

PROFESSIONAL ACCOUNTING ETHICS: A VISUAL ANALYSIS OF PUBLIC PERCEPTION

Renato Ferreira Leitão Azevedo

Ph.D. Student in Education (Ph.D. Program) by University of Illinois

Master and Bachelor's degree in Accounting, and Controllership (FEA/USP) and a Bachelor's Degree in Information Systems (Universidade Anhembi Morumbi)

Professor in MBA Controller and Specialization Courses at FIPECAFI

Address: 2111 Hazelwood Drive ap. 202 - Urbana, IL - USA, 61801

E-mail: razeved2@illinois.edu / renatoflazevedo@usp.br

Edgard Bruno Cornacchione Junior

Bachelor, Master, Ph.D. and Associate Professor of Accounting Science at FEA/USP and Ph.d. in Education at University of Illinois (USA)

Professor at FEA/USP, Head of the Department of Accounting and Actuarial at FEA/USP and Scientific Director of ANPCONT

Address: Av. Prof. Luciano Gualberto, 908 (FEA2, Sala 113) São Paulo, SP, 05508-010

E-mail: edgardbc@usp.br

Abstract

The decline in both the number and quality of students choosing accounting programs has been a worldwide source of concern to scholars and practitioners. According to Albrecht and Sack (2000), that decline is a consequence of several factors, such as changes in business environment, decrease in salary levels and development of alternative careers perceived as more attractive by students and lack of information and/or misunderstanding related to accounting careers. For Carnegie and Napier (2010), comprehension of such external images related to accounting careers and accountants is important for assessing the roles of these professionals in a wider social context. The success of the accounting profession, according to Belski *et al.* (2004), largely depends on how it is viewed by the public, considering that the image of the accounting profession has been damaged in the recent past by the widely publicized accounting frauds, scandals and failures involving accounting firms and accountants. To support a better understanding of this phenomenon, the objective of this study is to identify and analyze whether the accounting profession is negatively stereotyped by public perception according to ethics. Based on an adapted photo-survey, with 1,034 randomly selected respondents, and tests of differences between means, the central hypothesis of this study was rejected: it is not possible to state that accounting professionals are negatively stereotyped for professional ethics. Also, there were no significant differences based

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on gender, academic background or education levels of the respondents, but on the other hand is possible to confirm a positive perception based on confidence interval analysis. Implications for practice and recommendations for future studies are both presented in the last section.

Key-words: Professional ethics; Accounting; Stereotypes; Public perception.

1. INTRODUCTION

The decline in the past two decades in both the number and quality of students choosing accounting programs has been a worldwide source of concern to scholars and practitioners. According to Albrecht and Sack (2000), that decline is a consequence of several factors, such as changes in business environment, decrease in salary levels and development of alternative careers perceived as more attractive to students and lack of information and/or misunderstanding related to accounting career. According to those authors, accounting education is still too tied to knowledge memorization and mastering of content in detriment to development of students' skills and attitudes as forms of enriching their lives and making them successful.

Accounting professionals and academic entities announced campaigns to attract new students to the accounting career (Hunt *et al.*, 2004; Hoffjan, 2004; Byrne and Willis, 2005; Dimnik and Felton, 2006; Sugahara and Boland, 2006; Carnegie and Napier, 2010). These campaigns aim at improving public perception about the accounting career, which often is viewed in a mistaken and stereotyped way. This phenomenon has been especially documented during the past decade in several regions of the world: United States (Albrecht and Sack, 2000; Schlee *et al.*, 2007), Australia (Jackling, 2002), United Kingdom (Marshall, 2003; Carnegie and Napier, 2010), Germany (Hoffjan, 2004), Ireland (Byrne and Willis, 2005), Japan (Sugahara and Boland, 2006), and Brazil (Azevedo *et al.*, 2010).

In Brazil, the Federal Council of Accounting (CFC), through the actions of its Regional Accounting Councils (CRCs), also is concerned over such matters and in response has promoted programs such as Excellence in Accounting, Continued Professional Education, Female Accountant, Socioenvironmental Responsibility and Accounting Volunteer Program, among others. According to Saemann and Crooker (1999) and Michael and Chen (2006), the range of skills that the labor market values and that firms need in their employees goes beyond specific technical and includes organizational, communication and strategy skills as well as social responsibility and ethical behavior. The International Federation of Accountants (IFAC, 1995) in more than a decade, designed a proposal for an international guide and educational practices in accounting, presenting the idea that the labor market requires that accounting practitioners must have: (a) the ability to work in teams; (b) the ability to creatively use technology; (c) general knowledge, enabling effective thinking and communication, as well as critical analysis; (d) knowledge on organizations and the business environment; (e) knowledge of information technology; (f) knowledge of accounting; (g) intellectual skills; (h) interpersonal skills; (i) communication skills; (j) commitment to acting in accordance with integrity and objectivity, as well professional independence; (l) ethical attitude; (m) concern with the public interest, citizens' rights and social responsibility; (n) attitude and commitment to continued learning; and (o) experience in making judgments.

At the same time, accounting practitioners are still obliged to defend themselves against the perception that their work is irrelevant, thus having to provide additional evidence of competence and integrity (Hunt *et al.*, 2004; Carnegie and Napier, 2010). Success in the accounting profession, according to Belski *et al.* (2004), largely depends on how the profession is seen by the public, and the image of the accounting profession has been damaged in the recent past by the widely publicized accounting frauds, scandals and failures involving accounting firms and accountants. There are several recent cases in the Brazilian context that have come to public notice regarding frauds and corruption, a fact that can lower public perception of the importance of professional and personal ethics.

Leeds (2007) describes that despite the large evolution toward Brazilian democratization in the past two decades, the criminal justice system and legal enforcement of laws has advanced very little. At the same time, the author points out that public safety continue to be one of citizens' major concerns in all social strata. Leeds (2007) also indicates that nongovernmental organizations and investors recognize the risk of weakened democratic institutions and threat the economic prosperity due to the low levels safety and fairness in application of laws. The model developed by Hofstede (1997) to describe cultures provides elements to understand

the Brazilian case. According to this model, Brazilian culture is characterized by high distance from power compared to the world standard, a more collective society in relation to the Latin American average and slightly lower values of assertiveness and compliance with standards in relation to the world, albeit slightly higher than the Latin American average. All these are characteristic of the masculinity index presented by the author. Still, Brazil has a long-term view higher than the world average, but with greater conservatism and resistance to situations of uncertainty.

	Brazil	Latin America	World
Distance from Power	69	62	55
Individualism	38	15	43
Masculinity	49	42	50
Aversion to uncertainty	76	80	64
Long-term orientation	65	N/A	45

Chart 1 – Brazilian Cultural Dimensions According to Hofstede

Source: Adapted from Hofstede (1997) and Kuchinke and Cornachione (2010).

One would expect, considering this scenario, that opportunistic accounting choices could be perceived by the population as activities that would directly affect accounting practitioners’ reputation and ethics. Azevedo (2010) noticed in a metonymic process that people tend to understand the accounting profession, just in its tax dimension or still associated mistakenly as an exact science rather than an applied social one. Therefore, a larger space for opportunistic would be opened in a country with a lower level of legal enforcement (in which managers can choose different accounting methods to enhance their utility function and well-being, deliberately increasing a firm’s value or reducing its tax burden, at the expense of other parties (Watts and Zimmerman, 1990).

1.1 Research goal and problem

Scientific research begins with the choice of an issue-topic-problem, and must concomitantly comply with the principles of importance, originality and feasibility. In this sense, Castro (1978) stresses that research is truly scientific when: (a) it is connected to an issue that substantively affects a segment of society or is linked to a theoretical issue deserving attention (importance); (b) when it has the capacity to surprise, bringing out new elements and enabling new understandings related to phenomena (originality); and (c) it is liable to observation in relation to theoretical and technical aspects, time conditions, cost and researchers’ competences (feasibility).

In view of the limitation of previous studies on perceptions and stereotypes related to the accounting profession, restricted to identification and analysis of the views of specific groups, such as students, professors and other accounting practitioners, this study stands out by posing a broader research question, namely: “*Are accounting practitioners stereotyped negatively by public perception in relation to ethics?*”

1.2 Justification and contributions

It has been known for decades that students consider stereotypes about different careers when deciding on their academic training (Decoster, 1971). According to Carnegie and Napier (2010), an understanding of accounting and practitioners’ external image is important for appreciating their roles in a broader social context. The accounting profession fails to project trust and respectability and to offer challenges, rewards, and perspectives sufficient to attract and retain more talented, ethical, and competent students and professionals.

While stereotypes can be useful by allowing people to simplify and understand large amounts of social information and thus make inferences on others going beyond the available information (Ensari and Miller, 2002; Robbins, 2005), incorrect or inadequate stereotypes and perceptions can result in erroneous and inconsistent evaluations and expectations (Robbins, 2005; Schlee *et al.*, 2007). If people perceive accounting as an area that is linked with ethically doubtful practices or still unconnected to social commitment, students and professionals that value ethics and social responsibility will not pursue accounting careers.

Even though others may be the reason for this alarming lack of interest in accounting training, as

Ewing *et al.* (2001) point out, if a profession has developed a stereotyped image among the public, it is crucial to determine whether this stereotype is a benefit or a detriment to the profession. When stereotypes inhibit the capability of a profession to represent its members faithfully and to attract new students, it is necessary to understand and fight them.

This study seeks, as a differential, to explore empirically the image of accounting professionals related to ethics by the public at large. This study also focuses on Brazil's position in the international debate. Thus, it contributes to enlarge the research cycle on the issue in other parts of the world, which is limited in the amount of empirical studies and in extension, mainly because the few existing studies mainly involve Northern Hemisphere countries and only analyze restricted and segmented groups. Those are usually limited to academia, while they do not directly observe the variety of perceptions.

From a methodological standpoint it contributes by adopting the photo questionnaire, still little explored in accounting research. This approach, as Dempsey and Tucker (1991) explain, is able to capture richer data than those obtained only with verbal procedures and, therefore, may bring out new perspectives for the accountant perception and stereotypes issue.

Concerning relevance and practical contribution, this study's potential results provide evidence for debates, actions and policies to face factors associated with accountant stereotyping. Two specific contributions are anticipated: (a) increase in awareness on the stereotype threat; and (b) arguments for both academics and practitioners to review their policies, attitudes and actions, aiming at changing any negative stereotypes.

2. LITERATURE REVIEW

The expression stereotype appeared in the typographic vocabulary meaning a metal plate of fixed characters for serial printing, only later acquiring connotations in psychology and sociology. The first usage in the social sciences of the stereotype term is attributed to Walter Lippmann's book *Public Opinion* (Lippmann, 1922; Carnegie and Napier, 2010). Lippmann (1922) considered stereotypes as simplified images of the world, forming generalizations, not always accurate, about events, groups and categories of people, aiming at satisfying the need to perceive the world in a more comprehensible way than it really is.

The perception, for Robbins (2005), may be defined as a process through which individuals organize and interpret their sensorial impressions, intending to provide meaning to their environment. Nevertheless, this perception may be substantively different from objective reality. The same author highlights that perception is important to study behavior, because people behave based in their perception of reality and not on reality itself. On the other hand, according to Robbins (2005) stereotypes occur when people use their perception about a group or a context to generalize opinions on individuals, as a natural part of a simplification process that human beings use to understand phenomena.

Generalization has advantages as a natural mechanism to simplify the complexities of the world, allowing maintaining coherence of already formed opinions. From the cognitive psychology point of view, stereotypes are social as well because they refer to characterization and treatment of groups' cognitions, respect for individuals that are identified under generic social categories, including forming a particularly large role in the constructive memory (Atkinson *et al.*, 1983). The theory on which this rationale is based is known as the Stereotype Threat Theory (Atkinson *et al.*, 1983; Steele and Aronson, 1995; Steele *et al.*, 2002; Aronson *et al.*, 2005).

Based in this theoretical perspective, we also employed content analysis for synthesis of specific literature on stereotypes and perception about accounting ethics. Holt (1994), Smith and Briggs (1999) found, when analyzing films, that the image of accountants usually is perceived as that of professionals lacking ethical standards. Generally, accountants are viewed only as flexible when concomitantly they use their skills in the practice of illegal acts or anti-ethical proposals. In contrast, a positive view as an upright and honest professional is pointed out by DeCoster (1971), Bougen (1994), Friedman and Lyne (2001), Dmnik and Felton (2006), and Felton *et al.* (2007). Accounting professionals in many movies are portrayed, according to Bougen (1994), as highly committed to confidentiality in the business environment. Felton *et al.* (2007) carried out a study involving factorial analysis of 110 films where accountants were portrayed, analyzing the characters' ethical standards, behavior and values. Those authors find that accountants' ethical behavior usually portrayed in movies is positively associated with their intrinsic characteristics and values, although negatively associated with their instrumental competences and values. The results found

by Felton *et al.* (2007) also suggest that it is more probable to expect unethical behavior from accountants in movies, when they are highly competent, comparatively to less skilful accountants, who are usually portrayed as honest, optimistic, calm and pleasant. These findings, according to Hunt *et al.* (2004), show a disorder when a profession concomitantly needs ethical values and behavior and also communication skills and creativeness. Sugahara *et al.* (2006), in an empirical study among high school teachers (128 in the United States, 87 in Japan, and 36 in New Zealand), found that these teachers perceive accountants as having lower social status, lower ethical standards and less social power compared to lawyers and physicians, but higher than engineers.

Smith and Briggs (1999) highlight that the image projected in publicity campaigns of hedonistic accountants, who only consider their own pleasure and satisfaction, may convey disastrous consequences of an ethical nature, in a scenario in which nobody notices the firms' long-term interests. Ewing *et al.* (2001) analyzed pictures of accountants in publicity campaigns and noticed that they are portrayed as attractive and adventurous in external spaces, such as get together and field meetings and other situations in outdoor and leisure environments, corroborating the evidence found by Smith and Briggs (1999) of the hedonistic accountant. Jeacle (2008) also reports similarities when analyzing auditing firms' publicity campaigns, evidencing that advertisements adopt topics involving making new friends inside and outside the work environment, to engage in fun activities, and making use of exotic locales and settings that are divorced from traditional views of firms.

Regarding the profession's image as a whole, accountants are particularly concerned, in this sense, with unethical behavior and the impact of a few individuals' behavior after the events related to the Arthur Andersen scandal, according to Felton *et al.* (2007). The work of Belski *et al.* (2003) probably was the pioneer in evaluating the impact of scandals such as the Enron case in public perception of accounting professionals. The authors suggest in their exploratory study that public perception of accounting professionals did not change significantly post-Enron, since the profession's prestige was already low even before the scandals. Independently of these events, educators and practitioners face the challenge, for the authors, of repositioning the profession in a more positive way, aiming at recovering public trust regarding the profession. The results of Belski *et al.* (2003) contradict a large portion of literature on the matter, since they point to evidence those business students rank the profession's prestige significantly worse than that attributed by the public, and more surprisingly, that accounting students themselves attribute low prestige to the profession.

In the view of Francisco's *et al.* (2003), given that the negative stereotypes emerging from the news media also involve the perception of a career that involves unethical practices, there can also be an additional barrier to selecting students committed to ethical values and to strengthening the professional class. Bougen (1994) states that, in general, accountants' creativity began to be associated and perceived as a malleability, which is tested to the limit to increase profits in a firm's financial statements that need "surgery and cosmetics". Friedman and Lyne (2001) point also to a change that may be harmful to accountants, whose stereotype has been improved regarding creativity but with possible detriment due to dishonest dealing.

Carnegie and Napier (2010) also point toward this trade-off, in which accountants in the traditional view suffer from the stereotype of being boring, uncreative and non-commercial, but enjoy the privileges of positive stereotype of being reliable, honest, and upright. However, in the modern view, accountants are seen as guided and focused on business, more emotional and creative, but suffering from the stereotype of working as clients' sycophants and being too flexible, opportunistic and willing to deviate in their standards. Figure 1 represent this dilemma in a graphic representation of the accounting environment, in which the difference is stressed between serving the objectives of the public interest as being the primary purpose of the so-called traditional accountant, in opposition to the stereotype of a modern business professional who primarily aims at adding value to clients' businesses.

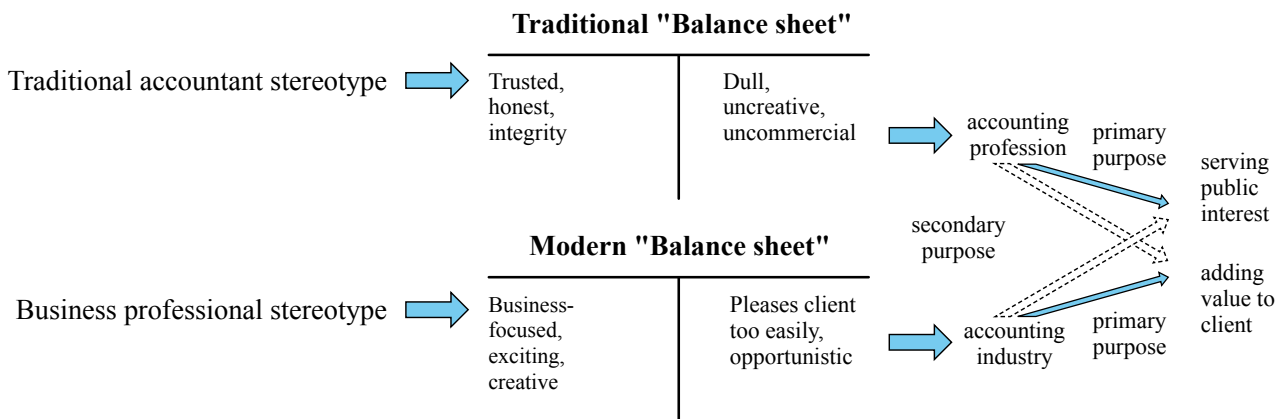


Figure 1 – Trade-off between accounting creativity and ethics in the traditional and modern visions
Source: Carnegie and Napier (2010)

Figure 2 proposes a synthesis of some literature review studies, regarding the “ethics” variable and respective stereotypes:

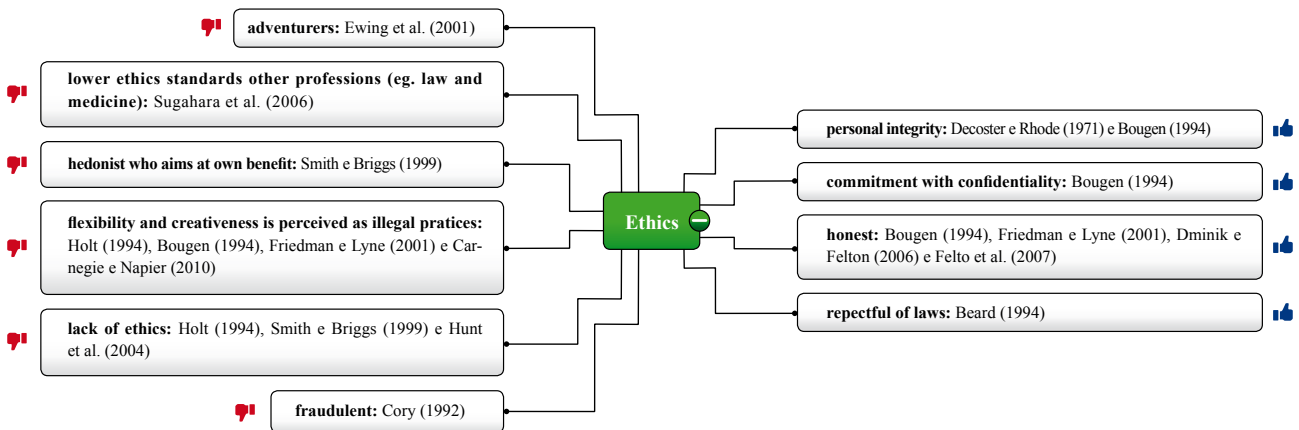


Figure 2 – Stereotypes related to the “ethics” variable

The specific literature on stereotyping and perception of accounting professionals regarding ethics feature is highly dichotomous, although recent studies tend to be more negative. Carnegie and Napier (2010), in a more recent work, provide a rationale to justify such an extreme variation in the perception of accounting professionals, from honest and reliable to opportunistic and fraudulent.

3. METHOD

This is a non-experimental study with descriptive relations and causal comparisons, developed in function of an exploratory framework, in accordance with Gall *et al.* (2007), to provide a deeper view of one of the dimensions and perspectives dealt in the dissertation developed by Azevedo (2010). For this purpose, we adopted an interview approach based on a photo questionnaire, with the protocol adapted from Dempsey and Tucker’s proposal (1991). The adaptation refers to using drawings instead of pictures due to, among other reasons, the complexity of finding pictures that gather and concentrate the stereotypes assessed in the literature review.

The feasibility of the photo questionnaire method has been documented in anthropological and sociological studies (e.g. Becker, 1978; Collier and Collier, 1986; Garfinkel, 1967) and specifically in the educational area (e.g., Fang, 1985; English, 1988). According to Dempsey and Tucker (1991), the techniques of interviews and questionnaires based in pictures are able to capture richer data than those obtained just with separate verbal procedures.

This method offers a promising way of collecting data in situations where one desires to consider samples of a complex phenomenon, reducing the possibility of not considering the systemic relations of observed reality. In the photo questionnaires, according to Dempsey and Tucker (1991), respondents tend to analyze images and react to stimuli present in these images with more attention than the reaction expected through written or oral means. Images set out memory triggers (recall) and they provide greater focus in the interview process, enabling a deeper picture of the studied objects as well as the intentional features. These work as both stimuli and checks of perception.

In this sense, drawings have the advantage of being able to be constructed at two extremes of meaning, presenting negative and positive stereotypes researched in the literature, or also the antonymous idea of negative stereotypes that one intends to submit to respondents' evaluation. Thus, on the one hand, while drawings can be considered complex by gathering a range of researched stereotypes in just one image; on the other hand they are simpler in terms of noise. Another advantage in adopting drawings appears in the validation process, since throughout the adjustment process to that the drawings really express and reflect the research features, the artist has greater freedom to redraw images while interacting with the validation group until the final version of drawings is set. Finally, a more pragmatic additional advantage involves copyrights, where using picture could become more problematic concerning people's image rights, and they can include more scenario and lighting biases, in addition to respondents' preferences for other factors with more complicated identification in the process of choosing images.

The strategy designed by Dempsey and Tucker (1991) comprises nine steps, as follows: (1) identifying supporting issues and research perspective; (2) preparing the approach for data collection; (3) photography session (herein adapted to drawing session and validation by focus groups); (4) organizing and tagging photos (herein also adapted to drawings, as already explained); (5) preparing the protocol; (6) pilot testing; (7) data collection; (8) data analysis; and (9) summary of results.

3.1 Identifying supporting issues and research perspective, and preparing the approach for data collection

According to Dempsey and Tucker (1991), the purpose of these steps is to clarify the research objective, the issues and approaches for the study and, later, to establish content parameters for designing images. These items were previously described in the objective and theoretical basis section.

3.2 Content analysis, designing and validation of drawings

Content analysis, according to Bardin (1977), is used after definition of the research topic and problem, preceded by review of the literature pertinent to the investigated problem and choice of theoretical framework supporting the study. Next, data collection means are defined, when one deals with research of the exploratory type. In this study we chose direct documental research by reviewing the literature from primary and secondary sources.

All texts were printed and read, at least twice, identified with marks when directly evidencing stereotypes related to accounting professionals' ethics or ethical issues related to accounting. A third party through independent reading checked the text marks. Drawings were then created by a cartoonist to create the basis of the instrument from the perceptions gleaned from the literature review and validated by the focus group.

The focus group comprised eight accounting professionals, representing several working fields in the area, with gender balance (four men and four women). Validation took place in four rounds in a virtual environment, during the period from May 31 to June 3, 2010. The cartoonist, in each interaction, made changes in the drawings that were suggested by the group until reaching consensus for the final versions.

Participants also validated collectively the drawings made by the cartoonist in order to decrease the misunderstanding of drawings by portraying the highlighted points during the session. Thus, we tried to achieve, consensually, images that portrayed positive and negative stereotypes for the raised hypothesis. We asked the focus group to evoke words that were related to the ethics concept and to accounting professionals, in order to validate and make adjustments to the drawings used in the field survey. The words evoked by this focus group are expressed below:

Ethics	Positive: cautious, code of conduct; coherent; commitment; duty; honest; laws; maintaining accounting records faithful to represented transactions; norms; standards; professionalism; prudent; rules; reserved; and responsibility.	Negative: excessive ambition; unethical behavior; gaps; agency conflict; corruption; dishonest; imprudent; self-interest; ill will; manipulation; and taxes.
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Chart 2 – Detailing of words evoked by the focus group to validate the ethics category.

Still related to the validation process of the drawings used in the field survey, we called on the Accounting Education Technology Studies Group – GETEC, in a round of comments about the images. All images were projected on a large screen and received criticism and contribution from eleven participants: two professors and nine students (Master’s and PhD degrees) in the accounting education and research area, of which five were women and six were men. The participants in this validation process were gathered in a large room, with freedom of expression, in chairs arranged in U shape around the presented slides. The session lasted about 25 minutes, after the weekly GETEC meeting, on June 1, 2010. The contributions were sent again to the artist for adjustment and redrawing of some images. The final versions had a last interaction with the group of experts in accounting through electronic means, and since they were unanimously approved, they were taken as finished for field survey use.

3.3 Organizing and tagging drawings

The drawings prepared by the artist were organized for the two gender dimensions, taking into consideration positivity, neutrality, and negativity of portrayed stereotypes for the ethics category, as shown in the following poster:

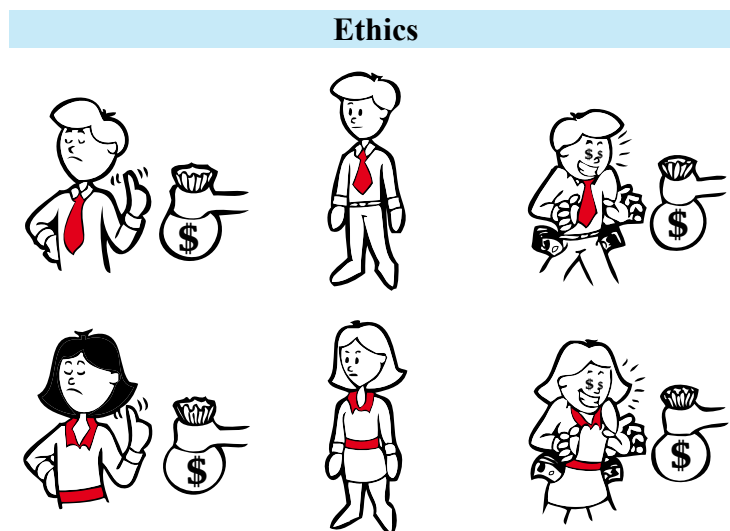


Figure 3 – Poster representation of ethics category used in the study.
Source: Designed by the authors and by the artist Alexandre Ostan.

We also added the name of the research category to better contextualize the subject of analysis for the respondents, before preparing the protocol for applying this material during the field survey stage.

3.4 Preparing the protocol

3.4.1 Selection of respondents and characterization of collection site

For this purpose we adopted the method of systematic sampling, which in accordance with Gall *et al.* (2007, p. 168), “[...] it is a simple random sampling procedure that can be used if the sample to be select is too large and the target population is accessible.” The first step to execute this sampling procedure was to obtain

a random number, to serve as a basis for counting the intervals between respondents selected in the streets. The process was repeated to select the upcoming respondents, while counting was restarted after completion of the interview with each participant. To ensure randomness of the selection process of subjects, we restarted the counting in cases where the selected individual declined to participate in the survey and for cases when several individuals simultaneously passed by the interviewer, making ordering impossible without subjective interferences of the researcher in selecting subjects.

Regarding the data collection site, Paulista Avenue in downtown São Paulo, is characterized by a flow of 1.2 million passers-by daily (*Folha de SP*, 2009). Paulista Avenue, with over one century of history, is considered one of the most important locations in Sao Paulo, running through one of the major financial centers, having heterogeneous passers-by (*Prefeitura*, 2005). The six data collection points along that avenue were organized as follows, using letters A, B, C, D, E, and F and detailed as: (A) vicinity to Shopping Center mall 3; (B) vicinity of *Galeria Conjunto Nacional*; (C) vicinity of Trianon and Mario Covas Parks; (D) vicinity of the free space of Banco Real and Art Museum of Sao Paulo (MASP); (E) vicinity of *Casa das Rosas*; and (F) vicinity to Paulista Shopping Mall. Additionally to the large flow of people and heterogeneity of the public already described, other particular advantages of the selected points is the fact that all are near the major thoroughfares, with a variety of large business and services, in addition to closeness to the city’s major cultural events.

3.4.2 Sample

Considering the random selection process and population heterogeneity at the sites chosen for application, according to the recommendation of Gall *et al.* (2007), we paid attention to other determinant factors to the sample contour, aiming at strengthening even more the representativeness and confidence in the data collection process. Data collection was undertaken during an interval of six days, five days during the same week (June 7 – 11, 2010), on working days during working hours (from 8:00 a.m. to 6:00 p.m.) and one additional day of the next week (June 14, 2010), necessary to fulfill the desired sampling amount. This procedure aimed at reducing biases of specific public for each period of the day. In order to decrease some biases and better control some of the variables of the survey, a pilot test was undertaken also on June 5 and 6, 2010, which is described better in the next item. Days in which extraordinary phenomena could change respondents’ general behavior, such as rallies, strikes or natural events, did not occur during the data collection period. Thus, 1,034 respondents were interviewed during the mentioned period of six days, with the following distribution of respondents among the six points and working days.

	Pilot I	Pilot II	Day1	Day2	Day3	Day4	Day5	Day6	Total
A		9	43	49	14		53	32	200
B	10		38	47	16		57	44	212
C					42	45	22		109
D					44	48	29		121
E			24	48	34	35	34	18	193
F			30	24	46	37	29	33	199
Total	10	9	135	168	196	165	224	127	1034

Chart 3 – Real distribution of data collection in the field

The research design is based on an effect size for the sampling composition of 0.4 SD and a statistical power of 0.10, resulting in a minimum sample size (*n*) of 110 respondents for each subgroup of analysis (Bickman and Rog, 1998). In view of the number of respondents (*n*=1034) and the analysis of some tests, such as the directional type, the statistical power will be improved in some cases, reducing the effect size or increasing the statistical power.

Table 1 – Estimated size of the sample

Effect Size	Alpha and Beta Levels ($\alpha=\beta$)			
	.20	.10	.05	.01
.10	900	1715	2600	4810
.20	225	430	650	1200
.30	100	190	290	535
.40	60	110	165	300

Source: Adapted from Bickman and Rog (1998).

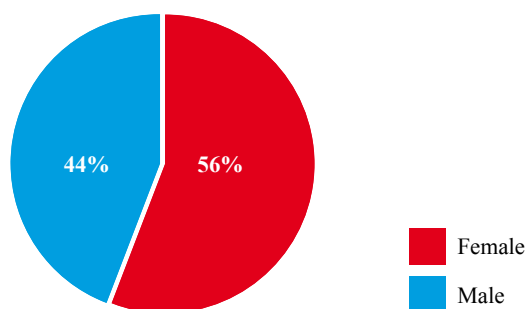
Another precaution is related to the level of commitment of the respondent in the streets to the survey. To register this level, we recorded the percentage of individuals that declined to participate (177 respondents, total of 17.1% of cases), or who gave up during the interview (12 respondents, total of 1.2% of cases), or the events when several individuals simultaneously passed by the interviewer, to enable a truly random selection, therefore forcing a restart of the counting and selection of another respondent (21 respondents, total of 2.0% of cases).

3.5 Pilot testing and data collection

The survey was preceded by a pilot test, as mentioned, and also by assistant interviewers’ training, to decrease the differences in the data collection process. These efforts also allowed making the need adaptations to the form for recording the responses. The pilot test was conducted on June 5 and 6, 2010, for a period of one hour each day, in which the application and average completion time per participant was about five minutes, when 19 respondents were heard, four people refused to participate, one gave up, and no coincidence that prevented selection of respondents randomly. For effective data collection, in addition to basic questions of gender, professional training and level of schooling, each respondent chose among six images when questioned, “*Regarding ethics, which drawing best represents your perception about accounting professionals?*”

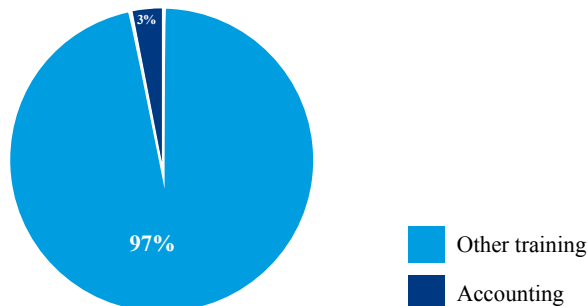
4. DATA ANALYSIS

Analysis was carried out by also undertaking triangulation with the theoretical framework and the stereotypes already mentioned in previous studies in the literature review. To answer the question: “*Are accounting professionals stereotyped negatively by public perception related to ethics?*”, descriptive analyses were adopted and Student’s t-test for difference of the means were used, considering mostly the volume of data to be collected and the characteristics of normality. According to Sampieri *et al.* (2006), Student’s t-test “is a statistical test to evaluate whether two groups differ significantly between each other in relation to their means,” or still whether the averages are different from zero. The sample used in this study, as previously described, comprised 1,034 respondents. Representation of respondents related to gender is found in Graph 1, in which 581 were female (56%) and 453 were male (44%).



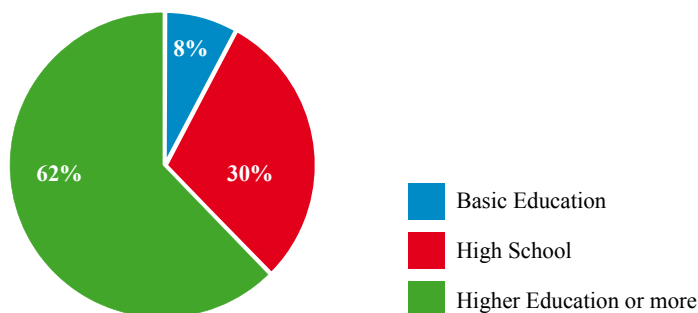
Graph 1 – Distribution of respondents by gender.

Regarding the professional training category, 3% (27 respondents) presented training in accounting, as shown in Graph 2. This number seems very reasonable when considering the characteristics of the data collection sites and the relationship between the numbers of professionals in accounting registered with the state professional council in comparison to the overall labor force in the state of Sao Paulo¹, around 1% of the sample.



Graph 2 – Distribution of respondents by training

Graph 3 shows the respondents’ level of schooling, in which 79 only had completed “basic education”, meaning through the eighth grade (8%), 314 had completed all of part of high school (30%) and 641 were studying or had completed higher technical training or university programs (62%).



Graph 3 – Distribution of respondents by education.

The data were analyzed for their frequency distribution, finding for the 1,034 collected observations, a mean of 0.40, standard deviation of 0.78 and kurtosis equal to zero, indicating data normality. Additionally, the Kolmogorov-Smirnov test confirmed adherence of the sample to the normal curve ($D_{max} \text{ calc.} < D_{critical}$), at significance of $\alpha=0.05$.

To undertake the analysis of the t-tests, the drawings with positive features were identified with value 1, the neutral drawings with value 0 and the negative drawings with value -1. The averages of the 1,034 respondents enable a first identification, moderately seen as positive (0.40), of the vector of the perception trend of the respondents. This average was statistically tested for difference from zero. In accordance with analysis of the confidence intervals (assuming 95%) and of the t-tests, identifying whether there were statistically significant differences, the hypothesis that accounting professionals are perceived negatively by the public was rejected.

¹ According to the Brazilian Institute of Geography and Statistics (IBGE), the labor force (“economically active population”) for January 2009 was 9,851,917 people and according to the São Paulo State Regional Council of Accounting (CRC-SP), there were around 116,000 accounting professionals that month.

Table 2 – T-test of differences of means for analysis categories.

Two-tailed t-Test						
Category	n	t Statistics	Sig. (two-tailed)	Difference of means	Confidence interval: 95%	
					lower	higher
Ethics	1034	16,39	0,00	0,40	0,35	0,45

Thus, unlike argued by the majority of authors noted in the literature review, it not possible to state that accounting professionals are negatively stereotyped in public perception concerning ethics. Even more surprising in relation to the findings of the literature review, the opposite was indicated by the findings here, in function of the confidence interval of the results (between 0.35 and 0.45), that is, public perception is slightly positive about professional accounting ethics. Additionally, other analyses were undertaken, separating the respondents by gender:

Table 3 – T-test of differences of means in function of respondents' gender

Two-tailed t-Test						
Category	n	t Statistics	Sig. (two-tailed)	Difference of means	Confidence interval	
					lower	higher
Gender = Female	581	11,66	0,00	0,39	0,32	0,45
Gender = Male	453	11,60	0,00	0,42	0,35	0,49

The results did not show significant differences regarding gender. We also applied the t-test for difference of the means in this respect, and obtained significance of 0.57. Also, in order to assure higher consistency of the tested hypotheses, tests separating respondents in terms of their respective professional training were undertaken.

Table 4 – T-test of differences of means in function of respondents' training

Two-tailed t-Test						
Category	n	t Statistics	Sig. (two-tailed)	Difference of means	Confidence interval	
					lower	higher
Accounting	581	2,66	0,01	0,41	0,09	0,72
Outras profissões	1007	16,17	0,00	0,40	0,35	0,45

Accountants' self-evaluation presented higher variability in perception, but did not present significant differences in relation to respondents with other professional training. The same tests were undertaken by separating the respondents in terms of their level of schooling, and the results presented next also point, in general terms, to the absence of difference in terms of schooling.

Table 5 – T-test of differences of means in function of respondents' level of schooling

Two-tailed t-Test						
Category	n	t Statistics	Sig. (two-tailed)	Difference of means	Confidence interval	
					lower	higher
Basic Education	79	3,91	0,00	0,37	0,18	0,55
High School	314	9,72	0,00	0,41	0,33	0,50
Higher or Vocation Education	641	12,67	0,00	0,40	0,34	0,46

We could have carried out other analyses of the data, but we believe the tests performed and the results demonstrated are sufficient to support the reflections and answer the research problem.

5. CONCLUSION

Based on the analysis of the confidence intervals (assuming 95%) and of the t-tests, the hypothesis that the public perceives accountants negatively concerning professional ethics was rejected. For this hypothesis, we also tested the possible existence of difference in terms of gender, professional training and level of schooling. In all cases, the statistical tests did not indicate significant differences in the findings based on these aspects. Thus, these results confer greater consistency to reject that accounting professionals are perceived negatively by the public, in the Brazilian case, related to professional ethics.

More surprisingly, in opposition to what the literature review and cultural characteristic attributed to Brazil indicate regarding the low level of legal enforcement, high level of frauds and slow justice system, accounting professionals are perceived positively by the public regarding professional ethics according to the evidence gathered and the analysis of the confidence interval outcomes. The first implication to the academia is of a methodological nature, where the employment of the photo questionnaire method, the adoption of an enlarged sample of respondents in the field survey and the scale including a neutral response option confer other variants that are not only textual and limited to the university environment.

Even though there are perhaps social differences in these professions' reputation and characteristics, such studies have disregarded possible professional rivalry in the majority of these compared areas, which compete for the same labor market with accounting professionals. By enlarging the analysis of perceptions to the general public, we noted that the negative perception concerning accounts' professional ethics is not significant, unlike found in the literature. However, even though it was not possible to state the presence of negative stereotypes for characteristics studied, we believe it is still necessary to promote this area to the population. As example, throughout the entire process of interviews in the Field, we note that the majority of people classified accounting as an exact science rather than having features of applied social science, with consequent social implications for the profession.

A limitation of this survey is that the respondents were only drawn from the city of Sao Paulo, so in spite of their variability of space and heterogeneity, the results are subject to the limitations derived from drawing a sample from a single large urban center, making the sample perhaps not representative of other regions of the country and less cosmopolitan populations. Thus generalizations should be made with caution, and more comprehensive comparative studies are necessary to obtain a better understanding of the public perception in the country.

Other studies are also suggested to understand to what extent society understands the accounting major as an applied social science one. This understanding will have implications for better positioning of the area and of its professionals, from both the academic and professional standpoint, in view of the desired changes in terms of competencies targeted more to the human and social aspects of the accounting career.

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