

PERSONAL ATTRIBUTES OF EXPERT AUDITORS

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ABSTRACT

Considerable effort has been expended on the development of systems which depend on the identification of experts. Some examples include the development of expert systems, as well as personnel selection, training, and promotion procedures. In each case, a key step is to select and analyze experts. However, little is known about the pattern of personal attributes associated with experts.

This study explored the perceptions of expert auditors by three groups: managers/partners, seniors/supervisors, and auditing students. Subjects first listed all the attributes they felt important in an auditor. They then evaluated 20 attributes which might be associated with auditors. Unexpectedly, the results for the three groups were quite similar: cognitive/knowledge attributes were most important, followed by self-presentation/image attributes and strategic/decision-making attributes; least important were personal appearance/style characteristics. There were a few differences between the groups, with managers and partners emphasizing how an expert thought over how he/she behaved; seniors and supervisors stressed strategic concerns over style; and auditing students focused on externally observable characteristics.

The results have three implications. First, professionals can identify a consistent set of attributes they associate with experts. Second, there are some differences between the perceptions of experts, novices, and naive subjects that could be important. Third, the results have implications for defining and measuring expertise, for developing expert systems, as well as for establishing training, evaluation, and promotion procedures.

PERSONAL ATTRIBUTES OF EXPERT AUDITORS

Substantial costs in time and money are expended trying to identify who is and who is not an expert in a given domain. This identification is important for building expert systems, developing training programs, specifying guidelines for hiring, and establishing procedures for employee evaluation/promotion. In each case, there are important consequences to being able to identify correctly who is, and who is not, an expert.

One obvious way to answer the question "Who is an expert?" is to define an objective standard -- something like a platinum bar for length. Anyone whose decisions matched the standard would be declared an expert. Unfortunately, certifiable standards seldom exist for expert domains. Experts often are needed precisely because there is no "ground truth." As argued by Golde (1970), the job of an expert is to define the problem, to identify relevant variables, to suggest strategies for proceeding, and to lay out possible courses of action. Each of these steps is difficult, if not impossible, to objectify in most expert domains (Shanteau, in press).

So, it is necessary to find other ways to define experts. One approach is to compare the psychological characteristics of acknowledged experts with those of non-experts. Using this approach, Shanteau (1987) identified a set of personal attributes which experts in various domains appear to share. The purpose of this research is to investigate whether experts view these attributes as distinguishing between various levels of expertise.

Research Strategy

Auditors are appropriate for this research project for three reasons: First, the tasks performed by auditors are important for businesses, investors, and society at large. The failure to do an audit properly can have grave financial

repercussions for all concerned, as some recent bank failures illustrate. Identifying expertise in auditing, therefore, has important consequences.

Second, auditing is a challenging profession that requires years to learn and that many do not master. Of those who start at a major auditing firm, few reach the top of the profession. It would be useful to be able to identify psychological characteristics predictive of future success. With such information, employee selection could be made more efficient and training programs could target those most likely to become experts.

Third, within auditing there is a clear hierarchy going from entry level (students) to intermediate (seniors and supervisors) and to advanced (managers and partners). This hierarchy provides a solution to a difficult problem in research on expertise -- how to operationalize who is an expert in the absence of objective criteria. Using professional certification to identify experts has proved useful in prior auditing research (Ashton, 1982).

Auditing Background

There have been efforts to identify the characteristics of expert auditors. Many references in the literature refer to the role that experience plays in becoming an expert (e.g., Ashton, 1991). Experience is presumably the basis for acquiring the knowledge base needed to become an expert. Choo (1989) and Colbert (1989) reviewed the literature on experience, however, and reported mixed results. Abdolmohammadi and Wright (1987) suggested that task complexity may act as a moderator variable.

Recent studies by Bonner and Lewis (1990) and Gibbons and Larocques (1990) report significant experience effects in auditing expertise. But, sizable effects were found for other attributes such as ability and knowledge. These results leave open the question of what attributes reflect auditor expertise. Instead of experience, Davis and Solomon (1989) propose that performance, defined by

efficiency and effectiveness of an audit, is a better reflection of expertise.

Recognizing there is no objective means to measure effectiveness, they suggest surrogates such as defensibility of the audit process for evaluating effectiveness.

The feasibility of this approach, however, has yet to be shown.

Libby (1991) argues that cognitive factors are important in the conduct of an audit. There is some research addressing processes such as memory and thinking in auditing (Waller & Felix, 1984; 1989). However, these factors can be difficult to measure, particularly in an auditing context. Therefore, the question of how to define and measure the characteristics of auditing expertise remains unanswered.

Research Approach

One approach not tried previously is to examine the behavioral traits shared by experts. If a set of common characteristics can be established, then it may be possible to use them to identify who is an expert. Thus, the presence of a distinct pattern could become a signature of expertise.

This approach leads to a three-step research strategy: The first step is to develop a list of expert characteristics. The second is to validate the list using feedback from experts. And the final step is to apply the list to identification of experts. The present project is concerned with the middle step.

Expert Characteristics

A set of “psychological characteristics of expert decision makers” was identified by Shanteau (1987). These were based on observations made while carrying out research on livestock judges, personnel selectors, registered nurses, business managers, as well as auditors. The characteristics range from “communication skills” and “outward confidence” to “ability to adapt” and “stress tolerance,” plus “content knowledge.” The complete list, with definitions, appears alphabetically in Table 1.

Also included are seven distractor items, such as “physical attractive-ness,” not listed by Shanteau (1987). These are identified by “#” in Table 1. In total, there are 20 characteristics, 13 on the original list plus 7 distractors.

Rationale

The present research extends prior work in three directions. First, the list of characteristics in Shanteau (1987) were intended as generic descriptions for experts of all types. However, certain characteristics might apply to some professions more than others. For instance, “stress tolerance” may be essential for a nurse, but less important for a livestock judge. The present study is designed to evaluate domain-specific characteristics for auditors.

Second, there has been some speculation by behavioral researchers about the behavioral characteristics of experts (e.g., Camerer & Johnson, 1991). However, experts have yet to be asked what they think is important in an expert. Accordingly, the present study starts by asking professionals to list (without prompting) the attributes they associate with expert auditors.

Third, the characteristics in Table 1 were derived from a combination of formal and informal observations made during prior studies. There is not yet any evidence of how professionals at different levels of development view the items on the list. Therefore, in the second phase of this research, auditors at three levels of expertise are asked to evaluate the importance of various prespecified characteristics as descriptions of an expert auditor.

Preliminary Research

Shanteau and Peters (1989) developed an instrument to evaluate the expert attributes identified by Shanteau (1987). In a pilot study, 63 psychology students evaluated six types of experts: CPA accountant, auto mechanic, medical doctor, personnel manager, registered nurse, and truck driver. For each occupation, subjects were given a brief description of duties and responsibilities. They then

were asked to evaluate the importance of 20 characteristics, the original 13 plus 7 others included as distractors.

The results for CPA accountant showed that “current knowledge,” “experience,” and “perfectionist” were ranked as most important. “Creativity,” “warm and friendly,” and “physical appearance” were ranked as least important. The results are consistent with a naive stereotype of what accountants are like. Interestingly, two distractor items, “perfectionist” and “methodical,” were in the top five of students’ rankings. In contrast, three characteristics felt by Shanteau and Peters to be central, “self-confident,” “makes exceptions” and “creativity,” were listed in the bottom six.¹

A parallel study was done using accounting students as subjects.² Their results showed that “current knowledge,” “knows what’s relevant,” and “assumes responsibility” were ranked as most important; the only distractor in the top seven was “perfectionist.” The three least important were “physical appearance,” “makes exceptions,” and “creativity.”

This preliminary research demonstrated the feasibility of asking naive subjects about the characteristics of experts. The present study goes beyond this project in three respects: (1) Professional auditors are used as subjects instead of naive psychology students or accounting majors. (2) A comparison is made between experienced and inexperienced professionals, as well as auditing students. (3) The professionals are asked to produce their own list of characteristics, besides evaluating the prespecified list in Table 1.

METHOD

Subjects

A sample of 75 professional auditors from three international accounting firms received the experimental instrument. Thirty-six (48%) returned a complete set of responses. Nineteen of the subjects were partners or managers, and 17

were supervisors or seniors. In addition, 36 advanced accounting students taking a course on auditing volunteered to take part. At the time of the study, they had finished about two-thirds of the course.

When asked whether they viewed themselves as expert auditors, 16 managers and partners said they were; only 2 managers and 1 partner said they were not experts. Thirteen of the supervisors and seniors said they were not experts; 4 said they were. Thus, the self-designation of being an expert or not largely coincides with a manager-partner/supervisor-senior designation.

In a post-experimental evaluation, 19 professionals said the characteristics represented those possessed by an expert auditor they knew; 20 said they had these characteristics themselves.³ This result shows that most professionals found the task to be credible.

Research Instrument

The research instrument, entitled “Study of the Characteristics of Expert Decision Makers,” was filled out when each participant had time. The instructions read in part, “In this study, we are interested in finding out what characteristics are important for describing an expert decision maker... Your task will be to determine how important various characteristics are for expert decision makers in auditing.”

The instrument had three sections. The first was an open-ended request asking participants to write down “what makes someone good at making decisions.” They were told to use “single words or short phrases” in their descriptions and were given 12 blank lines; there was more blank space available and many subjects used the extra space.

The second section provided definitions of the 20 characteristics listed in alphabetical order. The definitions are paraphrased in Table 1. No distinction was made between the original list and the distractor items, and the items were

not categorized. Participants were asked to “read each (definition) several times... Pay attention to possible negative or positive aspects.” They also were told, “The definitions use words that describe decision maker’s activities. Learn the definitions in this light.”

In the third section, participants were asked to “assess the importance of the 20 characteristics for decision making in auditing. Focus on an expert in that job.” Next, a categorical ranking procedure, modified from Guilford (1954) by Brien, Haverfield, and Shanteau (1983), was explained. Subjects were asked to assign an “a” to the four most important characteristics, “b” to the next four, etc., with “e” assigned to the four least important. “These letters should reflect how important it is for a decision maker... to possess a particular characteristic.”⁴

Also, there was a short demographic section asking about background information, such as years of experience, degrees, area(s) of specialty, and professional rank. There were several questions about the participant’s views of the study. Neither their name nor any other identifying information was requested.

RESULTS

Open-Ended Attributes

In response to the request to list characteristics of experts, participants generated over 150 attributes. The 22 attributes listed by at least 10% of the respondents are presented in Table 2.⁵ These responses are transcribed directly from the written comments of participants. Except for obvious similarities (e.g., “confident” and “self-confidence”), no attempt was made to classify or combine the responses.

The attributes are listed in the first column in the order of frequency of mention by all subjects, as given in the right-hand column. The results for managers/partners, seniors/supervisors, and auditing students appear in the

second, third, and fourth columns, respectively. Each entry gives the percentage of subjects responding and the overall rank within the group. For instance, 47% of managers/partners listed “knowledge,” which ranked first.

Ten of the items coincide with the attributes specified in Shanteau (1987), including seven of the first nine items. These items, shown by an asterisk, include “knowledge,” “experience,” and “confidence” as three of the top four. This finding shows that auditors, on their own, generate many of the characteristics from Shanteau’s list.

The overall results can be organized into three groups. The top three items (“knowledge,” “experience,” and “intelligence”) are all cognitive characteristics. The next five items (“confidence,” “decisive,” “objective,” “responsive,” and “communication”) reflect presentation-style characteristics. And most of the remaining items (“creative,” “analytical,” “thinker,” “common sense,” “look at alternatives,” etc.) represent strategic attributes.

Group Differences. Across the three groups, the results are similar, e.g., “knowledge” is at the top of each list. Nonetheless, there were some notable differences. For instance, “judgment” ranked 4th for managers/partners, but 14th overall. “Confidence” was 4th overall, but was ranked 16th by this group. And “fair” was 14th overall, but 4th for the managers/partners. That suggests the managers/partners were more concerned with how an expert thought than his/her outward behavior.

For seniors/supervisors, “organized” was ranked 3rd, but was tied for 14th overall. “Intelligent” was listed 10th by the middle group of auditors, but was tied for 3rd overall. “Analytic” also tied for 3rd, but was 10th overall. The pattern suggests seniors/supervisors considered decision strategy items to be more important than other subjects.

Given the obvious differences between professionals and students, there were surprisingly few discrepancies. “Objective” was ranked 2nd by students, but was 6th overall. “Look at alternatives,” which appeared 8th for students, was 12th overall. In all, it appeared that students focused more on externally identifiable characteristics.

Prespecified Attributes

The categorical rankings of the prespecified attributes are listed in Table 3. The attributes are listed in the first column in the order of the overall means for all subjects, as given in the right-hand column. The results for managers/partners, seniors/supervisors, and auditing students are listed in the second, third, and fourth columns, respectively. Each entry gives the mean value along with the overall rank within the group. For instance, the highest ranked attribute for managers/partners was “knows what’s relevant” with a mean of 1.68.

Most of the top ranked items are from the list first proposed by Shanteau. In contrast, the distractor items, denoted by an “#,” are clustered at the bottom. Specifically, the last 5 (and 6 out of the last 9) attributes are distractors. “Decisiveness” ranked 7th (Mean = 2.52, with 1.0 as most and 5.0 as least important) is the only distractor in the top half of the list. Thus, it appears that auditors viewed the relevance of expert attributes similarly to Shanteau.

The results can be categorized into several groups. The cognitive attributes of “know what’s relevant,” “current knowledge,” “perceptive,” and “experience” are ranked 1st (Mean = 1.79), 3rd (1.94), 5th (2.11), and 6th (2.28) overall. Next, there is a group of self-presentation items: “assumes responsibility” (Rank = 2nd, Mean = 1.93), “adaptability” (4th, 2.08), “decisiveness” (7th, 2.52), “self confident” (8th, 2.55), and “communicates expertise” (10th, 2.82). The decision-strategic items of “creativity” (11th, 3.07), “inquisitive” (12th, 3.10), “problem simplification”

(13th, 3.29), “makes exceptions” (14th, 3.36), and “problem selection” (15th, 3.61) cluster around the middle.

Group Differences. Generally, the groups are similar to each other, e.g., “know what’s relevant” is ranked 1st or 2nd for all groups. Nonetheless, there are some notable exceptions. “Experience” was 6th (2.28) overall, but 3rd (2.05) for managers/partners. This suggests top auditors may place more stress on professional background than the other groups.

For the seniors/supervisors, “decisiveness” was ranked 14th (3.24) compared to the group rank of 7th (2.52). “Makes exceptions” was ranked 9th (3.00) by this group with an overall rank of 14th (3.36). And “problem selection” tied for 9th (3.00), although the overall rank was 15th (3.61). Thus, the seniors/supervisors seemed to value decision-making approach more and decision-making style less.

The auditing students showed few differences from the other groups. The most notable discrepancies were for “perceptive,” 2nd (2.00) for students and 6th (2.11) overall, and “adaptability,” 6th (2.33) for students and 4th (2.08) overall. This suggests that students view problem insights as more important and decision flexibility as less important than professionals.

Statistical Analyses. Three analyses were done to examine the results further. To explore within-group differences, the standard deviations for each item were averaged within each group. These values reflect the amount of agreement between participants. The results revealed that managers/ partners had the tightest standard deviation, 1.08. The seniors and supervisors were intermediate, with a standard deviation of 1.15. And the students were slightly higher at 1.17. Thus, there was a progression from lower variability with top experts to higher variability with students.

To compare the groups, a multiple linear discriminant analyses was performed based on the 20 variables. The constants and weighting coefficients

were nearly alike across the three groups. The derived weighting coefficients for “current knowledge,” for instance, were 104.7, 105.6, and 105.3 for the three groups. Thus, the discriminant functions did not differ across the three levels of expertise.

The Kruskal-Wallis test of medians was applied to each of 20 attributes; the conservative H-statistic adjusted for ties was used. Four significant differences between groups (at the .05 level) were observed: “adaptability” (2.11, 1.53, and 2.33 for the three groups), “decisiveness” (2.21, 3.24, and 2.34), “energetic” (3.84, 4.06, 3.28), and “problem selection” (4.05, 3.00, 3.66). In each case, the seniors/supervisors differed from the other two groups.

DISCUSSION

This study used two methods for eliciting attributes about expertise from three groups of auditors. The first method involved an open-ended listing of attributes. The second reflected a categorical ranking of attributes identified from previous research. Participants were not only able to do both tasks, but most indicated the attributes were descriptive of themselves or others.

The implications of the results will be discussed in three sections. First, the overall trends will be described. Second, the differences between groups will be discussed. Lastly, the implications for expert systems, as well as training, selection, and promotion will be considered.

Overall Trends

Both methods showed that “knowledge,” “knowing what’s relevant,” and “experience” are the most important attributes of experts. These attributes represent cognitive or thinking characteristics. Therefore, the participants agreed that what an expert knows and how he/she thinks is essential.

The second group of attributes (“assumes responsibility,” “self-confidence,” and “communication”) reflect presentation or style characteristics. The same

pattern emerged for both methods. Thus, participants placed self-presentation or outward image characteristics second in importance.

The next set of characteristics (“creativity,” “problem simplification,” and “analytical”) seem to be primarily strategic. Again, the two methods largely agree. That means participants see how an expert approaches a problem as intermediate in importance.

At the bottom of the prespecified list are personal appearance characteristics (“physical attractiveness,” “warm and friendly,” and “methodical”). These items were included as distractors on the original list. Subjects indicated that such items are unimportant in an expert.⁶

In summary, the participants identified cognitive/thinking characteristics as most important in an expert, followed by presentation/image, and strategy/problem solving, with personal appearance characteristics last.

Group Differences

In comparing the three groups of auditors, the primary finding is their similarity. For both open-ended results (in Table 2) and prespecified results (in Table 3), the parallel between the columns is striking. Usually, the managers/partners, seniors/supervisors, and students placed most attributes in same relative position.

Nevertheless, there were a few differences between the three groups. The top group of managers/partners tended to place more emphasis on how an expert thinks than on how an expert behaves. In contrast, the middle group of seniors/supervisors tended to put more importance on decision-making strategy. Finally, students stressed externally identifiable characteristics.

There was another difference between the groups. The between-subject variance was lowest for the top experts and highest for the students. This suggests that consensus (or reliability) increases as expertise increases. Previous

research on experts, in contrast, often has reported an inconsistent relation between expertise and reliability (e.g., Einhorn, 1974).

Implications

Definition. The identification of attributes of expertise has implications for determining who, and who is not, an expert. The results here suggest that what an expert knows and how he/she uses that knowledge is more important than the self-presentation or problem-solving strategies, and that appearance and personal characteristics are least important.

This finding is meaningful for two reasons. First, it means that the patterns of characteristics associated with expertise potentially could be used to define the behavior patterns associated with an expert. Determining who deserves the label of “expert” has been a perplexing problem in analyses of experts (Shanteau, 1987). The present results provide a new means by which this determination can be made.

Second, most of the important characteristics in Tables 1 and 2 are measurable. Characteristics such as “knowledge,” “experience,” “intelligence,” and “creativity” could be examined using standard psychological tests. And some others, such as “confidence,” “decisiveness,” “objectivity,” “adaptability,” and “perceptiveness” have the potential to be measured, if appropriate tests could be identified or constructed.

Training and Selection. Knowledge of expert attributes is important for the selection and development of experts. To train novices to become experts, it is necessary to recognize the special characteristics of experts and to devise training and/or selection programs which reflect those characteristics (Shanteau, 1988).

But, it is conceivable that at least some attributes associated with experts may be untrainable, e.g., “creativity” and “self-confidence.” For such characteristics, emphasis should be placed on selecting novices whose cognitive

processes most closely fit the pattern associated with experts. These novices then might receive training on more teachable skills, e.g., “knowledge” and “assuming responsibility.”

This approach also has implications for job assignments and promotion decisions. Identification of the personal attributes may provide one means of verifying who has the potential, and who does not, to become a top expert in a field such as auditing. What’s needed now is research on how to measure and evaluate the relevant attributes.

Expert Systems. The identification of the attributes has clear implications for the development of expert systems. An important step in creating such systems is the selection of one or more experts. For instance, the tax consulting expert system, ExperTAX, was based on several tax specialists with a known reputation in tax planning (Shpilberg, Graham, & Schatz, 1986). However, no independent criteria were used to verify whether they were or were not experts.

Gibbins and Larocque (1990; also see Bonner & Lewis, 1990) have suggested that expertise in accounting depends on a variety of variables, such as personal attributes, task constraints, and incentives. However, the authors note that while some of these variables are observable, others are not.

The present research shows that it is possible to identify a set of characteristics associated with expertise. The results indicate considerable agreement about what is important in an expert. If the measurement problem (discussed above) can be resolved, then it should be possible to use these attributes to choose experts for the construction of expert systems.

Additional research

The present research project has supplied evidence that professionals can agree on the personal attributes important in an expert. The results confirmed that the characteristics identified by Shanteau (1987) are important to auditors.

Surprisingly, there were few differences between the different levels of participants. This suggests a consensus in identifying the attributes of expert auditors.

However, several characteristics not on the original list were identified in open-ended phase. Such attributes as “intelligence,” “objectivity,” and “common sense” may need to be added to the list. Clearly, the effort to identify expert characteristics should continue.

Interestingly, one item included as a distractor, “decisive,” was important in both the open-ended and the prespecified lists. It is likely that participants viewed this term as it is commonly defined, not as it was described in the instructions. In any case, this attribute may need to be reclassified.

Additional research is needed on how the characteristics should be organized and grouped. Several patterns were identified in this study, such as the set of presentation/image characteristics. These patterns should be confirmed by asking experts how they see the attributes fitting together.

Lastly, further work is needed on other domains of expertise. Although auditing has been a rich source of information about experts (Smith & Kida, 1991), there is little evidence whether the results generalize. Parallel research on expert characteristics is needed in other domains.

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Table 1. Attributes of Expert Decision Makers*

Attribute	Description
<u>Adaptability</u>	Experts adjust their decision-making strategies to fit the current situation. They are responsive to changes in conditions of the on-going problem situation.
<u>Assumes Responsibility</u>	Experts accept responsibility for the outcomes of decisions, successful or unsuccessful. They are willing to stand behind their decisions.
<u>Creativity</u>	Experts can find novel or unique solutions to difficult problems. They are capable of generating new approaches to established problems as necessary.
<u>Communicates Expertise</u>	Experts can convince others that they have specialized knowledge. They can effectively communicate their ability to make decisions to others.
<u>Current Knowledge</u>	Experts have an extensive knowledge base. They make a special effort to keep up with the current facts, trends, and developments.
<u>Decisiveness#</u>	Experts make decisions quickly, clearly, and emphatically. They do <u>not</u> bother with a detailed analysis of the problem situation.
<u>Energetic#</u>	Experts are capable of investing large amounts of energy into problem solving. They give the appearance of going the extra mile when make decisions.
<u>Experience</u>	Experts use past experience to make decisions more-or-less automatically. Their background and experience produces decisions without obvious effort.
<u>Inquisitive#</u>	Experts exhibit a high degree of inquisitiveness in problem solving situations. They have a tendency to work on problems just out of curiosity.
<u>Knows What Is Relevant</u>	Experts, based on experience, can readily distinguish relevant from irrelevant information in a problem. They use only what is relevant; they ignore what is not.
<u>Makes Exceptions</u>	Experts know when to follow established decision strategies and when not to. They don' t have just one way to solve problems.
<u>Methodical#</u>	Experts approach each new problem situation very systematically with one thought-out plan of attack. They use a set way to examine problems and carefully proceed step-by-step to make a decision.
<u>Perceptive</u>	Experts are able to extract information from a problem that others cannot see. Their decision-making ability is enhanced by insightful recognition and evaluation of confusing situations.
<u>Perfectionist#</u>	Experts attempt to achieve high levels of decision making by seeking the best of all possible strategies. They keep working to find the absolute best solution for the problem.

Table 1, Continued. Attributes of Expert Decision Makers*

Attribute	Description
<u>Physical Appearance#</u>	Experts present the outward image of someone who is good at solving problems. They have the style and physical appearance of someone who makes good decisions.
<u>Problem Selectivity</u>	Experts use foresight and planning in selecting which problems to work on and which problems to work on and which not. They tackle those problems that they can effectively handle or resolve.
<u>Simplification</u>	Experts know how to use a divide-and-conquer approach with complex problems. They work on parts to get a better understanding of a complex problem.
<u>Self-Confidence</u>	Experts have a strong belief in their ability to make good decisions. They are calm and self-assured while making decisions.
<u>Stress Tolerance</u>	Experts are able to make decisions under high stress situations. They continue stress situations. They continue to be effective problem solvers even as conditions progressively worsen because of high levels of pressure.
<u>Warm and Friendly#</u>	They get along well with people, even in difficult decision-making tasks. They use personality to smooth things over and appear more convincing when making decisions.

* These descriptions were adapted from Shanteau (1987) by Peters and Shanteau (1988).

These characteristics are distractors intended to look relevant.

Table 2. Attributes of Auditors Identified as Important; Open-Ended Questions

Attribute	Position						Overall	
	Manager/Partner		Senior/Supervisor		Auditing Student		Results	
	n = 19		n = 17		n = 36		n = 72	
	% (Rank)		% (Rank)		% (Rank)		% (Rank)	
Knowledge*	47	(1)	71	(1)	56	(1)	57	(1)
Experience*	26	(4)	59	(2)	25	(4)	33	(2)
Intelligent	32	(3)	18	(10)	36	(3)	31	(3)
Confidence*	16	(11)	29	(3)	25	(4)	28	(4)
Decisive*	47	(1)	29	(3)	17	(8)	28	(4)
Objective	10	(16)	18	(10)	39	(2)	26	(6)
Responsible*	21	(7)	24	(9)	25	(4)	24	(7)
Communication*	16	(11)	29	(3)	22	(7)	22	(8)
Creative*	16	(11)	29	(3)	17	(8)	19	(9)
Analytical	21	(7)	29	(3)	11	(13)	18	(10)
Thinker	16	(11)	12	(14)	17	(8)	15	(11)
Common Sense	21	(7)	0	(17)	11	(13)	11	(12)
Look at Alternatives	10	(16)	0	(17)	17	(8)	11	(12)
Perceptive*	10	(16)	6	(15)	11	(13)	10	(14)
Fair	26	(4)	0	(17)	6	(18)	10	(14)
Flexible*	5	(21)	18	(10)	8	(17)	10	(14)
Good Listener	10	(16)	18	(10)	6	(18)	10	(14)
Informal	21	(7)	18	(10)	0	(22)	10	(14)
Inquisitive*	16	(11)	0	(17)	11	(13)	10	(14)
Judgment	26	(4)	0	(17)	6	(18)	10	(14)
Logical	10	(16)	0	(17)	14	(12)	10	(14)
Organized	0	(22)	29	(3)	6	(18)	10	(14)

* Attributes which coincide with those listed by Shanteau (1987); see Tables 1 and 3.

Table 3. Importance Rankings of Expert Attributes by Auditors; Prespecified Attributes

Attribute	Position						Overall	
	Manager/Partner		Senior/Supervisor		Auditing Student		Results	
	Mean	(Rank)	Mean	(Rank)	Mean	(Rank)	Mean	(Rank)
Know What's Relevant	1.68	(1)	1.47	(1)	2.00	(2)	1.79	(1)
Assumes Responsibility	2.05	(3)	2.18	(4)	1.74	(1)	1.93	(2)
Current Knowledge	1.84	(2)	1.94	(3)	2.00	(2)	1.94	(3)
Adaptability	2.11	(5)	1.53	(2)	2.33	(6)	2.08	(4)
Perceptive	2.22	(6)	2.36	(5)	2.00	(2)	2.11	(5)
Experience	2.05	(3)	2.59	(6)	2.25	(5)	2.28	(6)
Decisiveness#	2.21	(6)	3.24	(14)	2.34	(7)	2.52	(7)
Self Confident	2.53	(8)	2.71	(7)	2.49	(8)	2.55	(8)
Stress Tolerance	2.79	(9)	2.88	(8)	2.77	(10)	2.80	(9)
Communicate Expertise	3.00	(12)	3.06	(11)	2.60	(9)	2.82	(10)
Creativity	2.84	(11)	3.06	(11)	3.19	(12)	3.07	(11)
Inquisitive#	2.79	(9)	3.53	(15)	3.06	(11)	3.10	(12)
Problem Simplification	3.05	(13)	3.06	(11)	3.53	(15)	3.29	(13)
Makes Exceptions	3.47	(14)	3.00	(9)	3.47	(14)	3.36	(14)
Energetic#	3.84	(16)	4.06	(18)	3.28	(13)	3.61	(15)
Problem Selection	4.05	(17)	3.00	(9)	3.66	(16)	3.61	(15)
Methodical#	4.21	(18)	3.94	(16)	3.83	(17)	3.96	(17)
Warm and Friendly#	3.63	(15)	3.94	(16)	4.29	(19)	4.03	(18)
Perfectionist#	4.63	(19)	4.06	(18)	4.24	(18)	4.30	(18)
Physical Appearance#	4.68	(20)	4.59	(20)	4.57	(20)	4.61	(20)

Distractor characteristics.

AUTHOR NOTES

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FOOTNOTES

¹ Only the results for CPA accountant are considered here. A paper describing the findings for the other professions can be obtained from the second author.

² The assistance of Paul Harrison in the gathering of this data is gratefully acknowledge.

³ These do not add up, since subjects could answer yes (or no) to each question.

⁴ This procedure simplified the ranking process; it can be difficult and time-consuming to rank order 20 items. It also prevented participants from saying that everything is equally important; a problem found in pilot work when a rating scale was tried.

⁵ A copy of either the complete results or the questionnaire can be obtained from the first author.

⁶ Confirming this interpretation, there were no personal characteristics listed in the top 22 items on the open-ended list.