A STUDY INTO THE IMAGE OF THE ACCOUNTANT: HOW UNDERGRADUATE STUDENTS PERCEIVE THE ACCOUNTING PROFESSION AND WHAT INFLUENCES THIS PERCEPTION

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OPEN ACCESS

How to cite this paper: Georgiou, M., Cameron, R., & Schleimer, S. (2024). A study into the image of the accountant: How undergraduate students perceive the accounting profession and what influences this perception. *Corporate Ownership & Control, 21*(2), 52–69. https://doi.org/10.22495/cocv21i2art5

ISSN Online: 1810-3057
ISSN Print: 1727-9232

Received: 27.11.2023
Accepted: 22.04.2024

JEL Classification: M41
DOI: 10.22495/cocv21i2art5

Abstract

While accounting matters more than ever in our modern society, the image of the accountant remains less understood. This study explores perceptions of the image of the accountant of university students in first, second and third-year courses across both accounting and non-accounting majors. Despite ranking among Australia's growing professions, undergraduate enrolments and new entrants to professional associations are falling. Disruptive change necessitates a shift from the stereotypical "bean-counter" image to that of a strategic advisor. This study examines how distance from the profession and source of influence affect undergraduate students' perceptions of the image of the accountant. Our findings reveal that a group's distance from the accounting profession does affect perceptions of the attractiveness of the image of the accountant and the further the group is away from the profession, the less attractive the image. Further, this study finds that different sources of influence create different images where the influence of teachers creates a more attractive image than when media is included as a source of influence. Our findings have implications for educators and professional associations.

Keywords: Accounting Major, Accounting Profession, Perceptions, Undergraduate Students

Authors' individual contribution: Conceptualization — M.G., R.C., and S.S.; Methodology — M.G., R.C., and S.S.; Investigation — M.G.; Writing — Original Draft — M.G., R.C., and S.S.; Writing — Review & Editing — R.C. and S.S.; Supervision — R.C. and S.S.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

Accounting is fundamental to the central processes of governance, strategizing, control and accountability across literally all sectors of society (Carnegie et al., 2021). However, modern accounting is undergoing rapid change with technical innovation, environmental changes, and digitisation disrupting the profession (Association of Chartered Certified Accountants [ACCA], 2016). Indeed, the new-age accountant needs to demonstrate not only excellence in governance and strategic controlling, but also requires increasingly complex skills around accountability, sustainability, and multi-stakeholder engagement. As a result, the profession of accounting and the impact it carries has become increasingly important for social

and organisational flourishing. However, unlike the evolution of the profession itself, the image of the accountant has long been stereotyped as a "bean-counter" (Baxter & Kavanagh, 2012) with university students viewing accounting as a profession for "green eyeshade geeks with little or no personality" (Ingram & Wahab, 2017, p. 42). Perpetuation of the "bean-counter" stereotype threatens the increasing importance of the accounting profession in trying to attract the best and brightest (Smith, 2017) as it may bias talented people against a modern profession for which they are suited (Bedeian et al., 1986). Wells (2018) suggests that the perpetuation of the "bean-counter" stereotype attracts those who view the image in the traditional sense, and this is evidenced by employers reporting a lack of the new-age skills required of the profession, particularly with university graduates.

Attempts to change the "bean-counter" perception indicate limited success (Wells, 2019) and despite ranking in the top 3 growing professions in Australia (Australian Government Department of Jobs and Small Business, 2018), the supply of accountants is falling both at universities (Australian Government Department of Employment, 2017) and those undertaking professional accreditation (Chartered Accountants Australia and New Zealand [CAANZ], 2018; CPA Australia, 2018). The pathway to professional accreditation requires the completion of a recognised undergraduate qualification in accounting, and thus, developing and shaping perceptions of current university students toward accounting as a profession happens primarily at universities.

This is where our motivation for and setting of this study lies: With an aim to aid educators and professional associations in ensuring the continued interest in the modern accounting profession, this study focuses on what happens to perceptions of the accountant whilst students are studying at university. As accounting is not only strongly influential but also argued to be a social phenomenon (Carnegie et al., 2021), our study considers students' perceptions of the profession in light of: 1) the students' closeness to the profession (measured along with their progression in the degree and whether they studied a non-accounting versus accounting major) and 2) various sources of influence that shaped their perception.

Our research question, therefore, investigates:

RQ: How do undergraduate university students perceive the accounting profession and what influences this perception?

Our findings generate three different images of the accountant. One where the smaller or less attractive the image, the closer the perception to the "bean-counter" stereotype whereas the more attractive or professional the image, the closer to the "modern professional" image. In between was an image of neither favourable nor unfavourable nuances. Our findings reveal that a group's distance from the accounting profession does affect perceptions of the attractiveness of the image of the accountant and the further the group is away from the profession, the less attractive the image. Further, this study finds that different sources of influence create different images where the influence of teachers creates a more attractive image than when media is included as a source of influence. This study makes several key contributions. First, it is one of the first to use the survey instrument created by Caglio et al. (2019), who compared the image of the accountant among university students, newly appointed accountants and practicing accountants. Second, it takes a further step by applying this survey tool in the Australian higher education sector across different years of undergraduate study. Third, applying this methodology in a different cultural context facilitates additional exploration of whether cultural differences influence perceptions of the accounting profession.

The remainder of this paper is organised as follows. Section 2 provides a review of the literature relating to stereotype theory to support the presented hypotheses. Section 3 describes the research design adopted to test this study's hypotheses. Section 4 presents the results, followed by a discussion of the research findings in Section 5 and then the paper concludes with implications for future research in Section 6.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Stereotype theory and the accountant stereotype

Defined as "a relatively fixed and oversimplified generalisation about a group or class of people" (Colman, 2015, p. 85), the term "stereotype" was first used by Lippman (1992) to describe "pictures in their heads" (p. 19). Such mental pictures are cognitively formed from the knowledge, beliefs and expectancies of the perceiver (Mackie et al., 1996) and are used to assign labels to groups thereby reducing the cognitive load of having to get to know everything about someone (Caglio et al., 2019). The most traditional approach to stereotyping is based on the cognitive schema of how people organise beliefs about social groups who share similar characteristics (Fiske & Taylor, 1984).

Using stereotypes simplifies the social world by using categories (Allport, 1954), or schema (Schneider, 2004) to infer that a person has the characteristics assumed of all members of the group to which they belong (McLeod, 2023). Underlying stereotype theory is the use of schemas to create groups. A schema is how people organise beliefs about a particular concept (Fiske & Taylor, 1984) and includes the particular characteristics attributed to that concept, providing "an interpretive framework by which we can explain the behaviour of others" (Hinton, 2000, p. 95). The author suggests that first, groups are distinguished by an identifying characteristic such as occupation. Next, stereotypical characteristics are associated with that group hence, when a person is identified as belonging to that group, stereotypical characteristics are attributed to that person. For example, accountants may be thought of as boring therefore identifying someone as an accountant, we assume they are boring (Carnegie & Napier, 2010).

Research into social psychology stereotype theory, suggests that stereotypes are over-determined (Mackie et al., 1996; Wells, 2018), powerful (Caglio et al., 2019) and difficult to change (Carnegie & Napier, 2010) due to the relatively enduring

underlying ontology of perceptions (Dobson, 2002) and as such, "serve the status quo" (Stangor & Schaller, 2000, p. 75). Stereotypes usually focus on negative or unfavourable characteristics (Colman, 2015) and hence may create an inappropriate image that may bias people against a profession (Bedeian et al., 1986). Despite a trend in the literature of viewing stereotypes more neutrally (Carnegie & Napier, 2010), literature regarding the stereotype of the accounting profession tends toward "undesirable and potentially threatening characteristics associated with prejudice" (Caglio et al., 2019, p. 851). Findings across different cultural settings demonstrate that the perceptions of accountants and accounting are negative (Wells, 2019), frequently stereotyped as boring, cold, aloof, impersonal and obsessed with numbers (Carnegie & Napier, 2010). Haunting the accounting profession is the unappealing term "bean-counter"; lingering "drearily over the public conscious" (Jeacle, 2008, p. 1297)

However, juxtaposed against the persistent "bean-counter" stereotype is a trend toward an expanded scope of activities for accountants (Warren & Parker, 2009) that renders the current perception of the image of the accountant as both limited and limiting (Sin et al., 2012). Baron (2017) notes: "…The next 20 years will see the profession evolve very rapidly. In short, it will be a very different profession from what we see today. Everything that we do will be different" (para. 8). Acknowledging that people use stereotypes when selecting an occupation to pursue (Schneider, 2004), professional accounting bodies in Australia have attempted to portray the image of the accountant in a more favourable light (Baxter & Kavanagh, 2012) to attract more interest in pursuing this profession, yet the stereotype has proven resistant to change (Wells, 2018). Perpetuation of a negative stereotype has consequences for the accounting profession in trying to attract the best and brightest (Smith, 2017) with longer-term implications of discouraging appropriately skilled people from entering the profession (Wells, 2015).

Government reports indicate that accounting is one of the top three growing professions in Australia (Australian Government Department of Jobs and Small Business, 2018). However, Australian university enrolments in management and commerce degrees are falling (Australian Government Department of Employment, 2017). This has created a flow-on effect for professional accounting associations with both Australian bodies reporting declining enrolments in professional accreditation programs (CAANZ, 2018; CPA Australia, 2018). This, in turn, has sparked concern about the short supply of talented graduates seeking a career in accounting (McDowall & Jackling, 2010). Coupled with employers reporting that accountants lack the skills now required of the industry (Commonwealth Bank of Australia, 2017) raises concern that the negative stereotype of the accountant has become self-fulfilling in Australia (Friedman & Lyne, 2001; Wells, 2015).

Research at Australian universities with first-year undergraduate students studying introductory foundational level accounting found the accounting profession was perceived as: "…boring, definite and precise. However, perhaps unsurprisingly, accounting majors perceive accounting to be less boring and more interesting than non-accounting majors" (Baxter & Kavanagh, 2012, p. 92). Other Australian research with accounting major students studying second or subsequent years of their degree generally held the profession more highly but still considered it compliance-driven (Sin et al., 2012) requiring the memorisation of lots of rules (Jackling et al., 2012; McDowall & Jackling, 2010) and strong technical skills in information technology (IT) and maths (Smith et al., 2018). Such findings indicate that as accounting major students progress through their degree and become closer to the profession, their perceptions change and seem to become more favourable.

Whilst existing Australian studies have provided important insights into the perception of the image of the accountant as held by undergraduate university students (Baxter & Kavanagh, 2012; Jackling et al., 2012; McDowall & Jackling, 2010), prior research has focussed on single-year cohorts rather than investigating students' perceptions across years and disciplines. As such, there is an opportunity to explore multiple cohorts across undergraduate university years and disciplines to provide a more granular understanding, explanation, and comparison of perceptions as students progress through their studies. Further, whilst existing research has sought to define the perception of the accountant, such definition has largely revolved around conceptions of the type of work undertaken by accountants thus creating a functional definition of the accountant's image without understanding factors contributing to it (Wells, 2019). The challenge with this approach is that students are generally unaware of the skills expected in the workplace (Kavanagh & Drennan, 2008) and lack an understanding of the diverse nature of accounting in practice (Kestel, 2017). There has been little linkage of stereotype formation mechanisms, such as year of study, study major and source of influence, to understand why perceptions have formed. Understanding how and what perceptions are shaped at different stages of the university degree opens the opportunity to uncover reasons why perceptions form. This in turn can aid educators and professional associations in ensuring the continued relevance of the accounting profession.

2.2. Why stereotypes form

The accountant stereotype of a profession of "bean-counters" has endured despite attempts to change it (Kavanagh & Drennan, 2008; Wells, 2018). Understanding why such a stereotype is formed is important as it offers insights into factors affecting it (Warren & Parker, 2009). Functional in nature, the use of stereotypes simplifies the social environment and infers information about others by using social categories or groups. Stangor and Schaller (2000) offer two functions to understanding why stereotypes are formed: epistemic in relation to the human motive "of knowing, understanding and predicting others" (Stangor & Schaller, 2000, p. 73) and esteem-related in relation to the need to differentiate oneself. Linking to group schema or group prototype forms of stereotypes, the epistemic function seeks to either explain and predict the category to which an individual belongs (Stangor & Schaller, 2000) or to differentiate between groups (Wells, 2015).

As such, a professional image is considered more neutral than stereotypes and is important for

social approval and therefore career success (Roberts, 2005). Research into professional image construction has focussed on unique attributes and how they shape perceptions of character; for example, poor clothing and grooming have been found to negatively affect the perception of competence (Morem, 2005). However, few studies on the stereotype of the accountant have focussed on imagery but rather focussed on function (Wells, 2018).

Caglio et al.'s (2019) study stands alone in researching the accountants' professional image in terms of using characteristics and attributes of the accountant to create an attractiveness scale that compares group perceptions. Their findings support the notion of the esteem function of stereotypes where those new to working in the profession (i.e., they "belong" to the group) viewed the accountant image more favourably as a "modern professional". Those deemed furthest away from the profession were still studying at university. This group took a more epistemic and expectedly less favourable view as they had less preference to be a member of the "in-group", and thus held a predominant "bean-counter" stereotype.

Summing up, much of the research to date has identified and analysed the accountant stereotype, as imagined by single groups, according to its form and function. Findings indicate the image of the accountant has largely been viewed negatively, summarised as a "bean-counter" and perpetuating the stereotypical perception in the face of a rapidly changing profession. Such findings provide important insights into what perceptions exist; however, it is unclear why these stereotypes have formed based on factors that may have influenced them. Acknowledging that the pathway to professional accreditation requires the completion of a recognised undergraduate qualification in accounting, perceptions of current undergraduate university students are paramount for educators and professional associations to ensure an appropriately skilled pipeline of accountants. Research by Baxter and Kavanagh (2012), Caglio et al. (2019), and McDowall et al. (2012) indicates that teachers and education are key influencers of university students' perceptions, however, existing research to date lacks an understanding of what happens to perceptions as students advance through their degrees and what influences these perceptions. Understanding perceptions across degrees and multiple-year levels may provide insight into how educators can positively influence these perceptions to attract talent to this important profession.

2.3. Hypotheses development

2.3.1. Distance from the accounting profession

Epistemic stereotypes are imagined by those external to a group or category. When people are not motivated to belong to that group, the image of that group is less clear-cut (Fiske, 2018) and tends to depict a less attractive image (Caglio et al., 2019). Conversely, the esteem function is internal in nature where stereotypes are ego-relevant and refer to how a person feels about themselves and the groups to which they belong (Stangor & Schaller, 2000). Linked to social identity theory (Tajfel & Turner, 2001) members of a group (of the same profession), have a vested interest in maintaining a positive self-image (Brewer, 1999) or professional image, thus contributing to the concept of legitimacy in the eyes of the public. Professional imagery has been associated with prestige (Warren & Parker, 2009) where viable images have been viewed as capable of meeting the social demands of the job (Roberts, 2005). Perceptions of accountants have been found to evolve over time, are different across different groups (Enis, 1998) and individuals generally prefer to be a member of a group that carries a positive stereotype (Carnegie & Napier, 2010). Hence, the closer one is to a profession, the more positively one may view that profession.

Accounting literature supports the notion that different groups of students at different distances to the profession perceive the image of the accountant differently (Baxter & Kavanagh, 2012) with those further progressed in their degree holding a more favourable perception (Jackling et al., 2012; McDowall & Jackling, 2010). However, much of the research in Australia has been with stand-alone student sample groups; for example, first-year university students only (Baxter & Kavanagh, 2012) or second-year university students only (Jackling et al., 2012; McDowall & Jackling, 2010). Little research has sought to understand the students' perception of the accountant in terms of motivation to belong to a group based on distance from that group. Further, little is known about the perceived attractiveness of the accountant and whether those studying accounting majors or those further along in their studies perceive the image as more attractive. In this study, the set of characteristics of a professional image used in the instrument is generally viewed as more positive or more negative. For example, boringness and shyness are less attractive than professionalism. It is, therefore, hypothesised (stated in the alternative form):

H1a: Different groups of undergraduate university students at different distances from the accounting profession, as defined by study major and year of study, perceive the image of the accountant differently.

H1b: The further the group that is asked to describe the accountant is from the profession, the less attractive the description of the attributes and characteristics that define the image of an accountant.

2.3.2. Sources of influence

Recognising that perceptions vary for reasons other than by groups of perceivers, theory suggests a number of other potential sources of influence, summarised into four mechanisms: cognitive, affective, socio-motivational and cultural mechanisms (Mackie et al., 1996). Understanding sources of influence is important as it may offer insight into potential triggers to affect perceptions of the image of the accountant. Albeit limited, previous research into the accountant stereotype has demonstrated sources of influence of perceptions of the image of the accountant include teachers, prior study, family, friends, exposure to accountants and media representations (Baxter & Kavanagh, 2012; Caglio et al., 2019; Wells, 2019).

Caglio et al. (2019) note that "much of the literature on accountant stereotypes relies on representations conveyed by the media" (p. 854) where media has been found "to be the most

powerful transmitters of cultural stereotypes" (Wells, 2019, p. 4). Cultural messages are "pre-packaged" (Mackie et al., 1996) and represent social norms therefore a person forming a perception based on this information is more likely to make a stereotypic judgement (Smith & Zarate, 1990). Research has found the image of the accountant to be negatively portrayed in advertisements, websites, literature, magazines and newspapers, jokes and music, movies, and books (Caglio et al., 2019; Wells, 2019). Interestingly, research into the impact of media on other professions, such as nursing, found similarly that media created more of a negative image (Hallam, 2000). As such, when perception includes media as a source of influence, it could be suggested that the perceiver may form a more negative perception thus being discouraged from pursuing a career in accounting.

Whilst these research findings offer some insight into student perceptions, left unanswered is an understanding of how these influences affect the perceived attractiveness of the accountant. More specifically, how do sources of influence affect undergraduate university students' perceived image of the accountant and are these images differently based on different sources of influence? Further, how does the inclusion of media as a source of influence affect the attractiveness of the perceived image? Therefore, in relation to sources of influence, it is hypothesised (stated in the alternative form):

H2a: The image of the accountant differs based on the sources of influence from which that image is formed.

H2b: The description of the attributes and characteristics that define the image of the accountant are less attractive when that image is constructed from sources that include media rather than from personal experience or acquaintance.

Figure 1 outlines the hypothesised relationships between distance from the profession and sources of influence, suggesting that the further away from the accounting profession or when the source of influence includes media, the less attractive the perception of the image of the accountant.

Figure 1. Relating distance from the profession and influence to attractiveness

Distance from profession (*H1a*)	Further away from profession (*H1b*)	Closer to profession
Sources of influence (*H2a*)	Source includes media (*H2b*)	Source does not include media
	Less attractive	More attractive

Attractiveness

3. RESEARCH DESIGN

3.1. Unit of analysis

The data for this study was collected in 2019. As undergraduate university students were the key focus of this study the sample comprised undergraduate students from two campuses of a large Queensland public university in Australia. As there is little research into imagery based on different groups at different distances from the accounting profession, it was necessary to create groups to facilitate comparison. This was achieved by combining courses and year levels. In particular, seven courses across first, second and third-year courses within the commerce[1] degree were selected. A compulsory foundation course that provides students with an introduction to accounting concepts was selected as the first-year course. This course includes accounting major and non-accounting major students thereby providing the opportunity to gather a large sample to assess perceptions from different distances to the accounting profession. Other courses selected for the sample included two second-year accounting major courses and two third-year accounting major courses. To include a course that was considered distanced from the profession, the final group of two separate courses was made up of students studying an economics major. Economics was selected as it has been considered independent of other social sciences (Shiozawa, 1999) thereby representing the furthest distance from the accounting profession for this study.

3.2. Data collection

Data was collected in person in the lectures of all chosen courses using a five-page questionnaire. Key variables in the questionnaire (see Appendix A) were adopted from the survey tool created by Caglio et al. (2019) and included the 72 characteristics they developed based on the literature. Demographic information such as study major and course code (of the lecture in which students were completing the survey) were key variables in determining distance from the profession. Another key variable was sources of influence which was used to create summary groups. Such methodology allowed for the assessment of whether variables, such as distance from the profession and sources of influence, produced a more, or less, favourable perception of the image of the accountant. The final key variables were derived during the data analysis phase to measure the image of the accountant and create an attractiveness scale.

Of the 412 collected surveys, 22 were incomplete and discarded, resulting in a final sample of 390. Participants are summarised in Table 1. Overall, most participants were studying a non-accounting major qualification (52.8%) and of these, the majority were in their first year of study. Of the 184 studying an accounting major, 26% were in their first year of study, 39.7% in their second year, and 34.2% in their final year.

Table 1. Participants by study major and year level

Major/non-major and year level	*n*	*% of all participants*
Accounting major 3rd year	63	16.2
Accounting major 2nd year	73	18.7
Accounting major 1st year	48	12.3
Non-accounting major 1st year	172	44.1
Non-accounting major 3rd year	34	8.7
Total	390	100.0

[1] Commerce degree encompasses choice of majoring in accounting or finance or financial planning or economics or a combination.

3.3. Variables and measurement instruments used

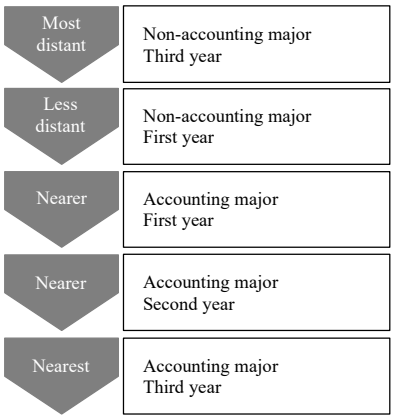
3.3.1. Characteristics

For this study. measures used for accountants' characteristics were adopted from Caglio et al.'s (2019) study. Characteristics are concerned with three broad themes: personal and physical traits (e.g., she/he is shy, she/he dresses with a trendy style), attributes and outcomes (e.g., she/he has long-term earning potential, she/he has prestige), and competencies associated with the accounting profession (e.g., her/his job implies a variety of tasks, her/his job requires leadership). Participants responded to a five-point Likert scale for each characteristic, where 1 indicated "Strongly disagreed" that the characteristic was reflective of the image of the accountant to 5 that indicated "Strongly agreed" that the characteristic was reflective of the image of the accountant.

3.3.2. Distance from the profession

Distance from the profession was measured based on the participant's study major combined with the course lecture where the data was being collected.

Figure 2. Distance from the profession



Students studying a non-accounting major were considered more distant than those studying an accounting major. Further, non-accounting major students studying a third-year non-accounting course were considered furthest away and those studying the first-year accounting course were next furthest away. Students studying an accounting major and a third-year accounting core course were considered closest to the profession, followed by those studying a second-year course and those studying the first-year course. The assumed distance from the profession is depicted in Figure 2.

3.3.3. Sources of influence on the image of accountants

Sources representing a similar mix of sources of influence were grouped. These groups were then replicated to include media as a source of influence. Students were then allocated to a group based on their responses. For example, respondents who reported being influenced by teachers and school subjects studied as well as at least one type of media (books, television, movies, internet) were included in the response group "Media, teacher and education".

3.3.4. Images of accountants

As this research sought to identify the image of the accountant based on a respondent's distance from the profession and sources of influence, it was necessary to identify common factors characterising images that could be imagined across the different groups within the population. The intention was to explore responses to the 72 characteristics utilising an exploratory factor analysis (EFA) model to reduce the number of characteristics to a more manageable set of variables that reflect different images. For data reduction, principle axis factoring with varimax rotation was utilised. Items with low communality and those that did not load clearly onto a factor were removed resulting in 19 characteristics clearly loading onto four factors. These four factors were named based on the associated characteristics and the conceptual idea they represent (Ticehurst & Veal, 2000). These are presented in Table 2: professional, large and unattractive, small and meek and cognitive anxiousness.

Table 2. Factor identification of images of accountants

Factor	*Professional*	*Large & unattractive*	*Small & meek*	*Cognitive anxiousness*
Advancement	0.719			
Leadership	0.682			
Work with others	0.666			
Decision making	0.662			
Delegate	0.662			
Problem solve	0.603			
Collaborative	0.562			
Variety of tasks	0.560			
Communication skills	0.553			
Physically unattractive		0.648		
Pale		0.620		
Old		0.591		
Male		0.569		
Bald		0.552		
Thin			0.764	
Small			0.619	
Shy			0.536	
Speaks abnormally				0.760
Nervous ticks				0.712
Initial eigenvalue	5.885	2.918	1.191	1.075
Rotation variance explained	19.792	12.641	8.481	7.211
Alpha	0.865	0.796	0.773	0.802

Note: Extraction method: Principal axis factoring. Rotation method: Varimax with Kaiser normalisation. Rotation converged in 5 iterations.

To assess the proportion of variance attributable to the underlying four factors, the Kaiser-Meyer-Olkin (KMO) test for the measure of sampling adequacy (MSA) was 0.879 which is a level regarded as meritorious (Cerny & Kaiser, 1977).

All retained characteristics loaded in excess of 0.5 indicating their practical significance to the model. Understanding that retained factors should have at least three items, it is acknowledged that the fourth factor contains two items. The decision was made to retain this factor and the items as both reflect excellent loading more than 0.71 reflecting 50% overlapping variance.

Multicollinearity between the variables and factors is not suspected. Further, testing the correlations between the final four factors (see Table 3) reveals all are less than 0.7.

Table 3. Reliabilities and correlations

Final four factors	*Cronbach alpha*	*Professional*	*Large & unattractive*	*Small & meek*	*Cognitive anxiousness*
Professionalism	0.865	1	-0.363**	-0.245**	-0.176**
Unattractive large	0.796	-0.363**	1	0.562**	0.455**
Small & meek	0.773	-0.245**	0.562**	1	0.419**
Cognitive anxious	0.802	-0.176**	0.455**	0.419**	1

*Note: ** Correlation is significant at the 0.01 level (2-tailed).*

To derive images, a two-step cluster analysis was used. Initially, the best maximum likelihood approach with automatic selection of the number of clusters was used resulting in two clusters being generated; however, cluster quality was deemed to be poor and a cluster analysis was re-run, specifying three clusters, subsequently improving cluster quality to fair.

Images held by participants in each cluster were defined using a common method of cluster interpretation. Here, the average score of group members on each of the four variables was used in the cluster analysis. The resultant clusters were named to define three images of the accountant, adopted by Caglio et al. (2019) "modern professional", "plain vanilla" and "bean-counter" as presented in Table 4.

Table 4. Three images and attractiveness scores

Factor	*Modern professional*	*Plain vanilla*	*Bean-counter*
	Mean	*Mean*	*Mean*
Professional	4.13	4.05	3.09
Large & unattractive	1.95	2.84	3.45
Small & meek	1.82	2.92	3.12
Cognitive anxiousness	1.9	2.58	2.85
Respondents in cluster	109 (27.9%)	186 (47.7%)	95 (24.4%)
Attractiveness score[a]	4.12	3.43	2.92

Note: Mean scores on each factor for respondents in three clusters were obtained using a two-step cluster analysis specifying 3 factors in SPSS 25. N = 390.

[a] Score is a simple mean of mean scores on each factor after reversing scores for "Large & unattractive", "Small & meek", and "Cognitive anxiousness".

3.3.5. Attractiveness scale

To test the hypotheses, it was necessary to first rank images according to attractiveness. As such, an attractiveness score was calculated for each of the three clusters as derived in the cluster analysis by calculating a grand mean of the scores of the variables used to derive the clusters. On the assumption that being physically unattractive, pale, small and shy, speaking abnormally and suffering from nervous ticks were relatively unattractive traits, the mean scores for "Large & unattractive", "Small & meek", and "Cognitive anxiousness" were reversed by deducting their grand mean score from 6 (reflecting the use of a 5-point Likert scale). Results of this process and attractiveness scores are presented in Table 4 where the variables used to define the image cluster are in rows with the average score on each variable for participants in each cluster presented in the columns.

3.4. Hypotheses tests and visual mapping procedures

Prior to hypotheses testing, image clusters and influence groups were assessed for goodness of fit via Chi-square testing to observe whether category membership frequencies differed from the hypothesised or expected frequencies. Results of the Chi-square goodness of fit tests indicate that both image clusters ($\chi^2 = 36.93$, DF = 2, $p < 0.001$) and sources of influence ($\chi^2 = 118.021$, DF = 13, $p < 0.001$) groups did not violate goodness of fit assumptions and therefore appropriate to proceed with hypothesis testing.

Next, non-parametric tests of statistical significance were undertaken. Contingency tables were built to assess and compare image preferences with the four categories of distance from the profession (*H1*) and sources of influence (*H2*). Testing differences in images per distance from the profession (*H1a*) and source of influence (*H2a*) were assessed using Chi-square tests (see Table 5). Assessing the strength of the association between distance from the profession and image attractiveness was tested using Kendall's tau-b test (*H1b*). Finally, the influence of media as a source of image formation was assessed using a Chi-square test comparing images held by respondents that included media ($n = 224$) as a source with those that did not include media ($n = 166$) as a source but rather drew images from experience or exposure. The hypotheses tests were supported and illustrated by visualising categorical data using multiple correspondence analysis (MCA) in XLSTAT software.

Table 5. Summary of hypotheses tests

Hypothesis	*Test statistic*	*Value*	*DF*	*p-value*
H1a	χ^2	28.893	8	< 0.001
H1b	tau-b	0.217	-	< 0.001
H2a	χ^2	37.55	18	< 0.005
H2b	χ^2	9.867	2	< 0.010

Finally, artefactual attributes were removed from the final factor structure and EFA was re-run to determine if the inclusion of artefactual characteristics was influencing the model and weights of loadings. Five artefactual characteristics were removed (physically unattractive, pale, old, male, and bald) and the three non-artefactual factors formed the same structure with and without the artefactual variables.

4. RESULTS

4.1. Professional images

Emerging from the cluster analysis are the three images depicted in Table 4 with variables defining the clusters in rows and the average score for participants in each cluster shown in the columns. The "modern professional" column has the highest means for professionalism ($\bar{X}$ = 4.13) and the lowest for large and unattractive ($\bar{X}$ = 1.95), small and meek ($\bar{X}$ = 1.82) and cognitive anxiousness ($\bar{X}$ = 1.90) depicting an accountant with strong communication, leadership and decision-making skills able to work collaboratively with others to solve problems whilst balancing a variety of tasks. At the other extreme, the "bean-counter" column has the highest means for large and unattractive ($\bar{X}$ = 3.45), small and meek ($\bar{X}$ = 3.12), and cognitive anxiousness ($\bar{X}$ = 2.85) where the accountant is seen as an old and pale person who speaks abnormally and suffers from nervous ticks. The "plain-vanilla" central point is where nuances of the image of the accountant are neither favourable nor unfavourable presenting the accountant as one that is male, unattractive, and meek but not cognitively anxious.

As shown in Table 4, the most common image held by the respondents is overwhelmingly that of "plain vanilla" with 47.7% of respondents. Next is the image of the "modern professional" with 27.9% of the respondents and finally, the image most closely linked to the "bean-counter" stereotype, 24.4% of respondents noted this as the image in their head. With an attractiveness score of 4.12, the "modern professional" presents the most attractive image. Interestingly, "plain vanilla" at 3.43 is still a reasonably attractive image and the "bean-counter" image at 2.92 is very close to neutrality (which in a 5-point Likert scale as used in this study is 3), thus is only a moderately negative perception.

4.2. Differences in professional images by distance from the profession

The contingency table, presented in Table 6, summarises participant perceptions of the image of the accountant first by distance from the accounting profession (Panel A) and then by source of influence (Panel B). Regarding distance from the profession (Panel A) students studying a third accounting major course were deemed closest to the accounting profession, with second-year and first-year accounting majors the next two closest. Third-year non-accounting major students were deemed furthest away from the accounting profession and first-year non-accounting students were second furthest away. Panel A shows 44.4% of participants regard the image of the accountant as a "modern professional", 47.6% regard it as a "plain vanilla", and 7.9% regard it as that of a "bean-counter". Looking at the analysis total column, accounting major third-year students made up 16.2% of the sample, second-year accounting majors represented 18.7% of the sample and non-accounting first-year majors made up 44.1% of the sample.

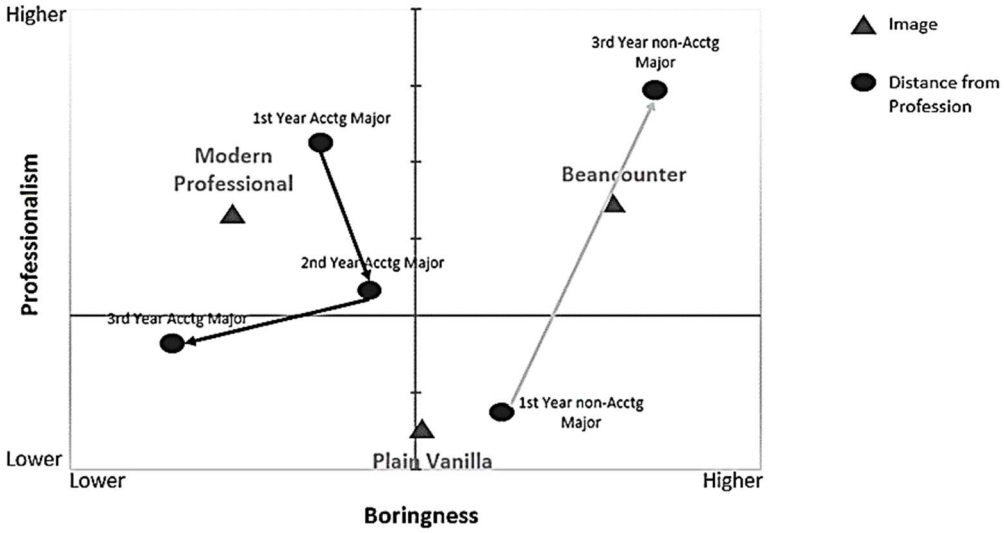
Table 6. Contingency table

Perceptions of the image by distance and source of influence	*Image*							
	Modern professional		*Plain vanilla*		*Bean-counter*		*Analysis total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Panel A: Distance from the accounting profession								
Accounting major — 3rd year	28	44.4%	30	47.6%	5	7.9%	63	16.2%
Accounting major — 2nd year	23	31.5%	34	46.6%	16	21.9%	73	18.7%
Accounting major — 1st year	18	37.5%	20	41.7%	10	20.8%	48	12.3%
Non-accounting major — 1st year	35	20.3%	88	51.2%	49	28.5%	172	44.1%
Non-accounting major — 3rd year	5	14.7%	14	41.2%	15	44.1%	34	8.7%
Total participants (Distance)	109	27.9%	186	47.7%	95	24.4%	390	100.0%
Panel B: Source of influence								
Sources that include media								
Media only	2	7.4%	14	51.9%	11	40.7%	27	6.9%
Media, accounting and/or experience	4	16.7%	12	50.0%	8	33.3%	24	6.2%
Media, teacher and education	6	15.0%	22	55.0%	12	30.0%	40	10.3%
Media, teacher, education and others	30	31.9%	41	43.6%	23	24.5%	94	24.1%
Multiple including media	10	25.6%	17	43.6%	12	30.8%	39	10.0%
Total influenced by media	52	23.2%	106	47.3%	66	29.5%	224	57.4%
Sources that do not include media								
Accountant and/or experience	18	32.7%	28	50.9%	9	16.4%	55	14.1%
Teacher and education	7	28.0%	12	48.0%	6	24.0%	25	6.4%
Teacher, education and others	27	45.0%	26	43.3%	7	11.7%	60	15.4%
Multiple excluding media	5	21.7%	14	60.9%	4	17.4%	23	5.9%
Don't know		0.0%		0.0%	3	100.0%	3	0.8%
Total not influenced by media	57	34.3%	80	48.2%	29	17.5%	166	42.6%
Total participants (Source)	109	27.9%	186	47.7%	95	24.4%	390	100.0%

Considering first the perceptions of third-year accounting major students as depicted in the first row in Table 6, where 44.4% view the image of the accountant as a "modern professional" as compared to 7.9% perceiving it as a "bean-counter". Interestingly, most of these students who are deemed closest to the profession hold the predominant view of the image of the accountant as "plain vanilla" in preference to "modern professional"; not overly "professional" but not suffering from the cognitive anxiousness of the "bean-counter" image. Looking at second and first-year accounting major students, the ranking of preferred images is the same, with most participants viewing the image of the accountant as "plain vanilla" in preference to "modern professional" and lastly, "bean-counter". Such ranking of preferences changes when considering those students further away from the profession, studying majors other than accounting. Similar to accounting major students, the majority of first-year non-accounting major students held the predominant image as "plain vanilla" (51.2%) but the next highest preferred image is that of the "bean-counter" (44.1%) and last the "modern professional" (20.3%). The group considered furthest away, third-year non-accounting major students, held the predominant view of the accountant as a "bean-counter" (44.1%) followed by "plain vanilla" (41.2%) with only 14.7% of participants in this group reporting the "modern professional" as their preferred image of the accountant. Further, looking at the "modern professional" column, the percentage of participants imagining this image declines from 44.4% of students in third-year accounting major courses to 14.7% of those in a third-year non-accounting major course. At the other end of the attractiveness scale, in the "bean-counter" column, the opposite trend occurs where 7.9% of those closest to the profession perceive the image as a "bean-counter" as opposed to 44.1% of those furthest away.

Visually depicting these relationships, Figure 3 presents the multiple correspondence analysis map of the joint relationships between distance from the profession and images of accountants. The vertical axis represents professionalism where positive values indicate greater perceived professionalism of the accountant and conversely, the horizontal axis represents boringness where negative values represent lower boringness.

Figure 3. Joint plot: Distance from the profession



To confirm the quality of this model, a correlation analysis was undertaken, as presented in Table 7 which shows that the dimensions distinguished effectively between images; professional image is highly correlated with boringness (r = 0.631) and professionalism (r = 0.535); and distance from the profession where it is highly correlated with boringness (r = 0.631), and professionalism (r = 0.538).

Table 7. Discrimination measures

	Dimension		
	Boringness	***Professionalism***	***Mean***
Professional image	0.631	0.535	0.583
Distance from profession	0.631	0.538	0.584

Further, when assessing the relative contribution of dimensions explaining variances in the groups in the MCA, the Hair et al. (2009) rule of thumb suggests retaining dimensions that have eigenvalues more than 0.2. According to the eigenvalues retained in this MCA, all are in excess of 0.2 as shown in Table 8.

Table 8. Multiple correspondence analysis

Eigenvalues	***F1***	***F2***	***F3***	***F4***	***F5***
Distance from profession	0.621	0.537	0.500	0.500	0.463

Looking at Figure 3, the "modern professional" image ranks high in professionalism and low in boringness. Conversely, the "bean-counter" ranks high on boringness but also high on professionalism. The "plain vanilla" image ranks relatively low for professionalism but neutral regarding boringness. The group closest to the "bean-counter" image is the one that is furthest away from the profession; third-year non-accounting students; viewing the accountant's image as professional yet boring. Looking at the path for non-accounting major students only, both groups consider the image to be relatively boring but as a student progresses from first into third-year studies, their perception of professionalism increases which is contrary to the perceptions of accounting major students. Third-year accounting major students placed furthest away from the "bean-counter" image but also placed a distance away from the "modern professional" image, ranking low on the boringness scale but also low on the professionalism scale. Considering accounting major students only, the relative positions of perceptions as imaged by first, second and third-year students suggest a sort of path as they move closer to the profession.

To test the assertion that distance from the profession and professional image are related, Table 5 reports a Chi-square contingency test that shows the distance from the profession and professional image are related to one another ($\chi^2 = 28.893$, DF = 8, $p < 0.001$) supporting *H1a*. Given the association between distance from the profession and perception of professional image, Cramer's V test indicates effect size (Hair et al., 2009). which in this study is 0.192 reflecting a slight to moderate effect of the relationship between distance from the profession and professional image (Cohen, 1988).

Further, the direction of the relationship was tested per *H1b*, that the further away a group is from the accounting profession, the less attractive the image. A Kendall's tau-b test presented in Table 5 reveals a tau-b correlation of 0.217 with significance $p < 0.001$, indicating a reliably positive correlation between distance from the profession and image meaning the further away from the profession, the less attractive the image, supporting *H1b*.

4.3. Differences in professional images by source of influence

Sources of influence (see Panel B of Table 6) were grouped together to create ten groups and to understand what influence media had, five groups were created to include media when a participant reported it as an influence and five groups had no media influence. Table 6 (Panel B) shows perceptions when media is included as a source of influence, the "modern professional" image is perceived by 23.2%, "plain vanilla" by 47.3%, and "bean-counter" by 29.5%. Where media is the only source, the image of the "modern professional" ranks the lowest at 7.4% followed by "bean-counter" at 40.7% and "plain vanilla" at 51.9%. Where media is included with exposure to accountants, the image of "modern professional" improves to 16.7% but the predominant view is still "plain vanilla" (50%) then "bean-counter" (33.3%). Where media, teacher and education are grouped, the number of participants reporting a "bean-counter" image reduces (30%) as does when multiple sources and media are reported as influencers (30.8%).

Turning to groups where media is not an influencer in Panel B of Table 6 and perceptions are formed based on exposure mechanisms, the image of the accountant as a "modern professional" is better than that when media is a source (34.3% compared to 23.2%). Further, those reporting the image of "bean-counter" when media is not a source of influence is better than when media is a source (17.5% compared with 29.5%). Non-media influenced groups reported that teacher, education, and media were the predominant sources for the formation of the "modern professional" image (45.0%) and the lowest for the "bean-counter" image (11.7%). Interestingly, where exposure to accountants was included as a source of influence, the predominant image was that of "plain vanilla" (50.9%) compared with "modern professional" (32.7%) and lowest "bean-counter" (16.4%).

Figure 4. Joint plot: sources of influence on image

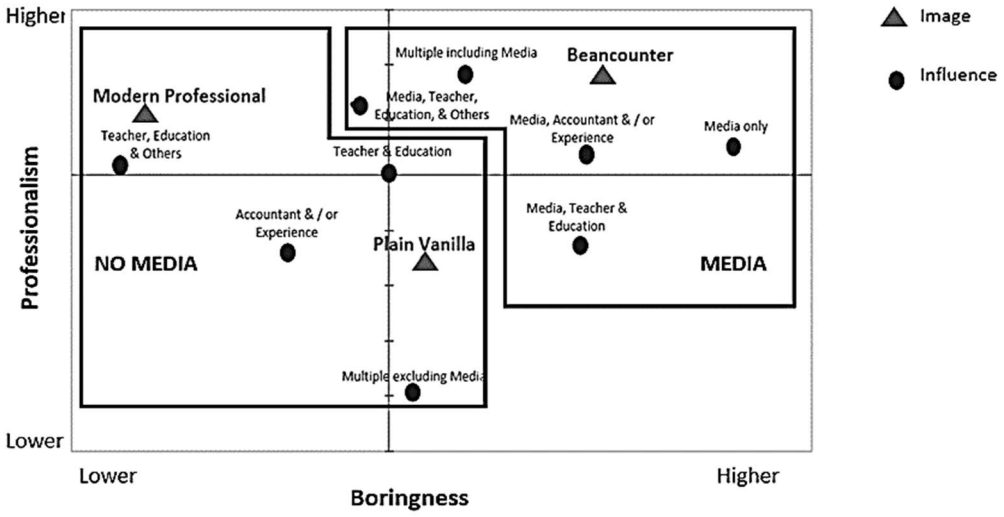


Figure 4 plots the relationship of the professional image by source of influence. To confirm the quality of this model, Table 9 presents a correlation analysis. The dimensions distinguished effectively between images; professional image is highly correlated with boringness (r = 0.640) and professionalism (r = 0.567); and influence is highly correlated with boringness (r = 0.640) and professionalism (r = 0.567).

Table 9. Discrimination measures

	Dimension		
	Boringness	***Professionalism***	***Mean***
Professional image	0.640	0.567	0.603
Distance from profession	0.640	0.567	0.604

Referring to Figure 4, all sources including media as a source of influence have been plotted in the top right quadrant reflecting the image of the "bean-counter", higher boringness but also higher professionalism. Of note is that all groups have reported the image either even with "bean-counter" or better than (i.e., plots sit below the "bean-counter" point). Sources excluding media have plotted in the left two quadrants, reflecting closer to the images of "plain vanilla" and "modern professional". In other words, those participants citing influences drawing from personal experience, family, friends, and exposure to accountants with no media influence hold the image of the accountant as more attractive than those influenced by media. However, these positive perceptions rank below the "modern professional" image which is depicted in the top left quadrant as high professionalism and low boringness. In particular, when influenced by exposure to accountants, the image is closer to that of "plain vanilla" yet when influence includes teachers and education, the perception of professionalism increases.

To test the assertion that the image of accountants differs from the sources of influence from which it is constructed, a Chi-square contingency test was conducted. Results of the Chi-square test, as presented in Table 5, demonstrate that image and sources of influence are related to one another ($\chi^2 = 37.550$, DF = 18, $p < 0.005$), thus supporting *H2a*. A Cramer's V test result of 0.219 reflects a slight to moderate effect (Cohen, 1988). Finally, to test the assertion that the image of the accountant is less favourable when media is included as a source of influence, a Chi-square contingency test as presented in Table 5 shows that the professional image of an accountant is less attractive when constructed from sources that include media ($\chi^2 = 9.867$, DF = 2, $p < 0.010$), thus supporting *H2b*. According to the Cramer's V test, the effect level of 0.159 reflects a slight to moderate effect.

5. DISCUSSION OF THE RESEARCH FINDINGS

Our study explored perceptions of the image of the accountant as imagined by multiple groups of undergraduate university students undertaking different years of study to identify potential reasons why accountants are perceived as boring "bean-counter", and obsessed with numbers (Carnegie & Napier, 2010) — an image that has proven resistant to change (Wells, 2018).

5.1. Distance from the accounting profession

Acknowledging accounting major students as closer to the profession than non-accounting major students, consistent with social identity theory (Tajfel & Turner, 2001) we find that overall, they perceive a more attractive image of the accountant than non-accounting major students, closer to the "modern professional" and that accounting major students rely on socio-motivational mechanisms to activate a positive image based on an esteem-function of being closer to the "in-group" (Stangor & Schaller, 2000).

We find a uniqueness with regard to accounting major students and perceptions of the professionalism of the accountant. Different to Caglio et al. (2019) who found that as people gain work experience in the accounting industry their perception of professionalism declines, we find a steady decline in perceived professionalism throughout an accounting major's studies. New entrants to undergraduate study held the profession in the highest regard. Second-year students imagine an image slightly higher in boringness but slightly lower in professionalism yet still closer to "modern professional". However, third-year accounting major students, whilst still imagining an image closer to "modern professional", perceive the profession as far less professional, suggesting that accounting students' perceptions change over the duration of their study and that the image of the accountant becomes less attractive as they grow closer to the profession.

The two non-accounting groups are deemed furthest away from the profession, plotting above "bean-counter" images suggesting a higher level of professionalism but also a much higher perception of boringness. This could be attributed to third-year non-accounting students, lacking motivation to allocate cognitive resources and instead relying on using a stereotypic schema to form their perception (Wells, 2015). The findings also reveal that the image of the accountant is gender-stereotyped (Fiske, 2018) as "male" and "pale".

There are differences between our findings and Caglio et al.'s (2019) earlier research. Specifically, comparing our findings with Caglio et al. (2019) reveals out of 19 characteristics as retained in both studies, only five overlapped with this study retaining more negative characteristics including the extreme that the accountant "speaks abnormally" and "suffers from nervous ticks".

This difference could be due to the different setting, as our study examined participants at different levels of progression at university whereas Caglio et al. (2019) explored participant's perceptions both at university and outside of the university context. Moreover, our study took place in a different country. This could indicate that cultural mechanisms underlie how students in Australia perceive the image of the accountant as opposed to how Caglio et al.'s (2019) Italian participants perceive accountants. Applying Hofstede's (1983) cultural dimensions theory, society's culture affects the values of its members and how such values affect behaviour. Australia and Italy are similar with regards to a culture focussed on individualism. However, long-term orientation differs with Australia considered more normative in approach with "truth" steeped in tradition, whereas "truth" in Italy relies on situation, context, and time (The Culture Factor Group, n.d.-a, n.d.-b). Understanding that some participants in both studies may not be native to the population, such overarching differences in cultures could explain why this study's participants demonstrated a preference for characteristics more closely aligned with the traditional "bean-counter" image whereas participants in Caglio et al.'s (2019) study retained more of positive characteristics.

5.2. Sources of influence

Sources including teachers and education linked closely to the "modern professional" image, exposure to the accounting profession linked closely to "plain vanilla", and sources including media linked closely with the negative and stereotypic "bean-counter" image. These findings are interesting, as they demonstrate the power of affective and cultural mechanisms in influencing perceptions across different groups and countries.

Consistent with prior research (Caglio et al., 2019; Baxter & Kavanagh, 2012; Wells, 2015), when perceptions are influenced by the classical conditioning affective mechanisms of teachers and education, the image of the accountant is more attractive. In addition, when the affective mechanism is exposure-based, such as working with or knowing an accountant, like Caglio et al. (2019), we show the perception of the image of the accountant shifts toward "plain vanilla" and reinforces Wells (2019) proposition that exposure to accountants reinforces a stereotypical image.

When perceptions are influenced by the cultural mechanism of media, consistent with Caglio et al. (2019), Wells (2019), Smith (2017), and Carnegie and Napier (2010) we find that the image of the accountant is negative, reflecting that of the stereotypic (Smith & Zarate, 1990) "bean-counter". Like Caglio et al. (2019), when media is grouped with exposure to accountants, the image is closest to "bean-counter", when media is the sole source of influence, the perception of the accountant is at its most boring, suggesting the media is a significant contributor in "establishing and maintaining the traditional accountant image" (Caglio et al., 2019, p. 867). The aforementioned studies occurred at different times, in different countries, adding further evidence that affective and cultural mechanisms are powerful influencers of perceptions.

6. CONCLUSION

Three key contributions to the literature emerge from this study. The first contribution is one of the first empirical validations of Caglio et al. (2019) methodology in a different cultural context, different setting and with a different participant sample. This is an important contribution as it provides a modern method of measuring perceptions about the profession.

Second, different to Caglio et al. (2019), who used undergraduate students from one year of study within a degree, this study expands the literature by using multiple student groups undertaking different year levels of their degree. Understanding these factors by considering a student's distance from the accounting profession and sources of influence on their perception of the image of the accountant unlocks potential reasons why perceptions have formed and thereby identifies levers to change the persistent "bean-counter" stereotype (Wells, 2018).

Third, prior studies suggest that the closer someone is to belonging to a "group", the more likely they are to use an esteem function (Wells, 2015) and form a positive image (Brewer, 1999) inferring that accounting major students in their third year of study would use an esteem function to form a positive image of the accountant. Whilst our findings demonstrate they imagine an image close to the "modern professional", such an image is less professional than that imagined by first and second-year accounting students. This demonstrates that third-year accounting students have not used an esteem-function but rather have formed an epistemic-related category label (Wells, 2015) of the image of the accountant. However, as Wells (2015) suggests: "Perceptions that develop for epistemic reasons are the easiest to change…" (Wells, 2015, p. 474) and based on the findings that perceptions have developed for epistemic reasons, provide the opportunity to address the decline in perceptions of professionalism.

Of concern for the higher education sector is that accounting students' perception of professionalism declines as they progress through their studies which may infer something in the accounting curriculum is a powerful influencer. Prior research has suggested that accounting education places a heavy focus on the technical aspects of accounting and presents accounting as "a relatively narrow technicist phenomenon to be mastered and properly applied" (O'Connell et al., 2015, p. 10). Thus, it could be inferred that parts of the university-level accounting curriculum are viewed as less professional, thus creating a decline in professionalism in the minds of second and third-year accounting students. Such perception may have a flow-on effect on the number of people pursuing a professional accreditation and a career in accounting. This is of particular concern for the professional accounting associations in Australia that are already reporting declining enrolments (CAANZ, 2018; CPA Australia, 2018) and could exacerbate the already short supply of appropriately skilled people in an otherwise growing profession (Australian Government Department of Jobs and Small Business, 2018). As our results indicate that the influence of teachers creates a more attractive

image of the accountant, this presents an opportunity for higher education to review the curriculum and teaching pedagogy in second and third-year accounting courses. Positive perceptions could be shaped with a focus on exciting new opportunities in the profession and training future accountants to be leaders and creators of value.

Troubling for policymakers and industry bodies is the perceived image when media is included as a source of influence with findings indicating the perception is the negative stereotypic "bean-counter" image. Research shows that media "are key to the setting of agendas and focussing public interest on particular subjects" (Happer & Philo, 2013, p. 321). This study and prior research (Caglio & Cameran, 2017; Caglio et al., 2019; Smith, 2017) indicate that media have perpetuated the stereotypical "bean-counter" image which has implications for policymakers' professional associations as to how and why various forms of media have been allowed to portray the image of the accountant in this negative light, particularly given that professional associations that have historically used media to promote the accounting profession. Given that disruptive change in the accounting profession is imminent where we will see "a very different profession from what we see today" (Baron, 2017, para. 8) it is incumbent on policymakers to influence the media in presenting this new image as media portrayals of different kinds of stakeholders "influences their acceptability and legitimacy" (Weishaar et al., 2016, p. 1). It is also incumbent on professional associations to take a lead by learning the effectiveness of various forms of media to reach and attract those possessing the required skills and competencies to thrive in a rapidly changing profession.

We acknowledge several limitations of the study. First, this study only collected data at a single point in time and only within one educational institution; Second, we also recognise that the voluntary nature of the survey questionnaire limited the sample size and may thus run a higher risk of non-response bias. Third, the nature of our data collection was quantitative; qualitative research could uncover richer information as to why perceptions of the image of the accountant reduce professionalism in the third year of an accounting major course. In light of our findings and limitations of the study, future research could look into other parts of the profession including graduates, new hires, more experienced workers and across industries. Such research could provide further insights as to how the profession sees itself and whether it is perpetuating the traditional stereotype, in addition to insights into generational impacts. Another interesting future research avenue could be research focussed on how accounting major undergraduate university students perceive the future skills required of the accountant. These future research endeavours could provide deeper insight into how a more progressive curriculum can be structured and would assist in attracting the best and the brightest to fill the skills gap in this rapidly changing and fast-growing profession.

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APPENDIX A. SURVEY QUESTIONNAIRE

Dear participant,
This questionnaire is part of a _____[2] University research project with ethical approval 2019/226. Participation is voluntary and all information collected is strictly confidential.
We are interested in your perceptions of the image of accountants, how and why these perceptions have been formed and your thoughts on future skills needed.
This questionnaire should take no longer than fifteen (15) minutes to complete. Your input is greatly appreciated and will help to ensure the relevance of accounting education in an ever-changing world.
If you are under the age of 18 or have previously completed this questionnaire, please *do not* complete the survey but feel free to continue reading

Section A: Demographic data (Please tick the appropriate response)

1. Do you identify as:
   - ☐ Male
   - ☐ Female
   - ☐ Other

2. Current age:
   - ☐ 18–19 ☐ 20–21 ☐ 22–23 ☐ 24–25 ☐ 26–30 ☐ 31–35
   - ☐ 36–40 ☐ 41–45 ☐ 46–50 ☐ 51–55 ☐ 56–60 ☐ 61+

3. Are you enrolled as a domestic or international student?
   - ☐ Domestic
   - ☐ International

4. What is your home country? _____

5. If your answer to Q4 was not Australia, how many years have you lived in Australia? _____

[2] Items blanked out to de-identify sampled university.

6. Are you currently enrolled in the Bachelor of Commerce program at _____ University?

- ☐ Yes
  - ☐ Accounting
  - ☐ Economics
  - ☐ Finance
  - ☐ Financial Planning
- ☐ No Please name your degree, for example, Bachelor of Business (Travel and Tourism):

_____

7. What is the course code of the lecture you are in while you are completing this survey?

- ☐ Accounting for decision-making
- ☐ Accounting theory and practice
- ☐ Auditing
- ☐ Applied econometrics
- ☐ Cost-benefit analysis applications

8. What campus are you enrolled in?

- ☐ _____ ☐ _____
- ☐ _____ ☐ Other (please specify) _____

9. Are you studying:

- ☐ Part-time
- ☐ Full time

10. Prior to coming to University, have you previously studied accounting/bookkeeping at any of the following? (Please tick all that apply).

- ☐ High school
- ☐ TAFE
- ☐ Other (please specify) _____

11. If you ticked any of the answers in Q10, what was your overall level of enjoyment of your prior study of accounting /bookkeeping? (Please circle the appropriate number on the following 5-point scale).

Not enjoyed	Somewhat enjoyed	Neutral	Enjoyed	Greatly enjoyed
1	2	3	4	5

12. Did you complete year 12, or equivalent?

- ☐ Yes
- ☐ No

13. Do you currently work or have you previously worked in an accounting-type role/s?

- ☐ Yes
- ☐ No

14. If you answered “No” to Q13, please proceed to Q15. If you answered “Yes”, how many years of experience have you had in accounting roles AND in what type/s of organisations have you worked?

Years of experience: _____
Organisation types:

- ☐ Public accounting firm ☐ Non-profit organisation
- ☐ Commercial business ☐ Other (please specify) _____
- ☐ Government department

Section B: Perception data

15. The following are 72 characteristics to aid in assessing the image of accountants. Please circle a number that reflects how strongly you feel that characteristic represents the image of an accountant (where 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, and 5 = Strongly agree).

No.	*Characteristic*	*Strongly disagree*	*Disagree*	*Neither agree nor disagree*	*Agree*	*Strongly agree*
1.	She/he behaves ethically	1	2	3	4	5
2.	He is bald	1	2	3	4	5
3.	He is male	1	2	3	4	5
4.	Her/his job implies a variety of tasks	1	2	3	4	5
5.	Her/his job presents an opportunity for advancement	1	2	3	4	5
6.	Her/his job requires the ability to decide	1	2	3	4	5
7.	Her/his job requires the ability to delegate	1	2	3	4	5
8.	Her/his job requires the ability to work with others	1	2	3	4	5
9.	Her/his job requires computer skills	1	2	3	4	5
10.	Her/his job requires leadership	1	2	3	4	5
11.	Her/his job requires problem-solving ability	1	2	3	4	5
12.	Her/his job requires written and oral communication skills	1	2	3	4	5
13.	She/he can speak foreign languages	1	2	3	4	5
14.	She/he complies with the law	1	2	3	4	5
15.	She/he is concerned with job security	1	2	3	4	5
16.	She/he dresses formally	1	2	3	4	5
17.	She/he dresses in a trendy style	1	2	3	4	5
18.	She/he feels comfortable with public speaking	1	2	3	4	5
19.	She/he gets high marks at school	1	2	3	4	5
20.	She/he gets on well with the other sex	1	2	3	4	5
21.	She/he has a calm disposition	1	2	3	4	5
22.	She/he has flexible working hours	1	2	3	4	5
23.	She/he has free time	1	2	3	4	5
24.	She/he has little faith in her/himself	1	2	3	4	5
25.	She/he has long-term earnings potential	1	2	3	4	5
26.	She/he has no friends	1	2	3	4	5
27.	She/he has the opportunity to do the whole work from the beginning to the end	1	2	3	4	5
28.	She/he has other interests apart from accounting	1	2	3	4	5
29.	She/he has prestige	1	2	3	4	5
30.	She/he is a person of habit	1	2	3	4	5
31.	She/he is always sitting at her/his desk	1	2	3	4	5
32.	She/he is ambitious	1	2	3	4	5
33.	She/he is an idealist	1	2	3	4	5
34.	She/he is boring	1	2	3	4	5
35.	She/he is brave	1	2	3	4	5
36.	She/he is capable in her/his job	1	2	3	4	5
37.	She/he is a collaborative	1	2	3	4	5
38.	She/he is committed to life-long learning	1	2	3	4	5
39.	She/he is conscious of her/his duty	1	2	3	4	5
40.	She/he is demanding	1	2	3	4	5
41.	She/he is discrete	1	2	3	4	5
42.	She/he is easily influenced	1	2	3	4	5
43.	She/he is energetic	1	2	3	4	5
44.	She/he is generous	1	2	3	4	5
45.	She/he is good at maths	1	2	3	4	5
46.	She/he is a hard worker	1	2	3	4	5
47.	She/he is incorruptible	1	2	3	4	5
48.	She/he is kind	1	2	3	4	5
49.	She/he is meticulous	1	2	3	4	5
50.	She/he is modest	1	2	3	4	5
51.	She/he is old	1	2	3	4	5
52.	She/he is organised	1	2	3	4	5
53.	She/he is pale	1	2	3	4	5
54.	She/he is physically unattractive	1	2	3	4	5
55.	She/he is poor in coping with stress	1	2	3	4	5
56.	She/he is sad	1	2	3	4	5
57.	She/he is shy	1	2	3	4	5
58.	She/he is sincere	1	2	3	4	5
59.	She/he is small	1	2	3	4	5
60.	She/he is thin	1	2	3	4	5
61.	She/he is trustworthy	1	2	3	4	5
62.	She/he is lucky	1	2	3	4	5
63.	She/he practices sports	1	2	3	4	5
64.	She/he prefers to be alone	1	2	3	4	5
65.	She/he remains in a shut room	1	2	3	4	5
66.	She/he speaks abnormally	1	2	3	4	5
67.	She/he suffers from nervous ticks	1	2	3	4	5
68.	She/he travels a lot	1	2	3	4	5
69.	She/he trusts other people	1	2	3	4	5
70.	She/he wears glasses	1	2	3	4	5
71.	She/he works on her/his own	1	2	3	4	5
72.	She/he works with numbers all day long	1	2	3	4	5

Section C: Influences on perceptions

16. What has influenced your perceptions of the accounting profession and/or the work of an accountant? (Please tick all that are relevant).

- ☐ My teacher/s
- ☐ A family member who is an accountant
- ☐ TV shows
- ☐ Careers guidance counsellors
- ☐ Books
- ☐ An accountant I know (other than family)
- ☐ Internet
- ☐ Movies
- ☐ School subjects studied
- ☐ My friends
- ☐ My friends' families
- ☐ Personal work experience
- ☐ Other (please specify) _____

Section D: Future skills (per job advertisements)

17. Following are 13 job skills. Thinking about the accountant of the future, please circle a number that reflects how important you feel that skill is (where 1 = Not important, 2 = Slightly important, 3 = Important, 4 = Fairly important, and 5 = Very important).

No.	*Job skill*	*Not important*	*Slightly important*	*Important*	*Fairly important*	*Very important*
1.	Collaborate with colleagues	1	2	3	4	5
2.	Present, discuss, and defend views	1	2	3	4	5
3.	Positive attitude	1	2	3	4	5
4.	Use of Information technology	1	2	3	4	5
5.	Leadership skills	1	2	3	4	5
6.	Meet deadlines	1	2	3	4	5
7.	Understand group dynamics	1	2	3	4	5
8.	Observant and aware	1	2	3	4	5
9.	Think and act independently	1	2	3	4	5
10.	Act strategically	1	2	3	4	5
11.	Analyse, reason and conceptualise issues	1	2	3	4	5
12.	Flexibility	1	2	3	4	5
13.	Solve problems and construct arguments	1	2	3	4	5

Thank you for taking the time to complete this survey. If you would like to receive a copy of the results and also allow us to communicate with you further, please provide an email address: _____

This email address will only be used for the purpose of contacting you to arrange an interview time convenient to you and then to liaise with you during the data analysis phase to clarify any points needing clarification. It will be saved in a password-protected document housed in the (deidentified) University's secure database. It will be destroyed at the cessation of this research project.