Value Differences Between Scientists and Practitioners:  
A Survey of SIOP Members

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The scientist-practitioner model emphasizes the importance of integrating science and practice in a meaningful way. Treatments of the science-practice gap inevitably include a discussion of the differences between research and practical application and the difficulty inherent in assimilating these two diverse goals. Murphy and Saal (1990) suggested that even if we do begin to do a better job balancing research and applied goals, it is realistic to expect that there will still be few people who weigh these goals equally. Instead, it is likely that most I-O psychologists would primarily be concerned with either research or practice, with only a secondary concern for the other piece of the model. Anderson, Herriot, and Hodgkinson (2001) observed that those on both sides of the science-practice gap in I-O psychology hold stereotypes of one another. Researchers are seen as interested only in methodology at the expense of anything relevant to the real world, whereas practitioners are seen as proponents of fads, ignoring all theoretical evidence. Although most realize that these stereotypes are extreme and are not wholly accurate conceptualizations of either area, the idea that differences exist between those preferring to focus on research and those primarily interested in practical application seems to be an implicit assumption in the science-practice dialogue. Because we have no empirical evidence to support this assumption, the present study investigated differences in work values and workplace characteristics of people in academic versus applied jobs in the field of I-O psychology.

Although those doing research and applied work in psychology share the common title of “I-O Psychologist,” scientists and practitioners clearly play distinct roles. Research is the main focus of academics, whereas “most nonacademic I-O psychologists are not actively engaged in research or research publication” (Murphy & Saal, 1990, p. 51). These authors speculated that people are drawn to either research or practice roles based in part on individual differences in values. That scientists and practitioners perform different activities suggests that those entering the field could benefit not only from understanding value differences between people who choose academic and applied careers but also from understanding what needs the two different career paths fulfill. We compiled a list of values for which we expected scientists and practitioners in I-O psychology to differ. In addition, we examined whether there were differences between research and applied jobs in the degree to which they fulfilled employees’ needs. If there are, indeed, notable differences between science and practice, it would be useful for those respon-
sible for training I-O doctoral candidates to consider this information and share it with doctoral candidates deciding among career options.

Based upon our own intuition, along with the armchair speculation of others, we expected that scientists and practitioners would differ on the following values: autonomy, structure, affiliation, science, and money. As for autonomy, academic freedom is a crucial part of research within a university. The academic setting is characterized by little monitoring and academic independence (Anderson et al., 2001). One might expect that people drawn to academic careers would place a higher value on autonomy than those drawn to applied careers. Because research is a large part of most academic jobs, and is, by nature, a relatively unstructured activity, we predicted that those who chose an academic career would value structure less than those who chose an applied career. Moreover, applied jobs are often characterized as being deadline driven and requiring high accountability. Thus, people drawn to this work environment may place greater value on structure than those drawn to academic environments. With regard to affiliation, there seems to be less of a premium placed on social and interpersonal skills in academics. Anderson and his colleagues suggested that in order to begin to close the research/practice gap, academics need to develop “key social and political skills” (Anderson et al., 2001, p. 408). Indeed, the stereotype of the socially inept intellectual hiding in the ivory tower is alive and well, and the autonomy inherent in academic jobs would seem to attract those who prefer to work alone. We anticipated, therefore, that practitioners would value affiliation to a greater extent than would academics.

McIntyre (1990) suggested that one of the biggest differences between academics and practitioners is their beliefs about science:

What science views as the critical element to its existence—adherence to the scientific method—is a frivolous and esoteric concern to the workplace....science’s strategy for answering these questions—based on data collection, data analysis, and cautious conclusions—are perceived in the workplace as “irrelevant” (p. 28).

Academics are expected to place a higher value on science for science’s sake than are practitioners. Finally, we expected to find differences in the extent to which academics and practitioners valued money. According to the most recent SIOP salary study, those in an applied setting had significantly higher median salaries than those in academic settings ($100,000 versus $73,000; Katkowski & Medsker, 2001). In addition, in his discussion of the “pure practitioner” in I-O psychology, McIntyre (1990) noted that the “pure practitioner” in I-O may have a stronger inclination to increase monetary wealth. Graduate students contemplating academic versus applied careers often point to money as a deciding factor in their career choice. As such, we expected that those who place a higher value on money would be more attracted to applied careers than those who find money a less important life concern.
We also expected differences in the extent to which the academic setting and the applied setting fulfill certain needs for I-O psychologists. Although the concept of needs was once widely employed in the psychological research literature, the dramatic shift toward cognitive theories, beginning in the 1960s, led to the repudiation of the need construct. In recent years, however, there has been a resurgence of interest in needs, corresponding with the increased attention being given to hedonics or well-being in the psychological literature. Research by Ryan and Deci (2000) has uncovered three universal needs: *competence, relatedness,* and *autonomy*. The universality of these needs has been demonstrated in research analyzing participants’ descriptions of “most satisfying events” (Sheldon, Elliot, Kim, & Kasser, 2001), and life history reports (Bauer & McAdams, 2000). Another goal of this study, therefore, was to examine the degree to which academic and applied careers satisfied these “Big Three” needs.

**Method**

Participants were I-O psychologists with doctoral degrees. Our sample was based on the SIOP membership roster from 2000. In December 2001, we mailed a questionnaire to all people listed in the SIOP database as active SIOP members or SIOP Fellows in the United States. Of the 1,481 surveys mailed out to SIOP members, 619 usable surveys were returned. Seven surveys were returned unopened due to address changes, giving a response rate of 42%. Of the respondents, 395 (64%) were male, and 223 (36%) were female. For our analyses, we combined academics in psychology departments and management departments into one “academic” category and combined practitioners in consulting firms and industry into one “applied” group. The small number of people who reported government or “other” as their principal employer were excluded from these analyses. Of the remaining 590 respondents, 229 (39%) were academics and 361 (61%) were practitioners.

The authors developed items for each of the values and needs discussed below, drawing from existing measures. Items were aggregated, and a consensus on best items was reached; for the sake of brevity, each value or need was measured using the best two or three items. There were three components to our survey: values, workplace characteristics, and demographics. Two items measuring job and career satisfaction were also included. Participants were instructed to respond to each value item and each workplace characteristic item on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

**Values**

Affiliation, science, autonomy, money, structure, and feedback were each measured. Cronbach’s alpha levels ranged from .56 to .75. (See Table 1 for sample items and reliability levels). A principal components factor analysis with varimax rotation yielded 7 factors; two factors (i.e., need for feedback
and need for structure) cross-loaded and were placed into a single composite factor (labeled need for structure).

**Workplace Characteristics**

We assembled 3-item scales for each of the following: work efficacy (e.g., “My work makes me feel competent.”), autonomy at work (e.g., “I feel that I am free to do things my own way at work.”), and work relationships (“I feel close and connected to other people at work.”). These were conceptually based on competence, relatedness, and autonomy needs (Ryan and Deci, 2000). Items for these scales were adapted from Sheldon et al. (2001). Cronbach’s alpha reliability levels ranged from .69 to .87.

**Table 1**

<table>
<thead>
<tr>
<th>Sample Values Items</th>
<th>Sample item</th>
<th>Items</th>
<th>Reliability (Alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliation</td>
<td>I derive a lot of satisfaction from interacting with others.</td>
<td>2</td>
<td>.63</td>
</tr>
<tr>
<td>Structure</td>
<td>It is important that I have consistent responsibilities and daily activities.</td>
<td>5</td>
<td>.67</td>
</tr>
<tr>
<td>Science</td>
<td>It is important for organizations that scientists continue engaging in basic psychological research.</td>
<td>3</td>
<td>.56</td>
</tr>
<tr>
<td>Autonomy</td>
<td>I prefer to set my own agenda, without much input from others.</td>
<td>3</td>
<td>.69</td>
</tr>
<tr>
<td>Money</td>
<td>Salary is an important consideration when choosing one’s work.</td>
<td>3</td>
<td>.75</td>
</tr>
</tbody>
</table>

**Results**

Using a Bonferroni correction, we obtained a significance value of .002. Thus, all reported significant differences have $p$ values of less than .002. There were no significant differences between academics and practitioners in satisfaction with career path (academic or practitioner) or satisfaction with current job. Consistent with our predictions, significant differences were found between academics and practitioners for all self-reported personal values (see Figure 1). Practitioners ($M = 4.09$) scored higher on affiliation than academics, ($M = 3.77$), $t(587) = .95$, $d = .42$. Practitioners ($M = 3.51$) valued financial compensation significantly more than academics ($M = 3.10$), $t(585) = 6.10$, $d = .52$, and practitioners ($M = 3.33$) also reported a higher need for structure than their academic counterparts ($M = 3.14$), $t(582) = 3.67$, $d = .31$. Academics
(\(M = 4.38\)) reported a higher need for autonomy than did practitioners, \((M = 4.01)\), \(t(585) = 6.92, d = .59\), and academics \((M = 4.21)\) valued science to a greater degree than did practitioners \((M = 3.84)\), \(t(586) = 5.94, d = .50\).

**Figure 1.** Personal Values of Academics Versus Practitioners

Significant scientist-practitioner differences were also observed for fulfillment of values in the workplace (see Figure 2). Practitioners \((M = 3.65)\) reported more fulfilling interpersonal relationships with coworkers than did academics \((M = 3.41)\), \(t(585) = 3.11, d = .26\). Academics \((M = 4.43)\) reported a higher level of autonomy in the workplace than did practitioners \((M = 4.24)\), \(t(587) = 3.19, d = .27\). There was no significant difference in efficacy scores between academics and practitioners.

**Figure 2.** Reported Work Need Fulfillment for Academics Versus Practitioners
Discussion

Our results suggest that there are, indeed, work value differences between those in academic and applied settings within I-O psychology. Consistent with our predictions, academics place a higher value on autonomy and scientific research, and practitioners place a higher value on affiliation, money, and a structured work environment. In addition to these value differences, there are differences in the extent to which academic and applied jobs fulfilled the “Big Three” needs (i.e., competence, autonomy, and relatedness). Specifically, academics experienced more autonomy on the job and felt a greater sense of competence than practitioners. Practitioners felt that their jobs fulfilled their need for interpersonal relationships and connections with coworkers to a greater degree than did academics.

Our findings support Murphy and Saal’s (1990) concern about the challenges of truly adopting the scientist-practitioner model. These authors caution that “it is unrealistic to expect that all members (or even a large majority) of a particular subfield will actively pursue both science and practice roles” and that many of the contexts in which psychologists work do not even encourage both science and practice. Murphy and Saal suggested that, given this reality, “it may be a good thing that relatively few psychologists share values that emphasize both roles.” Too much should not be made of these differences, however, as the relative rank ordering of these values is not dramatically different between the two groups. For example, although scientists value science more than practitioners, and practitioners value money more than scientists, both groups value science more than they value money.

Because science and practice are associated with different values and needs, different people should be attracted to and satisfied with each of these two career paths. We encourage those in the field to consider scientist-practitioner differences and how we might use our knowledge when collaborating and integrating the two branches of I-O psychology. In addition, these findings might be used to guide graduate students in I-O toward a career compatible with their needs and values. To this end, a promising future direction for research would be to develop and validate a measure of values that could be used for the vocational guidance of prospective I-O psychologists.

References


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