts were primed to activate their IM capabilities and respond as highly polychronic. Those who were lower on extraversion, and subsequently not as likely to use IM, would therefore report lower levels of polychronicity. In Snell and colleagues’ (1999) terms, in the high multitasking conditions the activation of extraversion may increase the ability to fake due to the IM associated with extraversion. Conversely, in the low
multitasking conditions the cues regarding what the situation called for may not have been as clear. Indeed the second manipulation check did show a slightly lesser degree of understanding for the low multitasking conditions. Subsequently, it may be that the ambiguous cues are responsible for the lack of extraversion-polychronicity correlation because neither extraverts nor introverts knew definitively how to best manipulate their responses. Although as a whole the participants did correctly manipulate their responses in the expected directions, perhaps there would have been even larger differences had the cues been stronger in the low multitasking conditions.

Practical Contributions

In addition to the theoretical contributions, the present study has also made practical contributions in regard to prescribing factors to consider when utilizing polychronicity in personnel selection. The statistically significant differences between conditions regarding the personality variables reflect the ability of the participants to understand what is expected of a job applicant in various contexts, and to respond accordingly. In all conditions the data suggest that participants made logical manipulations to their responses on the personality variables based on the extent and type of job information provided. Comparing the control groups’ (“straight-take” vs. job application) response patterns to each other, as well as by analyzing the interaction that took place in the 2x2 design, suggested that calculative thought went into the participants’ responses. In sum, the results of the present study offer further support to the argument that faking to improve applicant impressions does indeed occur, moreover, that this effect can take place with varying levels of demand characteristics present and across a variety of measures.

Polychronicity & Faking. The present study demonstrated that individuals could skillfully manipulate their scores with very little information. This suggests that actual applicants would be quite capable of manipulating their scores. Bear in mind that in a real job application setting the applicants are likely to have researched the job to which they are applying and would subsequently have detailed information regarding the job demands and work environment. The presence of more information would likely make response distortion easier than it was in the present study, which suggests that the results of the present study would generalize to realistic application settings.

While some research suggests that the level and frequency of faking present in lab studies is highly inflated compared to that which actually occurs in the workplace (e.g., Ones & Viswesvaran, 1998), there is more recent evidence that suggests that faking does indeed occur in the field, though perhaps at a slightly lower level (Griffith, Chmielowski & Yoshita, 2007). Following from the results of the present study, it could be posited that the job knowledge an applicant would likely possess could be indeed be seen as an additional factor contributing to the interactional model of faking. Understanding what a job requires and what the hiring manager is seeking could increase applicants’ ability to present themselves in a desirable manner, as well as increase their motivation to fake based on a belief that they possess the required job knowledge to successfully present themselves in a positive manner. It may even take self-regulatory effort for applicants to not respond according to the evident temporal demands of the job that they are applying for when the questions are as face valid as those of the MPI are.

Motivation to obtain the job was indeed a significant factor contributing to participants’ response manipulation. The present study demonstrated that even imagined motivation to apply for the job affected the degree to which participants manipulated their scores. For example, in the low P-E fit/low multitasking condition the mean did not significantly vary from that of the control group (i.e., a condition with no manipulation of motivation) whereas those in the high P-E fit/high multitasking condition had the highest polychronicity scores, thus demonstrating that the fit-based motivation to acquire the job impacted the level of effort participants dedicated to manipulating their scores. Under the assumption that most job applicants are motivated to successfully acquire the jobs that they apply for, it follows that real job applicants are likely to exhibit similar response manipulation. The strength of the effects found in the present study, in which the manipulation was relatively weak, have important implications for realistic selection settings. The participants were able to quite successfully manipulate their scores in desirable directions with very small amounts of information, which does not bode well for utilizing polychronicity in personnel selection.
As a means to avoid the potentially negative affects of faking when utilizing polychronicity scales in a selection system, practitioners could adopt a select-out procedure (Mueller-Hanson, Heggestad & Thornton, 2003). More specifically, polychronicity scores could be used as a means to select applicants out of the selection pool as opposed to selecting them into the pool. For example, if one were selecting applicants for a job that required multitasking, you could eliminate those with the lowest polychronicity scores from the selection pool. This method would eliminate those persons that were not truly polychronic, and were also unmotivated to alter their responses, while also not rewarding those with the highest polychronicity scores, who may have engaged in response distortion. Utilizing this procedure narrows the selection pool, thereby allowing for the more resource intensive selection procedures (i.e., interviews, assessment centers, work simulations) to be focused on a stronger group of applicants. By selecting out those individuals with the lowest polychronicity, one would also be selecting out the individuals that would also likely have the worst P-E fit in a multitasking environment. Lack of P-E fit can have numerous negative effects for both the worker and the organization. P-E fit has been found to affect both attitudinal variables such as job satisfaction, organizational commitment and increased turnover (Verquer, Beehr, Wagner, 2003), as well as performance outcomes (Hoffman & Woehr, 2006). Moreover, research has shown that the select-out method may eliminate those persons that would perform at less successful levels (Mueller-Hanson et al., 2003).

Job Applications & Faking. While the primary focus of this study was on the interaction found in the experimental conditions, the two control conditions were incorporated in order to include a traditional faking study. In the extant literature the job application vs. straight take manipulations have generally been significantly stronger than what was used in the present study, such as clearly instructing participants to fake their responses or providing detailed descriptions of the job characteristics (e.g., Jackson et al., 2000; Kristof-Brown et al., 2002, respectively). A clear strength of the present study is that although the directions did not explicitly encourage participants to fake their responses, nor describe what the job entailed, large differences between the two groups were found. This suggests that the concept of applying for a job is powerful enough that people do not need encouragement in order to distort their responses to personality questionnaires.

Comparing the differences in reported polychronicity between the control groups (straight-take vs. job application) demonstrates that applicants did not systematically manipulate their responses to polychronicity questions. This is likely due to a lack of information regarding the temporal demands of the job as well as the mixed, nascent nature of general attitudes toward multitasking. These same participants did in fact systematically manipulate their responses in socially desirable directions for question regarding well-known personality characteristics such as conscientiousness and neuroticism. The directions of these differences are supported by existing research on faking personality scores (McFarland & Ryan, 2000). This suggests that when not given information regarding the nature of the job, applicants may only distort their responses to measures for which there are widely accepted beliefs regarding what is desirable.

Limitations & Future Directions

While the present study has provided valuable insights on the potential risks of utilizing polychronicity for personnel selection, there are limitations. Experimental methods have great strengths with regard to experimental control (e.g., random assignment and control conditions), yet there is a potential lack of generalizability across populations due to the sample. The sample utilized in the present study (i.e., largely white, female college students) would allow comparisons to groups that are similar, however due to the range restriction regarding race, gender, age and cognitive ability, it could be difficult to generalize across wider populations. The average high school GPA of the present sample was relatively high (M = 3.72, SD = .37), indicating that the results may not generalize to a more normative population.

In the present study college undergraduates engaged in a vignette, therefore the results may not be directly representative of how actual job applicants would behave; bear in mind however, that attaining a job is certainly a salient topic for most college students. As was previously mentioned, there is contention regarding whether laboratory samples can represent how applicants behave in genuine personnel selection
situations; therefore, future research regarding polychronicity for personnel selection could benefit from investigating these behavioral patterns in a sample of job applicants.

The present study did not address the question of whether selecting for polychronicity can increase P-E fit and subsequently impact job satisfaction, however, it did show that even imagined P-E fit affected the level of response manipulation in which the participants engaged. Additionally, research has suggested that polychronicity may predict the number of tasks requiring multitasking that persons choose to perform (Poposki & Oswald, 2010), which suggests that P-E fit may affect performance when multitasking is involved. In future research the effects of selecting for polychronicity on job satisfaction, and job performance in multitasking situations should be investigated.

The extant literature largely supports the ability of conscientiousness to predict performance in a variety of contexts (Barrick & Mount, 1991). Therefore, the statistically significant relationship between polychronicity and conscientiousness warrants mention. This small, negative correlation may be indicative of polychronicity’s lack of suitability for personnel selection, or perhaps that it must be carefully utilized. The relationship between these individual differences, as well as their predictive validity should be investigated in a multitasking environment in which multitasking ability and performance outcomes are assessed.

**Conclusion**

Insight has been gained as to the potentially inherent risks of applicant faking when measures of polychronicity are included in selection tests. While there is some dissent regarding whether faking on personality tests is truly a rampant issue that impacts hiring decisions (e.g., Hogan, Barrett & Hogan, 2007; Ones & Viswesvaran, 1998), in general there is consensus that faking on personality tests is frequent and problematic (Morgeson et al., 2007). Despite this issue of applicant faking, however, there may still be value to measuring applicants’ polychronicity as a contributing factor, if not the construct that hiring decisions are primarily dependent upon. Moderate predictive validity has been demonstrated for jobs that require multitasking (Kantrowitz et al., 2012), and moreover, performance is not determined solely from ability; therefore when selecting for jobs requiring multitasking behaviors, gathering data regarding employees’ polychronicity could help to predict their potential work motivation, intrinsic enjoyment and ultimate well-being. The future of polychronicity may well be a step toward person focused IO psychology, seeking to improve performance for the sake of the organization, but to also enhance the experience of the individual.

**REFERENCES**


