



Journal of Documentation

Emerald Article: Personality traits of individuals in different specialties of librarianship

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Article information:

To cite this document: J.M. Williamson, A.E. Pemberton, J.W. Lounsbury, (2008), "Personality traits of individuals in different specialties of librarianship", Journal of Documentation, Vol. 64 Iss: 2 pp. 273 - 286

Permanent link to this document:

http://dx.doi.org/10.1108/00220410810858056

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Personality traits of individuals in different specialties of librarianship

Personality traits of individuals

Received 26 May 2006 Revised 4 December 2006

Accepted 27 January 2007

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Abstract

Purpose – This paper aims to investigate whether academic reference librarians, archivists, catalogers, distance education librarians, public librarians, records managers, school librarians, special collections librarians, and systems librarians differ in personality traits measured by the Personal Style Inventory: i.e. adaptability, assertiveness, autonomy, conscientiousness, customer service orientation, emotional resilience, extraversion, openness, optimism, teamwork, tough-mindedness, visionary/operational work style, and work drive. It also aims to investigate whether personality traits of those in person-oriented library specialties differ from those in technique-oriented (technical) library specialties.

Design/methodology/approach - A total of 2,075 librarians/information professionals were surveyed in non-random sample. The Personal Style Inventory is a normal personality inventory assessing important traits for the world of work. It was used in a two-step cluster analysis for the data analysis.

Findings – The paper finds that distinct personality traits were associated with the different types of librarians. There was also a "unadaptive" cluster composed of individuals from all specialties. There were distinguishing traits associated with person-oriented and technique-oriented specialties.

Research limitations/implications - Results were not generalizable due to the non-random sample. Gender was not collected. The research has implications for career counseling.

Originality/value - There have been few studies of personality traits in library specialties, none measuring both narrow work trait and broad personality trait variables.

Keywords Personality, Libraries, Employees, Labour specialization

Paper type Research paper

Do different types of librarians exhibit different personality traits depending on the nature of the jobs that have attracted them? Clearly personality traits are not the only factors influencing job choice, but they can play an important role. For example, a person exhibiting extroversion might choose a job where he or she could work with the public. The present study investigates whether:

 different types of librarians differ on personality traits measured in a normal personality inventory assessing important traits for the world of work, the © Emerald Group Publishing Limited Personal Style Inventory (PSI) (Lounsbury and Gibson, 2002); and



Journal of Documentation Vol. 64 No. 2, 2008 pp. 273-286 DOI 10.1108/00220410810858056 information professionals in person-oriented specialties have higher levels of people-oriented personality traits, whereas information professionals in technique-oriented (technical) specialties have impersonally oriented traits.

One of the most heavily researched theories of personality and occupational choice is Holland's (1997) theory of vocational choice. He proposes that both persons and occupational environments can be described by six codes: realistic, investigative, artistic, social, enterprising, and conventional. The aspect of Holland's theory that is of interest in this study is his concept of congruence, not the six vocational and person environments *per se*. The degree of correspondence between the person and the environment partially determines attraction to the occupation and retention:

Individuals seek and remain in congruent environments; and environments recruit, reward, and retain congruent individual (Gottfredson and Holland, 1990).

An implication of Holland's theory is that there will be some degree of homogeneity in particular specialties as similar people are attracted to the activities of the occupation. To illustrate, there should be homogeneity in a catalogers' group as well as within a reference librarians' group.

Although the congruence theory has been challenged, e.g. (Tinsley, 2000), there is general support for the proposition that there is similarity of personality attributes for individuals within specialties and differences in personality attributes between specialty areas. By way of example, Winer (1981) found that graduate students in different fields of psychology differed in their preferences for worker functions (Winer, 1981). Also, Webb and Hultgren (1973) reported that clergy subgroups differed on the basis of vocational interests. In addition, a series of studies by Meir and colleagues found that there were differences between specialties in engineering (Meir and Erez, 1981), medicine (Meir and Engel, 1986), nursing (Hener and Meir, 1981), teaching (Meir, 1987), and computer software professionals (Meir and Melamed, 2005). Another verified proposition is that congruence within specialties contributes to work satisfaction more than broad occupational congruence (Meir and Melamed, 2005, Meir, 1989). The literature on the personality traits of students in medical specialty choices indicates empirical differences among the different specialties. For example, Vaidya et al. (2004) found that students choosing surgery, obstetrics/gynecology, and emergency medicine scored higher on novelty seeking than students choosing other specialties. This makes sense because of the urgent, critical situations involved in emergency medicine and obstetrics/gynecology. Most of the results in the literature are consistent with what one would expect in such a setting given the construct specification and meaning of the traits, indicating the nomothetic validity of the traits (Messick, 1989). In the field of library and information science, Scherdin (1994a) found that professionals belonging to a library science organization had higher scores on the Arts vocational interest dimension whereas individuals belonging to an information science organization had higher scores on the Investigative dimension, which is consistent with what one would expect based on Holland's theory of vocational choice. (Library science is an expressive practitioners' field, and information science is more research-oriented.) Additional evidence for the validity of personality traits, vis-à-vis library specialties, was provided by Scherdin (1994b) using the Myers-Briggs Type Indicator (MBTI) (Myers et al., 1985). The MBTI measures four dimensions: extraversion, introversion, sensing/intuition, thinking/feeling, and judging/perceiving.

Extraverts are drawn to people and objects in the environment, whereas introverts Personality traits draw energy from their inner experience and reflection. Sensing individuals rely primarily on perceptions observable by the senses, whereas Intuiting individuals rely on perceptions of possibilities. Thinking individuals are objective and focused on cause and effect, while Feeling individuals make decisions based on personal and group values. Judging individuals want to make decisions and attain closure, whereas perceivers are attuned to receiving more information. Scherdin found that technical services librarians were more frequently Introverts, Sensing and Judging types than children's public services librarians who were more frequently Feeling types. Also, more extroverted, intuitive, thinking, and perceiving types were more found in librarians in administration; and automation librarians were more frequently populated by introverts and thinking types (Scherdin, 1994b).

David and Scherdin (1994) used the Strong Interest Inventory to find that academic librarians scored higher on investigative, science and mathematics and lower on social, enterprising, social service, religious activities, public speaking, merchandising, sales, business (organizational management). David and Scherdin also found that school librarians scored higher on social, teaching, religious activities, public speaking, merchandising, and lower on science and mathematics In addition, Afolabi discussed the application of Holland's (1997) theory to librarians. Another salient topic illuminating the relationship of personality traits to specialty choice concerns the choice of person-oriented versus technique-oriented medical specialties. Borges and Gibson (2005) explain:

Person-oriented specialists are characterized as being oriented to the entire patient, whereas, technique-oriented specialists focus on particular areas of the body and have special technical skills (Yufit et al., 1969).

It is clear from this literature that person-oriented specialists have different personality traits than technique-oriented specialists. For instance, practicing psychiatrists scored higher on the *Iefferson Scale of Physician Empathy* than anesthesiologists, orthopedic surgeons, neurosurgeons, radiologists, cardiovascular surgeons, obstetricians and gynecologists, and general surgeons (Hojat et al., 2002). Psychiatrists are more person-oriented, whereas the other specialties are more technique-oriented, with the possible exception of obstetricians and gynecologists. Medical students making a primary care career choice (person-oriented) scored as more patient-centered on the Patient-Practitioner Orientation Scale (Haidet et al., 2002). In a Myers Briggs study of 3,987 medical students, Introverted, Feeling individuals were more likely to select primary care specialties; Feeling types were more likely to choose family medicine; and extraverted thinking types more like to select surgical specialties (Stilwell et al., 2000). Similarly, Machiavellianism, or cunning, was greatest in anesthesiologists and radiologists and lowest in family medicine and internal medicine (Merrill et al., 1993), showing segregation of personality traits to person-oriented and technique-oriented traits. Finally, Borges and Gibson (2005) found differences between person-oriented and technique-oriented specialties on seven Personality Research Form Traits and the Big Five factors of agreeableness and neuroticism. Zeldow et al. (1990) raise the question in the title of their study: "Do person-oriented medical students choose person-oriented specialties? Do technology-oriented medical students avoid person-oriented specialties?". While librarians are not fully analogous to person-oriented and

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technique-oriented medical specialties, the field is similar in that some practitioners work with the public and some are more technically-oriented. This raises the question of, whether person-oriented librarians choose person-oriented specialties, while technology-oriented librarians choose technical specialties, which formed one of the research objectives of our investigation.

Rationale

Informed by the medical specialty choice literature and the theory of congruence, the personality traits within specialties of librarianship are ripe for investigation, as is the distribution of traits among person and technique-oriented library specialties. Accordingly, the research questions follow:

- How do academic reference librarians, archivists, catalogers, distance education librarians, public librarians, records managers, school librarians, special collections librarians, and systems librarians differ on the traits of adaptability, assertiveness, autonomy, conscientiousness, customer service orientation, emotional resilience, extraversion, openness, optimism, teamwork, tough-mindedness, visionary/operational work style, and work drive?
- How do information professionals in person-oriented specialties and those in technique-oriented specialties differ in terms of: adaptability, assertiveness, autonomy, conscientiousness, customer service orientation, emotional resilience, extraversion, openness, optimism, teamwork, tough-mindedness, visionary/operational work style, and work drive?

Method

Participants

The participants for this study consisted of a non-random sample of 2,075 librarians and information science professionals who responded to print or e-mail solicitations during 2002 to fill out the personality inventory, which was available in print, as an e-mail attachment, or as a web form. Subjects responded to e-mail messages to LIBNT-L, TLA-L, EBSS-L, New Breed Librarian, SYSLIB-L, AUTOCAT, CHILD_LIT, ARCHIVES-L, RECMGMT-L, and OFFCAMP; and through print surveys left on tables at a national librarians' conference (Annual American Library Association Conference, Summer 2002). Although non-random samples do not permit inferences about the populations from which they are derived (Schonlau *et al.*, 2002), they are widely used in applied social science research, especially in correlational designs such as the present one. Institutional Review Board human subjects permission was solicited and received to conduct this study. All subjects' data were kept confidential. Respondents who indicated that they wished to receive individualized feedback were e-mailed a Microsoft Word document reporting and interpreting their scores on the inventory.

Geographic locale was not included in the inventory, but e-mail extensions indicated that the sample was international, including subjects from Australia, Canada, the UK, New Zealand, the USA, and other countries. Those participants who did not work in a professional library or information science position were dropped from the sample. For example, library science students, library technicians or paraprofessionals, clerks, and business analysts were deleted. Demographic information was collected about respondents: job title (which included an "Other" choice and a blank to enter current

of individuals

Inventory

Subject matter experts in different information professional jobs were consulted in development of the personality inventory. These experts were asked to list traits of successful information professionals. We measured these traits using relevant components of the PSI (Lounsbury and Gibson, 2002), a proprietary, work-based normal personality measurement instrument. Only the traits that subject matter experts identified were used from the PSI. The PSI consists of 101 questions measuring 16 scales, of which we used 13: adaptability, assertiveness, autonomy, conscientiousness, customer service orientation, emotional resilience, extraversion, openness, optimism, teamwork, tough-mindedness, visionary-operational work style, and work drive. The questions corresponding to 13 of these scales were used, as the Methods section describes. Below is a brief construct definition for the personality traits measured by the PSI:

	Frequency	Percent	
Job			
Other	397	19.1	
Academic reference librarian	275	13.2	
Archivist	157	7.5	
Records manager	92	4.4	
Public librarian	177	8.5	
School librarian	35	1.7	
Special librarian	255	12.3	
Systems librarian	157	7.4	
Cataloger	493	23.7	
Distance education librarian	40	1.9	
Total	2,075		
Years in current position			
Less than 2	700	33.6	
2-5	655	31.6	
6-10	305	14.7	
11-15	179	8.6	
16-20	108	5.2	
More than 20	128	6.2	
Total	2,075		
Years in a professional position			
Less than 2	170	8.1	
2-5	429	20.6	
6-10	423	20.3	
11-15	317	15.2	Table I.
16-20	253	12.2	Demographic
More than 20	483	23.2	characteristics of the
Total	2,075		sample
			•

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- (1) Adaptability. This refers to a person being flexible and to make on-the-spot adjustments to different situations. High scorers are able to go with the flow, respond flexibly to changing circumstances, and function comfortably with change. Low scorers tend to be more rigid and inflexible, preferring to work in unchanging settings with predictable outcomes (three items).
- (2) Assertiveness. This refers to a person's ability to assert him/herself, taking charge of situations, speaking up on matters of importance, defending personal beliefs, and being forceful (eight items).
- (3) *Autonomy*. This is a disposition to function autonomously and in a self-directed manner on one's job; to make work decisions and choose a course of action without reliance on others (three items).
- (4) Conscientiousness. This is being reliable, trustworthy, orderly, dependable, organized, and rule-following (nine items).
- (5) *Customer service orientation*. This means striving to provide highly responsive, personalized, quality service to (internal and external) customers; putting the customer first; and trying to make the customer satisfied, even if it means going above and beyond the normal job description or policy (eight items).
- (6) *Emotional resilience*. This is the overall level of adjustment and emotional resilience in the face of job stress and pressure. This can be conceptualized as the inverse of unadaptivism (six items).
- (7) *Extraversion*. This is the tendency to be sociable, outgoing, gregarious, warmhearted, and talkative (seven items).
- (8) *Openness*. This is receptivity/openness to change, innovation, new experience, and learning (nine items).
- (9) *Optimism.* This is having an upbeat, hopeful outlook concerning prospects, people, and the future, even in the face of difficulty and adversity as well as a tendency to minimize problems and persist in the face of setbacks (six items).
- (10) *Teamwork*. This is the propensity for working as part of a team and cooperatively on work group efforts (seven items).
- (11) *Tough-mindedness*. This means appraising information and making work decisions based on logic, facts, and data rather than feelings, values or intuition (eight items).
- (12) Work drive. This is the disposition to work for long hours (including overtime) and an irregular schedule; greater investment of one's time and energy into job and career, and being motivated to extend oneself, if necessary, to finish projects, meet deadlines, be productive, and achieve job success (eight items).
- (13) Visionary vs operational work style. This refers to a work style which emphasizes creating an organizational vision and mission, developing corporate strategy, identifying long-term goals, and planning for future contingencies versus an operational work style which focuses on day-to-day activities and accomplishments, short-term goals, current problems, and implementation of plans (eight items).

of individuals

Analysis procedures

Cluster analysis is a set of statistical techniques that results in the formation from a data set of relatively homogeneous groups that are heterogeneous from one another. Two-step cluster analysis is a method appropriate for large data sets that allows categorical variables as well as continuous variables. An example of a categorical variable is job type in our study. Pre-clusters are formed through a cluster feature tree, in which leaf nodes attach to root nodes. The log-likelihood distance measure is used to form clusters, with the pre-clusters treated as single cases. The log-likelihood distance measure is the decrease in log-likelihood resulting from merging two clusters (Chiu et al., 2001). A Bayesian Information Criterion (BIC) is used to determine the maximum number of clusters. When the BIC change between new clusters is minimized, the maximum number of clusters is found.

Results

Table III shows the composition of the clusters, and Table IV shows the student's t-scores, for the statistical significance of the variables by cluster. Student's t-scores allow one to test the equality of means. Cluster 1 was made up of individuals from all the occupational groups who are low on adaptability, low on assertiveness, low on autonomy, low on customer service orientation, low on emotional resilience, low on extraversion, low on openness, low on optimism, low on teamwork, high on tough-mindedness, possessing an operational work style, and low on work drive. This group will be labeled the "unadaptive" group, because several unadaptive traits such as low emotional resilience, low optimism, low teamwork, and low work drive are included. Cluster 1, along with Cluster 5, were the only clusters made up with individuals from more than one occupational group.

Cluster 2 was high on customer service orientation, high on extroversion, high on teamwork, and low on tough-mindedness. This group will be labeled the "adaptive academic reference librarians."

Cluster 3 was low on customer service orientation and possessed an operational work style. This group is referred to as the "adaptive catalogers."

Cluster 4 was high on autonomy, high on customer service orientation, and high on extraversion. This group will be referenced as the "adaptive special librarians."

Given the chance, I would be much more interested in activities like developing procedures, specifying work practices, and allocating resources for the library or organization

2 4 Given the chance, I would be much more interested in activities like creating an inspiring vision for the future of the library or organization

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Table II.

	Clus Unada grou	Cluster 1 Unadaptive grouping n (%)	Cluster 2 Adaptive academic reference librarians n (%)	Maptive cademic eference brarians (%)	Cluster 3 Adaptive catalogers $n (\%)$	er 3 tive tive (%)	Cluster 4 Adaptive special librarians n (%)	er 4 otive cial cians (%)	Cluster 5 Adaptive distance education librarians $et al.$ n	(%)	Cluster 6 Other "" (%)	er 6 (%)	Cluster 7 Adaptive archivists and systems librarians n (%)	er 7 vitive vists d ams ians ians (%)
Academic reference librarian Archivist Cataloger Distance education librarian Public librarian Records manager School librarian Special librarian Special librarian Oystems librarian Other	6 8 117 1 11 10 7 7 7 7 4 4 4 4 4 5 5	2.2 23.7 23.7 2.5 6.2 10.9 0.8 2.6 11.3	269	97.8	376	76.3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	000000000000000000000000000000000000000	0 0 0 8 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 97.5 93.8 89.1 80 0 0	352	000000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	94.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Table III.Composition of the clusters

Cluster 7 Adantive	archivists and systems librarians	1.6	0.2	-0.1	L	c.0 –	1.6	1.0	3.3*	1.4	1.6	2.9*		4.2	- 0.I
Cluster 6	Other	5.4 7.9*	2.9^{*}	-2.0	*	 	4.1*	4.4*	*8.9	7.7*	4.1^{*}	-2.5		* 4.7.	4.6
Cluster 5	Adaptive distance education librarians <i>et al.</i>	4.5 * 7.5 *	0.0	0.0	* C	7.2	5.5	8.4*	.5.8	7.2*	5.3 *	-6.2*		* 6.0 +	L.9
Cluster 4	Adaptive special librarians	2.6	2.8*	1.1	*	9.2	6.0	2.6^{*}	1.5	1.1	-0.5	-0.9		1.0	0.8
Cluster 3	Adaptive catalogers	2.1	-1.0	1.4	*	-4.2	6.0	-2.5	-1.5	0.3	-1.5	2.3		-5.7*	-0.3
Cluster 2	Adaptive academic reference librarians	$-0.1 \\ 0.5$	0.1	-1.6	*	3.9	-2.2	3.6 *	2.5	-1.7	3.0*	-5.3*		2.3	- 2.3
Cluster 1	Unadaptive grouping	$-15^* -27^*$	-4*	1	*	– 14 °	-12^{*}	-23*	-19*	-20^{*}	-17^{*}	11*		-21*	9-
		Adaptability Assertiveness	Autonomy	Conscientiousness	Customer Service	Orientation	Emotional Resilience	Extroversion	Openness	Optimism	Teamwork	Tough-mindedness	Visionary-Operational	Work Style	Work Drive

Note: * Exceeds critical value at confidence level 0.95. (Probability of less than 10 percent that results are random); Bonferroni adjustment applied (correction necessary for multiple comparisons)

Table IV.Student's *t*-values of importance of variables by clusters

Cluster 5 was high on adaptability, high on assertiveness, high on customer service orientation, high on emotional resilience, high on extraversion high on openness, high on optimism, low on tough-mindedness, high on teamwork, and possessing a visionary work style. This group will be termed the "adaptive distance education librarians, public librarians, records managers, and school librarians."

Cluster 6 was high on adaptability, high on assertiveness, high on autonomy, high on customer service orientation, high on emotional resilience, high on extraversion, high on openness, high on optimism, high on teamwork, possessing a visionary work style and high on work drive. These were the "adaptive other information professionals."

Finally, Cluster 7 was high on assertiveness, high on openness, and high on tough-mindedness. This group was considered the "adaptive archivists and systems librarians."

Discussion

Taken as a whole, the results of our study clearly demonstrate that different librarianship subspecialties can be differentiated by broad and narrow personality traits which carry important implications for theorizing and future research in this area. First, we should note that Holland's (1997) theory of congruence is supported by our results. Specifically, persons with similar personalities seem to be attracted to the different occupational groupings (Holland, 1985), and the specialties appear to attract corresponding types of personalities, perhaps because of their job functions. The results in addition extend the notion of occupational specialty congruence, which Meir and Melamed (2005, p. 22) define:

Occupational specialty congruence means that the specialty in which one works meets one's vocational interests within a broad occupation. For example, a person in the medical profession who prefers working with sophisticated equipment would likely experience occupational specialty congruence as a surgeon and incongruence as a psychiatrist. Research suggests that occupational specialty congruence provides a more appropriate measure and better predictor of vocational satisfaction than does vocational congruence, or fit between the broad occupation and the individual's interests as defined by Holland (1997).

Our results indicate congruence of personality traits within occupational specialties, an extension of Melamed's conception of congruence of vocational interests. The occupational specialty congruence of personality traits is seen most clearly for academic reference librarians, archivists, catalogers, special librarians, and systems librarians, all of whom were segregated to distinct clusters with distinct patterns of personality traits. Perhaps the public librarians, distance education librarians, records managers, and school librarians show less of this type of occupational specialty congruence since they belong to the same cluster.

The results of our study also support research on person-oriented and technique-oriented specialties. Borges and Gibson (2005) found a robust set of differences between person-oriented and technique-oriented medical practitioners on the Personality Research Form and the Big Five set of personality traits. Similarly, we found that high extraversion, low tough-mindedness, and high teamwork (among other variables for the various clusters) characterized person-oriented academic reference librarians, special librarians, public librarians, school librarians, distance education librarians and records managers. For the technique-oriented specialties, operational

work style and low customer service orientation characterized catalogers, and high Personality traits assertiveness and high tough-mindedness characterized the archivists and systems librarians. These results are compatible with the findings of Hojat et al. (2002), Merrill et al. (1993), Stilwell et al. (2000), and Borges and Gibson (2005). The results extend those of David and Scherdin (1994) and Scherdin (1994a, b), reporting on the personality traits for several more specialties within librarianship. In addition, we measure narrow work-related personality traits in addition to the broad personality traits measured in these previous studies.

Conceptual model

We now present a conceptual model for personality traits and librarianship specialties with hypotheses for future verification:

- · People with similar personality traits are attracted to the various library specialties that are consonant with those traits. This proposition is similar to and draws on Holland's (1985) congruence model for occupational fit based on vocational interests. The only traits that were not logically related to library specialties in the present study were the ones associated with the unadaptive grouping. Library specialties attract individuals with congruent personality traits. This congruence may be based on a functional similarity between personality type and job functions.
- · Person- and technique-oriented traits may be distinguished for the library specialties by those personality traits that connote interpersonal interaction versus those that connote logical, impersonal analysis and decision-making. respectively. For example, high Assertiveness and high Tough-mindedness are associated with systems librarians, a technique-oriented field.

Hopefully, the present results can be replicated and cross-validated on new samples. If so, there will be several practical implications of these findings. First, recruitment for library specialties may be carried out in a more systematic basis, with certain traits being desired for specific specialties. Also, librarians wanting to change directions in their career from one specialty area to another could benefit from tasking a personality inventory that measures these traits to assist them in determining how their trait levels match those for the specialty being considered. Third, it might be desirable to offer training workshops and continued education units for programs oriented around a particular trait, such as optimism or emotional resilience to help facilitate personal understanding and trait change. Of course it must be acknowledged that trait change is not a simple process, and there are ethical issues surrounding selecting individuals for jobs based on their personality traits.

Future research

Holland summarizes the mounting array of evidence between 1959 and 1996 for the effects of congruence on variables such as job stability, job satisfaction, occupational perceptions and cognitive styles, and work performance (Holland, 1997). Similarly, it would be good to measure whether congruence with the distinctive personality traits in our findings led to high values of these variables for the library specialties. For instance, is a cataloger more satisfied with his job if he has an operational work style? Similarly, like researchers of Holland's theory before us, e.g. (Hoeglund and Hansen,

1999), one could investigate what indices of congruence are appropriate for library specialties. For example, should an index be constructed based on some combination of all the personality traits, or on a more parsimonious model? Finally, Hartung *et al.* (2005) described a person-matching system of specialty selection that bypasses the intermediate step of assigning congruence between a person's traits and a specialty. One could develop a person-matching system that measures distance scores between a test-taker's answers and the answers for people in a specialty.

Limitations of the sudy

The great majority of our respondents were recruited off of listservs, perhaps excluding respondents not actively participating in these forums. Generalizations cannot be made with respect to populations varying in geographic locale, organizational characteristics of employer, or race and ethnicity, to name but a few of the variables which could be explored in future research. Since we also did not explore gender, given that there are gender differences in relation to specialties (e.g. Borges and Gibson, 2005), our study may have left out an important facet. One other limitation of our study is that there were only English-speaking respondents.

Conclusions

The study showed that different occupational groups of information professionals do differ on personality traits as might be expected due to their job requirements. These findings support the theory of congruence within specialties, with the homogeneity of individuals within specialties *vis-à-vis* specific personality traits and corresponding differences between specialties on those traits. Also, people-oriented information science specialties do differ from technique-oriented specialties in ways that are to be expected from the associated personality traits. Finally, the results also illustrate the power of two-step cluster analysis, which enabled us to co-analyze categorical and continuous variables.

References

- Borges, N.J. and Gibson, D.D. (2005), "Personality patterns of physicians in person-oriented and technique-oriented specialties", *Journal of Vocational Behavior*, Vol. 67 No. 1, pp. 4-20.
- Chiu, T., Fang, D.P., Chen, J., Wang, Y. and Jeris, C. (2001), "A robust and scalable clustering algorithm for mixed type attributes in large database environment", *Proceedings of the 7th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pp. 263-8.
- David, I. and Scherdin, M. (1994), "Librarians in transition: profiles on the Strong Interest Inventory", in Scherdin, M. (Ed.), Discovering Librarians: Profiles of a Profession, ACRL, Chicago, IL.
- Gottfredson, G. and Holland, J. (1990), "A longitudinal test of the influence of congruence: Job satisfaction, competency, utilization, and counterproductive behavior", *Journal of Counseling Psychology*, Vol. 37 No. 4, pp. 389-98.
- Haidet, P., Dains, J.E., Paterniti, D.A., Hechtel, L., Chang, T., Tseng, E. and Rogers, J.C. (2002), "Medical student attitudes toward the doctor-patient relationship", *Medical Education*, Vol. 36 No. 6, pp. 568-74.
- Hartung, P.J., Borges, N.J. and Jones, B.J. (2005), "Using person matching to predict career specialty choice", *Journal of Vocational Behavior*, Vol. 67 No. 1, pp. 102-17.

of individuals

- Hener, T. and Meir, E.I. (1981), "Congruency, consistency, and differentiation as predictors of job Personality traits satisfaction within the nursing occupation", Journal of Vocational Behavior, Vol. 18 No. 3, pp. 304-9.
- Hoeglund, T.I. and Hansen, J.I.C. (1999), "Holland-style measures of congruence: are complex indices more effective predictors of satisfaction?", Journal of Vocational Behavior, Vol. 54 No. 3, pp. 471-82.
- Hojat, M., Gonnella, J.S., Nasca, T.J., Mangione, S., Veloksi, J.J. and Magee, M. (2002), "The Jefferson Scale of Physician Empathy: further psychometric data and differences by gender and specialty at item level", Academic Medicine, Vol. 77 No. 10, pp. S58-S60.
- Holland, J.L. (1985), Making Vocational Choices: A Theory of Vocational Personalities and Work Environments, Prentice-Hall, Englewood Cliffs, NJ.
- Holland, J.L. (1997), Making Vocational Choices: A Theory of Vocational Personalities and Work Environments, Psychological Assessment Resources, Odessa.
- Lounsbury, J.W. and Gibson, L.W. (2002), Personal Style Inventory: A Work-based Personality Systems, Resource Associates, Knoxville, TN.
- Lounsbury, J.W., Sundstrom, E. and Loveland, J.M. (2003a), "Intelligence, Big Five personality traits, and work drive as predictors of course grade", Personality and Individual *Differences*, Vol. 35 No. 6, pp. 1231-9.
- Lounsbury, J.W., Loveland, J.M., Sundstrom, E.D., Gibson, L.W., Drost, A.W. and Hamrick, F.L. (2003b), "An investigation of personality traits in relation to career satisfaction", Journal of Career Assessment, Vol. 11, pp. 287-307.
- Meir, E.I. (1987), "Extension of the interests job congruence hypothesis to teaching specialties", Man and Work, Vol. 1, pp. 49-58.
- Meir, E.I. (1989), "Integrative elaboration of the congruence theory", Journal of Vocational Behavior, Vol. 35 No. 2, pp. 219-30.
- Meir, E.I. and Engel, K. (1986), "Interests and specialty choice in medicine", Social Science & Medicine, Vol. 23 No. 5, pp. 527-30.
- Meir, E.I. and Erez, M. (1981), "Fostering a career in engineering", Journal of Vocational Behavior, Vol. 18 No. 1, pp. 115-20.
- Meir, E.I. and Melamed, S. (2005), "Occupational specialty congruence: new data and future directions", Journal of Vocational Behavior, Vol. 67 No. 1, pp. 21-34.
- Merrill, J.M., Camacho, Z., Laux, L.F., Thornby, J.I. and Vallbona, C. (1993), "Machiavellianism in medical students", American Journal of the Medical Sciences, Vol. 305 No. 5, pp. 285-8.
- Messick, S. (1989), "Validity", in Linn, R. (Ed.), Educational Measurement, Collier, London.
- Myers, I.B., McCaulley, M.H. and Most, R. (1985), Manual, a Guide to the Development and Use of the Myers-Briggs Type Indicator, Consulting Psychologists Press, Palo Alto, CA.
- Scherdin, M.J. (1994a), "Librarians and information professionals: how do we resemble each other?", in Scherdin, M. (Ed.), Discovering Librarians: Profiles of a Profession, ACRL, Chicago, IL.
- Scherdin, M.J. (1994b), "Vive la différence: exploring librarian personality types using the MBTI", in Scherdin, M. (Ed.), Discovering Librarians: Profiles of a Profession, ACRL, Chicago, IL.
- Schmit, M.J., Ryan, A.M., Stierwalt, S.L. and Powell, A.B. (1995), "Frame-of-reference effects on personality scale score and criterion-related validity", Journal of Applied Psychology, Vol. 80, pp. 607-20.
- Schonlau, M., Fricker, R.D. and Elliott, M.N. (2002), Conducting Research Surveys via E-mail and the Web, Rand, Santa Monica, CA.

- Stilwell, N.A., Wallick, M.M., Thal, S.E. and Burleson, J.A. (2000), "Myers-Briggs type and medical specialty choice: a new look at an old question", *Teaching and Learning in Medicine*, Vol. 12 No. 1, pp. 14-20.
- Tinsley, H.E.A. (2000), "The congruence myth: an analysis of the efficacy of the Person-Environment Fit Model", *Journal of Vocational Behavior*, Vol. 56 No. 2, pp. 147-79.
- Vaidya, N.A., Sierles, F.S., Raida, M.D., Fakhoury, F.J., Przybeck, T.R. and Cloninger, C.R. (2004), "Relationship between specialty choice and medical student temperament and character assessed Cloninger Inventory", *Teaching and Learning in Medicine*, Vol. 16 No. 2, pp. 150-6.
- Webb, S.C. and Hultgren, D.D. (1973), "Differentiation of clergy subgroups on the basis of vocational interests", *Journal for the Scientific Study of Religion*, Vol. 12 No. 3, pp. 311-24.
- Winer, J.L. (1981), "Worker functions and intraoccupational specialty in psychology", *Vocational Guidance Quarterly*, Vol. 30 No. 1, pp. 50-60.
- Yufit, R.I., Pollock, G.H. and Wasserman, E. (1969), "Medical specialty choice and personality", Archives of General Psychiatry, Vol. 20 No. 1, pp. 89-99.
- Zeldow, P.B., Devens, M. and Daugherty, S.R. (1990), "Do person-oriented medical students choose person-oriented specialties? Do technology-oriented medical students avoid person-oriented specialties?", *Academic Medicine*, Vol. 65 No. 9, pp. S45-6.

Further reading

- Afolabi, M. (1996), "Holland's typological theory and its implications for librarianship and libraries", *Library Career Development*, Vol. 4 No. 4, pp. 15-21.
- Borges, N.J. and Osmon, W.R. (2001), "Personality and medical specialty choice: technique orientation versus people orientation", *Journal of Vocational Behavior*, Vol. 58 No. 1, pp. 22-35.
- Friedman, C.P. and Slatt, L.M. (1988), "New results relating the Myers-Briggs Type Indicator and medical specialty choice", *Journal of Medical Education*, Vol. 63 No. 4, pp. 325-7.
- Kane, L.T. (2003), Straight from the Stacks: A Firsthand Guide to Careers in Library and Information Science, American Library Association, Chicago, IL.
- Lester, W.M., Woloschuk, W., Juschka, B. and Mandin, H. (1995), "Assessing the psychological types of specialists to assist students in career choice", *Academic Medicine*, Vol. 70 No. 10, pp. 932-3.
- Newton, B.W., Savidge, M.A., Barber, L., Cleveland, E., Clardy, J., Beeman, G. and Hart, T. (2000), "Differences in medical students' empathy", *Academic Medicine*, Vol. 75 No. 12, p. 1215.

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