Selecting for Extroversion but Rewarding for Conscientiousness

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Abstract

The causal effects of extroversion and conscientiousness, two Big Five personality dimensions, were assessed on both selection and work success in a naturally occurring field study. College students (N = 96) completed Neuroticism-Extroversion Openness Five-Factor Inventory (NEO-FFI) personality scales during their freshman year and subsequently provided starting salary and salary growth measures after graduating and joining the labour market. The results revealed that extroversion and conscientiousness had opposite effects: extroversion was related to starting salary but not salary growth whereas conscientiousness was unrelated to starting salary growth but significantly so to salary growth. An explanation is that extroversion is easily observed during selection because it indicates warmth and high energy whereas it is less helpful on the job because social vitality does not affect work goals and dominance is counterproductive, especially in nonmanagerial, entry-level jobs. Conversely, conscientiousness is difficult to observe during selection, and GPA (an excellent proxy for conscientiousness) is not requested. However, conscientious employees grow their salaries quicker because they are intrinsically motivated and well-organized.
Selecting for Extroversion but Rewarding for Conscientiousness

Companies manage well when they hire well—organisations and individuals each benefit. In an effective selection system, qualified job applicants with human capital capabilities benefit from higher wages and organisations benefit from higher productivity.

Research in work psychology and labour market economics has explored how personality affects job performance and wages, respectively. Personality theory emphasizes that behaviour is internally determined and that there are broad enduring dispositions to exhibit behaviour consistently across dissimilar situations and over time. Two broadly studied personality types that derive from the The Big Five theory of personality are extroversion and conscientiousness. Extroverts exhibit social vitality, warmth, and assertiveness, whereas conscientious individuals are intrinsically motivated and well organized. Indeed, research by Fiske, Cuddy, and Glick (2007) has shown that judgements of warmth and competence underlie all social perceptions of others. At issue is the value of being consistently extroverted or conscientious, initially during the selection process and then subsequently on the job.

Conscientiousness has been related to job performance across a wide variety of jobs and organisational criteria (Barrick, Mount, & Judge, 2001; Berry, Ones, & Sackett, 2007; Chiaburu, Oh, Berry, Li, & Gardner, 2011; Salgado, 1997) as well as to individual wages (Judge, Higgins, Thoresen, & Barrick, 1999; Prevo & ter Weel, 2015). However, the relationship between conscientiousness and selection success has presented a more complex picture (Barrick, Patton, & Haugland, 2000; Caldwell & Burger, 1998). Conversely, with the exceptions of managerial (Barrick et al., 2001) and telemarketer jobs (Barrick, Stewart & Piotrowski, 2002), extroversion has not shown significant correlations with job performance (Barrick et al., 2001), citizenship
criteria (Berry et al., 2007; Chiaburu et al., 2011), or individual wages (Prevoø & ter Weel, 2015). However it has shown a consistent link with selection success, especially during employment interviews (Caldwell & Burger, 1998; Stewart, Dustin, Barrick, & Darnold, 2008; Turban, Stevens, & Lee, 2009).

Taken together, the findings from these separate lines of research suggest a potential inefficiency when transposed onto a work place setting. Are extrovert candidates being favoured unwittingly during selection when in fact conscientiousness shows a stronger relationship with subsequent work success? This study seeks to answer the question.

**Personality and Success at Work**

Work psychologists have generally studied how personality effects job performance. For example, they emphasize that conscientiousness correlates with job performance because of what one *will do* whereas intelligence does so because of what one *can do* (Barrick, & Mount, 2009). Judge and Ilies (2002) showed that conscientiousness was consistently related to performance motivation across three central motivation theories: goal setting, expectancy, and self-efficacy. It is understood that those who exert more effort tend to be more productive. Starting at age 20 in the life cycle, conscientiousness increases rapidly until age 35, and thereafter more slowly until age 65 (Roberts, Walton, & Viechtbauer, 2006). One reason for the change is that individuals choose life trajectories consistent with their personalities, which in turn places them in life spaces that reinforces those personalities (Woods, Lievens, De Fruyt, & Wille, 2013).

Labour market economists consider personality to be an important determinant of individual earnings, others being family background, cognitive measures, intelligence, years of schooling, gender, and race (Jencks, 1979). Where individuals acquire capabilities $c$ and sell these on the labor market at prices $p$, wages $w = pc$. Thus, for example, a standard deviation
increase in intelligence and personality equates to a 9% and 7% increase in wages, respectively (Lindqvist & Vestman, 2011). See Bowles, Gintis, and Osborne (2001b) for a review of early studies that investigate the personality effects of locus of control and Machiavellianism on earnings.

Employers can control the number of hours worked, but effort is not contractible in the principal-agent relationship, therefore employers can not control entirely the quality of their employees' work. If jobs are routine such as working on a factory assembly line, then individual effort is less important, but most jobs, especially in modern service economies, require some degree of intrinsic motivation. It is therefore important for employers to interact with employees whose preferences minimize conflict and maximize the effect of work incentives that employers have at their disposal. “The desire to interact with others whose preferences are favorable to the strategic pursuit of one’s own objectives is an important aspect of social interactions, one that for the most part has been neglected by economists” (Bowles, Gintis, & Osborne, 2001a). Such non-skill or soft-skill employee preferences are termed incentive-enhancing. (Bowles, et al., 2001b; Nyhus & Pons, 2005). Common examples of incentive-enhancing preferences include employees who a) who have a long term future orientation (so that losing a job would be a personal trauma, thus employees avoid behaviours that result in being fired), b) value the high marginal utility of additional income (which makes it easier to control work behaviour through money), c) are truthful (especially when it is difficult to monitor work behaviour), d) believe that one is responsible for their own success (locus of control), and who e) feel ashamed when using government assistance because one is unemployed.

Recent work by Becker, Deckers, Dohmen, Falk, and Kosse (2012) has shown that economic preferences and psychological concepts of personality are complementary when
explaining labour market success. Personality constructs such as conscientiousness and extroversion may be considered as incentive-enhancing preferences. For example, conscientious individuals are intrinsically motivated, well organized, finish tasks on time, strive to be above average in what they do, responsible, work hard to reach their goals, approach tasks in a systematic fashion, and keep their promises to others. Such characteristics would be preferred by an employer where constant monitoring is not possible and the quality of work depends to some degree on what an employee will do. Similarly, common descriptors of extroversion in a selection context include assertiveness, dominance, ability to control situations, drive, energy, decisiveness, ambitiousness, and positive outlook (Huffcutt, Conway, Roth, & Stone, 2001).

**Extroversion and Selection/Work Success**

**Extroversion and selection success.** Extroverts like to be among and talk to a lot of people, be where the action is, lead a harried life, seek excitement, and feel as if they are bursting with energy. They laugh easily, see themselves as happy and alert, and are generally optimistic. Facets, and correlated trait adjectives include warmth (friendly), gregarious (sociable), assertive (self-confident), active (energetic), excitement seeking (adventurous), and positive emotions (enthusiastic) (MacCann, Duckworth, & Roberts, 2009). Of the Big Five personality dimensions, extroversion is the easiest to identify during interviews because such candidates are active, talkative, and energetic (Barrick et al., 2000).

In general, extroversion correlates with emotional expressiveness (Riggio & Riggio, 2002) and expressive people are perceived as more attractive and likable than less expressive people (Friedman, Riggio, & Casella, 1998). It is well known that eye contact, body posture, hand movements (Burnett & Motowidlow, 1998), and even vocal attractiveness (DeGroot, & Gooty, 2009) influence how interviewers judge applicants. Extroversion in job candidates has
been associated with interviewer ratings, number of follow-up interviews, and number of job offers (Kristof-Brown, Barrick, & Franke, 2002; Stewart et al., 2008; Turban et al., 2009). Both lab and field studies have reported significant medium-sized correlations between extroversion and selection success (Stewart et al., 2008). Studies have operationalized extroversion with different, and psychometrically sound, measures such as the Personal Characteristics Inventory and the NEO-FFI.

Of the lab studies, correlations between extroversion and selection success have ranged between .27 and .54 (Barrick et al., 2000; DeGroot & Gooty, 2009; Kristof-Brown, Barrick, & Franke 2002; Stewart et al., 2008). The study by Kristof-Brown et al. (2002) also reported that extroversion was the highest correlate of self-promotion in the interview e.g., “I took charge to get my point across.” In fact, recent research has suggested that extrovert applicant characteristics affect interviewer perceptions as early as 3 minutes into employment interviews (Barrick, Dustin, Giluk, Stewart, Shaffer, & Swider, 2011). Moreover, mediator effects have occurred when interviewers use decision heuristics and impute candidates' extroversion from a firm handshake (Stewart et al., 2008) as well as from vocal qualities (DeGroot & Gooty, 2009).

Studies in field settings with graduating university seniors and MBAs have shown correlations ranging from .21 to .34 with follow up interviews and number of job offers (Caldwell & Burger, 1998; Turban et al., 2009). The correlations in the video, mock interview, and field studies above may be conservative estimates because they were not corrected for attenuation due to measurement unreliability.

**Extroversion and job performance/wages.** With a few narrow exceptions, work psychologists have reported few findings that extroversion correlates with job performance. Barrick et al. (2001) reported that extroversion correlated .21 with managerial performance and
.28 with training performance. The latter because extroverts participate more actively during training. Barrick et al. (2002) studied telemarketers who answered incoming calls from potential customers and gathered relevant information to generate sales and reported \( r = 21 \) between extroversion and sales performance. Similarly, Cattan (2010) reported that the effect of extroversion on wages depended on one's occupation: a standard deviation increase in adolescent sociability (related to extroversion) was associated with a 6% increase in wages for managers, a 4% increase in wages for sales workers, and a 2% increase in wages for clerical workers.

In the most definitive study to date of the relationship between conscientiousness and job performance, Barrick et al. (2001) conducted a second-order meta-analysis of 15 meta-analytic studies. In one set of five meta-analyses, in which there was no overlap of primary studies among the meta-analyses (independent set), extroversion correlated \( r = .15 \) with overall work performance for both the independent and non-independent sets of meta-analyses, and that these two overall correlations were not significantly different from zero when the lower-bound 90% credibility value was used. The validity for extroversion with sales performance was also low \( (r = .11) \).

Rotundo and Sackett (2002) have broadened the definition of job performance to include task performance, organizational citizenship, and organizational deviance. Regarding organizational citizenship behaviours, Chiaburu et al. (2011) reported the following validities for extroversion: omnibus OCB \( (r = .09) \), loyalty towards the organisation \( (r = .02) \), helping fellow workers \( (r = .10) \), and proactive change-oriented behaviours \( (r = .13) \). Finally, Berry et al. (2007) reported that extroversion was unrelated to individual and organisational deviance.

Findings from labour market economists of how extroversion affects wages also show mixed results. Findings have reported no relationship (Heineck, 2011; Mueller & Plug, 2006), a
small negative relationship \( (r = -0.05) \) (Becker et al., 2012), a small positive trend \( (r = 0.05) \) (Prevoo & ter Weel, 2015), a small negative trend for females only (Nyhus & Pons, 2005), and a small positive trend for males and a small negative trend for females in a German sample (Heineck & Anger, 2010). Boudreau et al. (2001) reported a link for annual remuneration for European but not American executives. The exception is a study by Judge et al. (1999) who reported a correlation of \( r = 0.19 \) between extroversion and extrinsic career success. In the same study, the corresponding correlation for conscientiousness was \( r = 0.50 \).

**Conscientiousness and Selection/Work Success**

**Conscientiousness and selection success.** Conscientious individuals are achievement orientated, intrinsically motivated, and well organized. Such individuals set goals towards which they work in systematic fashion, keep their promises to others, spend more time on a task, and motivate themselves to finish tasks. Other facets include perfectionism, tidiness, cautiousness, and procrastination restraint (MacCann, Duckworth, & Roberts, 2009). However, interviewers have difficulty identifying conscientiousness during the standard employment interview (Barrick et al., 2000).

Two studies used mock interviews with university students but failed to find significant correlations between conscientiousness and hiring recommendations (Barrick et al., 2000; Stewart et al., 2008). Caldwell and Burger (1998) used a field study and followed graduating college seniors as they searched for jobs. The students reported the number of initial interviews, the number of follow-up interviews, and the number of job offers. Conscientiousness correlated .38 with follow-up interviews but only .05 with job offers. The explanation for this result is unclear, especially given that the other four Big Five dimensions showed a consistent reverse pattern of being significantly and more highly correlated with final job offers than with follow-
up interviews. Turban et al. (2009) also followed graduating university students during their job searches and reported a correlation of .20 between conscientiousness and number of job offers. A weakness of the study is that conscientiousness was measured with a 7-item adjective checklist.

**Conscientiousness and job performance/wages.** The study of how conscientiousness is related to job performance has shown clear results. Barrick et al. (2001), in the second-level meta-analysis cited above, showed that conscientiousness correlated with supervisor ratings (.31), objective performance (.23), training performance (.27), and teamwork (.27), and correlated .21 for both managerial and sales performance. The overall correlation with work performance was .27 for this set. The correlation was .24 for a second set of eight meta-analyses in which there was overlap among the primary studies. Of the Big Five, conscientiousness consistently had the highest true score correlations with work performance, with estimates ranging from the mid .20s to the low .30s. Similar results have been reported in European samples (Salgado, 1997). Moreover, conscientious individuals exhibit more organisational citizenship behaviours (Chiaburu et al., 2011) and less deviance against the organisation (Berry et al., 2007).

Through wages, the market rewards human capital capabilities, such as conscientiousness (Borghans, Duckworth, Heckman, & ter Weel, 2008), according to their degree of incentive-enhancing properties. Prevoo and ter Weel (2015) used data from the British Cohort Study—a national data base that followed the lives of over 17,000 babies born in April 1970 and collected data every five years thereafter—and reported that conscientiousness was significantly correlated with wages. Conscientiousness was measured at age 16 and wages were obtained at age 34. A standard deviation increase in conscientiousness produced a 4% increase in gross hourly pay. Those in the 10th percentile of conscientiousness scores earned below 11 pounds per hour
whereas those in the top 40% earned over 14 pounds. The results hold even after controlling for child’s home environment, education, a measure of behavioural problems, self-esteem, locus of control, and social behaviour in school at age 16; and they hold across numerous occupations.

Studies with large national data sets in the U.S., U.K, Germany, and The Netherlands have shown mixed results of how conscientiousness affects wages. Findings have shown a large positive relationship between conscientiousness and annual income (Judge, et al., 1999), a wage premium for women only (Mueller & Plug, 2006) or for men only (Heineck, 2011; Heineck & Anger, 2010), a negative relationship for women only (Becker, et al., 2012), or no effects altogether (Boudreau, Boswell & Judge, 2001; Nyhus & Pons, 2005). However, the data sets necessarily created constraints. Conscientiousness was typically measured with blunt, three item surveys thereby causing reliabilities as low as .57 which introduces significant measurement error and attenuates correlations. Moreover, because personality and wages were often assessed simultaneously, the direction of causality was not known. Finally, because the data sets included 6,000 respondents or more, even correlations of .03 can be significant. Because the field is still in its infancy, the studies should be considered as exploratory.

Based on the above findings, two hypotheses are offered. Because research has shown that extroversion may be relevant in managerial positions, the following hypotheses are limited to the context of nonmanagerial jobs.

**Hypothesis 1:** Extroversion will correlate significantly with selection success but not with success at work.

**Hypothesis 2:** Conscientiousness will not correlate significantly with selection success, but will do so with success at work.

**Method**
Participants and Setting

The participants were currently-employed alumni from a four-year junior college where they had followed a curriculum that had prepared them to work as human resource management specialists. A four-year junior college education in The Netherlands emphasizes competencies and practical skills more than theoretical principles as might be taught in standard undergraduate liberal arts or business programs. Students studied such human resource management issues as how to help employees plan their careers and how to reintegrate the long-term unemployed back into the workforce, as well as the legal steps involved when terminating employees.

All participants had completed a Big Five personality inventory at the end of their freshman year as part of an Assessment Center and their scores were obtained from the school’s administration. A survey was emailed to each alumnus. The survey solicited feedback about their prior educational experience so that the college could enhance its curriculum. In addition, starting salary and current salary information was requested. Self-reports of income have correlated highly with archival company records (Judge, Cable, Boudreau, & Bretz, 1995). All correspondence, surveys, and test measures were in Dutch, a language in which both authors are fluent.

Of the 148 matriculated students, 137 alumni were located and contacted, and 101 responded, yielding a relatively high response rate of 74%. Matriculants who did not respond cited being unemployed or transitioning between jobs, starting a family, and working in a nonprofessional job (e.g. childcare). Missing data reduced the final sample to 96. The participants came from four successive graduating classes: 2000–2004, n = 34; 2001–2005, n = 44; 2002–2006, n = 57; 2003–2007, n = 39. ANOVA’s on the independent and dependent variables used in this study revealed no significant differences among the four cohorts.
The average tenure on the job was four years. Over two thirds of the participants worked as Human Resource specialists in organizations. For this group, the most frequently rated job tasks included processing and updating HR administration regarding employee benefit plans and staffing changes, creating job descriptions and writing job advertisements, interviewing job candidates, and orienting new hires. Another 15% worked in employment agencies as recruiters. The most important tasks included writing job vacancies and posting jobs, recruiting, organising competency tests and assessments, and mediating between client organizations and job candidates. Finally, a smaller group of about 10% worked as organisation development specialists. Frequently rated tasks included administering employee benefit plans including flexible cafeteria style plans, assisting with recruiting and selection, providing employees with information concerning performance appraisals and career planning, and recommending employee headcount during the annual budget cycle. The overwhelming majority of respondents (98%) rated their current positions as non-managerial.

Of the total sample, 69 respondents responded to a survey item about the number of jobs held between matriculation and the current survey: 56% held only their current job, 34% were on their second job, and 10% reported being on their third job. However, number of jobs held was not related to salary growth \((r = .06, p = ns)\), nor to extroversion \((r = .08, p = ns)\).

About a quarter each of the total employees worked in the following four company sizes: < 100; 100-500; 500-1,000; and > 1,000 employees. Tests revealed no significant differences among company size subgroups on the independent or dependent variables. For example, there were no significant differences among the various company sizes on conscientiousness \(F(3,92) = 1.098, p = .354\); extroversion \(F(3,92) = 1.909, p = .134\); starting salary, \(F(3,92) = 1.40, p = .248\), nor salary growth, \(F(3,92) = 1.313, p = .275\).
The employees also worked in different economic sectors, however there were no significant differences among the different economic service sectors on conscientiousness, $F(8, 87) = .854, p = .56$; extroversion, $F(8, 87) = .631, p = .75$; starting salary, $F(8, 87) = .544$, $p = .821$, or salary growth $F(8, 87) = .861, p = .59$. The following economic sectors were included (with numbers in parentheses representing starting salaries in Euros, and the percentage of the sample, respectively): business services ($1,971 / 46\%$), transport ($1,968 / 8\%$), health care ($1,875 / 8\%$), financial services ($2,025 / 5\%$), industry ($2,175 / 5\%$), government ($2,041 / 6\%$), information technology ($2,000 / 4\%$), education ($2,062 / 5\%$), and other ($2,025 / 14\%$). The starting salaries comport well with a national survey across economic sectors in The Netherlands of HRM advisors with no previous work experience (Intermediair, 2015).

A power analysis was conducted to determine if the sample size was sufficiently large to detect an effect, if it in fact existed. Based on the second order meta-analytic findings by Barrick et al. (2001) of the relationship between conscientiousness and overall work performance, and on the findings in the literature of the relationship between extroversion and hiring success, a medium effect size of .30 was posited. Using a two-tailed alpha level of .05, the current sample size of 96 participants yielded a power value of .86, which exceeded Cohen’s recommended minimum value of 80.

**Predictor Measure**

The 60-item, Dutch version of the NEO-FFI self-rating scale measured the Big Five personality dimensions (Hoekstra, Ormel, & De Fruyt, 1996). This instrument has shown good psychometric properties and the factor loadings obtained in this study mirrored those of the U.S. version (Costa & McCrae, 1992). Twelve items in the NEO-FFI measure extroversion and another 12 items measure conscientiousness. Participants rated the items on five-point Likert
scales ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item for extroversion is “I really enjoy talking with people.” A sample item for conscientiousness is “I can motivate myself to finish tasks on time.” For each personality dimension, a total score across all items in the dimension was generated, thus the constructs are unidimensional. Cronbach alpha reliabilities were .84 for conscientiousness and .77 for extroversion, which are similar to those reported in the U.S. version of the NEO-FFI manual.

Criterion Measures

Selection success. Selection success was operationalized as starting salary, which was the initial gross monthly pay for the first job immediately after graduation. Seventy-eight employees worked full-time and 18 worked part-time. There is no stigma to working part-time in The Netherlands. Of the part-timers, 14 had a four-day work week and three had a three-day work week. There were no significant differences among full-time and part-time employees regarding starting salary, F(7,88) = .86, p = .55; therefore, earnings for part-timers were extrapolated to the monthly income equivalent of full-time work.

Work success. Work success was operationalized as salary growth. Respondents supplied current, monthly base-pay salary figures. Salary growth was calculated by subtracting the starting salary from the current salary and dividing by number of years on the job. This resulted in an average annual salary growth figure. Although many scholars prefer working with partialled scores, difference scores are suitable when the reliability of the measure is not at issue. The effect of market conditions on salary should have been minimal because all employees were working in the same field, namely, human resource management.

Salary growth and ratings of job performance are not necessarily always related, either because job performance is not measured accurately and reliably, or because remuneration goes
beyond salary and may include a company car, stock options, and bonuses. In general, the only fringe benefits accorded to entry-level Human Resource positions are vacation money which is 8% of salary annually and is distributed to all employees in May as a one-time extra payment, and a 13\textsuperscript{th} month of salary which is distributed in December. Because participants reported the monthly salary figures that were deposited in their bank accounts, the vacation money and 13\textsuperscript{th} month would not have entered into their salary calculations. Moreover, at $r = .26$, the correlation between conscientiousness and salary growth is consistent with true score estimates of conscientiousness with supervisor ratings (.31), objective performance (.23), training performance (.27), and teamwork (.27) as reported by Barrick et al. (2001). Further validity for the salary growth measure comes from the fact that it correlates .29 with intelligence.

**Additional Measures**

**Intelligence.** General intelligence was assessed because it has been the single best predictor of job performance ($r = .55$) across all jobs (Schmidt & Hunter, 2004). By controlling for intelligence, it was possible to test whether personality had predictive validity above and beyond that of intelligence. The short version of the Multiculturele Capaciteiten Test voor Hoger Niveau (Multicultural Test of Intellectual Ability for Higher Education) by Bleichrodt and van den Berg (1999) measured intelligence. This test has been used widely in Dutch higher education and has been endorsed by the Dutch Testing Committee. The intelligence score was obtained from college records. The reliability of the test was .92.

**GPA.** Grade point average was the cumulative measure of grades across all subjects during tenure at school and was obtained from college records. GPA is the most common criterion of academic success and is used for subsequent entry to vocational college, university, or graduate school. Moreover, researchers have studied the relationship between school
performance and work success and have recommended including known predictors of work success, such as GPA and IQ to assess their joint and individual predictive value.

GPA is also a good proxy measure for the predictors of intelligence and conscientiousness when direct measures are not available to practitioners. This is especially important considering how both research and anecdotal evidence indicate that relatively little importance is assigned to GPA of new labour market entrants during the selection process. A meta-analysis by Poropat (2009) reveals that, of the Big Five dimensions, conscientiousness shows the highest correlation with grades in primary, secondary, and post-secondary education—almost as large as between grades and cognitive ability. Conscientious students score higher because of their positive study habits and attitudes, effort, and prosocial behaviour in the classroom (Credé & Kuncel, 2008).

**Results**

Table 1 shows the means, standard deviations, and bivariate correlations for all variables. The two personality dimensions were unrelated to one another and neither was related to intelligence. Intelligence correlated significantly with GPA, as did conscientiousness, but extroversion remained uncorrelated with GPA. In turn, intelligence and GPA each correlated significantly with salary growth but neither correlated with starting salary. The two salary measures were also unrelated to one another.

There were far more females in the sample. Male and female students were equally intelligent ($r = -.10, p = ns$), however females were less extroverted ($r = -.20, p < .05$) and more conscientious ($r = .27, p < .01$) than males. Females also had significantly higher GPAs ($r = .41, p < .01$) than males. After controlling for conscientiousness, the semipartial correlation between gender and GPA dropped to $.33, p < .01$. Thus conscientiousness accounts for some, but not all of the effect of gender on GPA. However, there were no significant differences between males and
females for starting salary \((t = .57, df = 94, p < .55)\), nor for salary growth \((t = -.05, df = 94, p < .96)\).

Hypotheses concerning the relationship between the other three Big Five personality dimensions: openness, agreeableness, and neuroticism with the selection and work success were not proposed in the current research, and the results confirmed that none of the three dimensions correlated with either starting salary or salary growth. The six correlations in the 2 x 3 correlation matrix ranged from .03 to .08.

Table 1  
Descriptive statistics and bivariate correlations for all variables

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>sd</th>
<th>Con 1</th>
<th>Extro 2</th>
<th>GPA 3</th>
<th>IQ 4</th>
<th>Start 5</th>
<th>Growth 6</th>
<th>Gender 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conscientiousness</td>
<td>43.9</td>
<td>6.3</td>
<td>.84*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Extroversion</td>
<td>44.0</td>
<td>4.8</td>
<td>-06</td>
<td>.77a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>GPAb</td>
<td>7.15</td>
<td>0.4</td>
<td>.45**</td>
<td>-07</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Intelligence</td>
<td>94.3</td>
<td>3.6</td>
<td>-.03</td>
<td>-.12</td>
<td>.22*</td>
<td>.92a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Starting salaryc</td>
<td>1998</td>
<td>251</td>
<td>.07</td>
<td>.25*</td>
<td>.07</td>
<td>.08</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Salary growthc</td>
<td>284</td>
<td>142</td>
<td>.26**</td>
<td>.04</td>
<td>.25*</td>
<td>.30**</td>
<td>-.17</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Genderd</td>
<td></td>
<td></td>
<td>.29**</td>
<td>-.20*</td>
<td>.41**</td>
<td>-.08</td>
<td>-.05</td>
<td>-.01</td>
</tr>
</tbody>
</table>

Notes.  
\(^a\) Values in the diagonal represent reliabilities.  
\(^b\) Grades were given on a 10 point scale  
\(^c\) Salary figures are denominated in Euros  
\(^d\) Males are scored 0 and females are scored 1.
Hypothesis 1 stated that extroversion would correlate significantly with selection success but not with work success, and was supported. The bivariate correlation between extroversion and starting salary was $r = .25, p < .05$, whereas with salary growth it was $r = .04, p = \text{ns}$. Conversely, hypothesis 2 stated that conscientiousness would not correlate significantly with selection success but would correlate significantly with work success, and was also supported. The bivariate correlation for conscientiousness with starting salary was $r = .07, p = \text{ns}$ and was $r = .26, p < .05$ with salary growth.

A Steiger test was used to test the probability of finding a matrix of four correlations in which two were significant, and two were nonsignificant, in the expected direction. A one-tailed test revealed that the results were significant at $Z = 1.74, \alpha = .05$, which suggested that it is unlikely that this matrix of correlations would have occurred by chance. However a direct comparison of the correlation of extroversion and salary growth with the correlation of conscientiousness and salary growth showed no significant difference between the two ($Z = -1.48, df = 93, p = .14$). Similarly, there was no significant difference between the two correlations regarding personality and starting salary ($Z = -1.24, df = 93, p = .22$).

Multiple regression was used to test the hypotheses. After controlling for gender, intelligence, and conscientiousness, the semipartial correlation for extroversion and starting salary was $r = .26, p < .01; b = .26, t = 2.51, p = .01$, whereas the corresponding statistics for conscientiousness are $r = .09, p < .09; b = .07, t = .63, p = .53$. Thus, when comparing the two personality dimensions, extroversion showed the larger relationship with starting salary. The
results for extroversion with salary growth, after controlling for gender, intelligence, and the opposing personality construct, show that $r = .09, p < .38; b = .08, t = .81, p = .42$, whereas for conscientiousness, the results show $r = .29, p < .01; b = .24, t = 2.25, p = .03$.

GPA was not included in the first set of regression analyses that tested the hypotheses because it is an outcome measure rather than a causal mechanism—it is an extrinsic reward in an education context as is salary in a work context. However, GPA did predict salary growth (bivariate $r = .25$) and is therefore a useful selection measure. When GPA was held constant, the correlation between conscientiousness and salary growth dropped from $r = .26, p < .01$ to $r = .17, p = \text{ns}$. Conversely, after controlling for conscientiousness and intelligence, the semipartial correlation of GPA with salary was no longer significant, $r = .08, p < .48$. Finally, the bivariate correlation between extroversion and starting salary ($r = .25$) barely changed ($r = .24, p < .05$) after controlling for gender, the only variable related to extroversion. As noted above, males and females did not differ significantly on starting salary.

**Discussion**

There are two main findings in the current research. First, extroversion predicts starting salary but is unrelated to salary growth. Second, conscientiousness is unrelated to starting salary but predicts salary growth. The following discussion combines the findings to answer the question of why employers reward extroversion during selection but then subsequently reward conscientiousness while on the job. The implications of the results are evaluated and interpreted with respect to the hypotheses and inferences are drawn to explain the findings.

**Extroversion and Selection/Work Success**

Extroversion is synonymous with the Fiske et al. (2006) core dimension of warmth. It is easier to observe than conscientiousness, and extrovert candidates are seen as having high energy
and a willingness to work hard for the goals of the company. Most likely, companies use heuristics to impute job motivation to candidates based on behaviours they do observe during selection. Moreover, the effects of applicant nonverbal behaviours and vocal quality on interviewer decisions are much stronger during unstructured, than structured, interviews (Barrick, Shaffer, & DeGrassi, 2009), and most interviews are unstructured.

However, once job applicants become employees, supervisors have ample time to observe their employees' personalities and productivity. Extroversion is not related to salary growth in this research. One explanation, consistent with research findings, is that the job incumbents are working in nonmanagerial jobs. Participants in this research are labour market entrants and occupy individual-contributor jobs. Moreover, in addition to the nonmanagerial nature of the job, extroversion may be a poor occupational match with the nature of the human resource management specialist job. The two major facets of extroversion: dominance (assertiveness) and social vitality (talkativeness, gregariousness, and sociability) may not complement the typical entry-level HRM position which is a staff function and therefore supportive in nature. Much as corporate finance departments, who allocate and monitor how line departments spend their budgets, cross the line when they start interfering with how the money is spent, the Human Resource function provides advice but typically refrains from making specific decisions. For example, Human Resources provides recruiting and selection support but line managers make the final hiring decision. Therefore, being assertive and dominant in an entry-level human resource position will not be viewed as helpful. And being talkative and sociable may make work life easier but does not necessarily contribute to achieving important work goals.

**Conscientiousness and Selection/Work Success**

Employers clearly benefit when they hire conscientious employees, yet this personality
dimension is not rewarded financially during selection. The most likely explanation is that companies can not reward for conscientiousness because they have no measure of it. There are two potential reasons. First, conscientiousness is difficult to assess during the standard job interview, and second, employers pay scant attention to a major correlate of conscientiousness, namely GPA.

Barrick et al. (2000) show that, in practice, conscientiousness is difficult to identify during the standard job interview. Because conscientiousness is related to work success, a better interview format would be a structured, behavioural interview (Latham & Sue-Chan, 1999). It yields far better predictions of work success (Wiesner & Cronshaw, 1988). However, follow-up conversations with a number of participants in this study reveal that all companies used unstructured job interviews. Unfortunately, research in general (Buckley, Norris, & Wiese, 2000) and specifically in The Netherlands (van der Zee, Bakker & Bakker, 2002; Wiersma & van den Berg, 1999) shows that structured interviews are not used in practice.

Second, given the high correlation of $r = .45$ between grade point average and conscientiousness in the current research, as well as the findings of the meta-analysis by Poropot (2009), a job applicant's GPA can serve as a proxy measure of conscientiousness. This assumes, of course, that the grades are accurate and not tainted by grade inflation. Conscientiousness is correlated with GPA, which in turn predicts salary growth. Controlling for conscientiousness significantly decreases the effect of GPA on salary growth. However, both study participants and employers say that GPA is not discussed in the interview.

Once on the job, the entry-level HRM job may be an especially good occupational match for conscientious employees. Although the term Human Resources may give the appearance of needing to engage with people, the entry level jobs of the employees in this research have a large
administrative component. For example, the jobs require completing forms to comply with both
government regulations and organizational policies, and may actually be more similar to an
accounting job. Personality facets such as perfectionism, tidiness, cautiousness, and task
planning should be important in such tasks. And the more the job mimics academic performance
(e.g. both require completing work on a schedule), the more understandable it is that the effect of
conscientiousness carries over from an educational to an employment setting. That GPA
correlates with salary growth speaks to this point.

The value of being conscientious may have an upper limit however. Boudreau, et
al.(2001) reports that conscientiousness does not predict annual remuneration for high level
executives. The authors speculate that conscientiousness may not fit the tasks of the executive
role. Executives experience conflicting demands, constant change, and shifting priorities, which
are inconsistent with some facets of conscientiousness such as being organized and dependable.
Moreover, it is well known that executives spend much of their time in meetings, a highly social
activity. Unlike the monotonically increasing effect of intelligence, in which more is always
better, the effect of conscientiousness may be curvilinear, between the two extremes.

**Alternative Explanations and Limitations**

There are two alternative explanations for why extroversion is more highly related to
starting salary than is conscientiousness: a) extroverts conduct better job searches, and b)
extroverts negotiate better. For example, being invited to more interviews might lead to more job
offers with a greater concomitant variety of starting salaries. However, Studies by Caldwell and
Burger (1998) and Turban et al. (2009), in which both applicant extroversion and
conscientiousness are assessed, show that, whereas the mechanisms through which the two
personality dimensions conduct their job searches differ, the outcomes are similar, namely,
extrovert and conscientious university graduate job seekers submit the same number of resumes and are invited to the same number of interviews. The authors conclude that differences in job offers are driven more by market needs and students’ majors. It is also not likely that salary negotiations influence the results. The current sample of novice labour market entrants all start with the same general skill set and have not yet established a record of major achievements, which makes it difficult to negotiate for higher salaries. It is more likely that a history of work accomplishments, rather than extroversion, is related to the ability to negotiate forcefully.

The sample has both strengths and limitations. The sample is highly homogeneous and therefore limits generalizability. Participants occupy exclusively non-managerial positions, therefore findings concerning extroversion should not be generalized to managerial positions. Another limitation is that the sample is small, especially when compared to samples used in labour market economics studies. The power of the sample was adequate to test the hypotheses against the null hypothesis that there was no relationship in the population. However, the power of the sample may not have been large enough to support direct tests between correlations in the study, especially when the two correlations are drawn for the same sample (which invokes a more stringent test). This may explain why there was no significant difference between the two correlations concerning the personality dimensions and starting salary, nor between the two and salary growth.

The homogeneity of the sample (same college, curriculum, and cohorts) is a strength in that it controls for important potential extraneous effects such as years of schooling, specific career skill-set, job tenure, and age. Therefore starting salary and salary growth will not have been materially effected by job market value and work experience. Realism is good because the study uses employees in a naturally occurring field study, as opposed to students in mock
interviews, concurrent designs, or video ratings of interviews. Causality is clear because personality measures are collected prior to labour market participation, thus personality influences starting salary and salary growth, and not the reverse. And, because of the multiyear gap between the personality and the salary measures, there is no reason to believe that job candidates distorted their personality self-assessments by exaggerating strengths and downplaying weaknesses to enhance their image in an imagined selection or job performance context.

Finally, cultural context affects HRM practices which may in turn influence research findings. There are differences in HRM practices between the United States and The Netherlands in both work and education contexts that are relevant to the findings of this study. Compared to the U.S., Dutch HRM practices focus more on social responsibility, industrial democracy, and job security during the boom and bust cycles of capitalist economies. Specifically, performance based extrinsic reward programs are less prominent in The Netherlands. Reasons include a) managers have less discretion concerning pay because rates are influenced more by collective bargaining between employers and unions, b) U.S. individuals are considerably more achievement oriented (the Dutch score higher on Hofstede's femininity scale), and c) in general, European companies appraise human resources whereas American companies appraise human resources (Van Diepen, Van Iterson, & Roe, 2006).

Concerning education practices, the U.S. has seen rampant grade inflation over the past half century. In 1960, only 15% of college students received an A, whereas currently 43% do so now. Conversely, students in The Netherlands receive grades ranging from 1 to 10 but rarely receive a 10 or even a 9. In fact, Dutch educators are concerned that some schools have developed a culture in which students have “a 6 is acceptable” mentality. Despite the differences
between Dutch and American work and education cultures, the results of this study are as predicted and are culturally robust.

**Future Research and Practical Implications**

The findings of this study suggest that the market is not acting efficiently. Conscientiousness has a significant effect on salary growth but no effect on starting salary. It is important to understand why this occurs. Conscientiousness is more difficult to assess than extroversion during selection, especially during the standard unstructured interview. An interesting question for future research concerns how selection decisions might be effected if conscientiousness is formally assessed prior to, or during, the hiring process.

Presumably, when interviews are structured, extroversion will have less, and conscientiousness will have more, effect on starting salaries. However this proposition needs to be tested directly and preferably in a field setting. Feedback from our participants and research findings clearly indicate that interviewers fail to conduct job analyses and continue to use the unstructured, conversational interview. The unstructured interview style, because it is not based on a job analysis, puts a premium on social skills, appearance, and nonverbal behaviour. Barrick, Shaffer, and DeGrassi (2009) report that the mean, meta-analytic correlation between applicant appearance and ratings of interview performance increases from .18 to .88 as interviewers shift from a structured to an unstructured format. The corresponding increase for the effect of a candidate's nonverbals such as body language is from .37 to .69, respectively. This means that interviewers are far more influenced by irrelevant factors when they use the typical conversational, unstructured interview style.

Another fruitful area for future research concerns testing how individual facets of extroversion and conscientiousness react in selection and job performance contexts. As noted
earlier, such facets for conscientiousness include perfectionism, tidiness, cautiousness, and procrastination refrainment (MacCann, Duckworth, & Roberts, 2009). For example, in the labour market economics study, Prevoo and ter Weel (2015) reported that, of four facets measured, decisiveness, reliability, and impulse control were more highly related to wages than was orderliness. However, a cautionary note regarding their study is that the facets were not measured by well tested psychometric instruments.

As noted earlier, companies manage well when they hire well. Yet, the line of reasoning above suggests that practitioners are not making use of evidence-based selection advice. It is often said that past behaviour predicts future behaviour. This is the basis of personality theory—people act invariantly across variable situations. The findings of this research show that conscientious students earn both higher grades and receive larger salary increases. Yet participants say that GPA is not discussed during the selection process. Why is this? Do interviewers assume that recently graduated, labour market entrants who have followed the same curriculum are equally competent and that they will learn what they need to know from on-the-job company training?

We need to understand why there is a mismatch between what is known and what is practiced and why 100 years of evidence-based research has not affected hiring practices. One strategy is to develop practitioner friendly theories. For example, Wiersma (2016b) has developed a holistic four stage model of the job interview. By dividing the interview into discrete stages, practitioners can become aware of when and how they are affected by job applicant personality dimensions. For example, perceptions of extroversion begin in Stage 1, within the first 10 seconds, when first shaking hands (Stewart et al., 2008). A second strategy is to disseminate evidence-based advice to practitioners through appropriate communication channels. Roulin and Bangerter (2012) suggest that behavioural interviews are diffused through the
practitioner-oriented literature much better than are structured interviews, and conclude that academics should “rethink their ways of communicating with practitioners through media.”

Finally, the affects of applicant personality during the selection process may also be considered from the job applicants' point of view. Specifically, conscientious job applicants, who lack a naturally extroverted nature, should be aware of the demand characteristics of the standard interview (Wiersma, 2016a). Showing passion for a job is a demand characteristic which can be communicated through body gestures, facial expressions, and an animated tone of voice. Training that helps leaders display charisma may also apply to an interview context. For example, charismatic leaders often use stories and anecdotes to help audiences understand and remember a concept (Antonakis, Fenley & Liechti, 2011). Likewise, conscientious job applicants should tell stories about past performance and include the background, their actions, and the results of their actions. And, similar to leaders, job applicants should communicate confidence that goals can be met and should use lists to give the impression of completeness. Towler (2003) reports that leadership training in communication style and visionary content, both of which apply to job applicants, affect leader trainees as well as their followers.

In summary, the results of this research show that extroversion results in a salary premium during selection because it signifies a high energy level which is interpreted as willingness to work hard. However, it is of less benefit during job tenure, especially in nonmanagerial jobs with an administrative nature. Conversely, conscientiousness is not rewarded during selection because it is not observed, but it is rewarded during job tenure after supervisors see the value of this employee personality dimension to productivity. This explains why companies in this study select for extroversion, but reward for conscientiousness.
References


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