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#### Review article

# Self-mentions in design area disciplines: A corpus analysis

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## ABSTRACT

This study analyzes the self-mention forms represented by first-person pronouns (I, me, my, we, us, and our), self-citations, and other forms of mentions made by the same author(s) in each article (e.g., this writer, the author, the authors, the research team) in a corpus of academic articles (625,195 words) in Design area disciplines to determine the similarities and differences in self-mention practices within these disciplines and the previous findings reported in the literature of authorial self-representation observed in hard and soft fields. A quantitative approach using the method employed by Hyland in 2001 [23] explored a corpus of 100 academic empirical and theoretical articles on visual arts, design, architecture, and art and design education (25 for each discipline) obtained from Q1 and Q2 journals listed in the Visual Arts and Performing Arts subject area of Scopus. The results suggest that self-mention practices in Design area disciplines share similarities and differences with the authorial self-representation in soft and hard fields previously reported in the literature by Hyland in 2001 [23] and Dixon in 2022 [24]. Overall, selfmentions in Design area disciplines resemble the authorial self-representation practices in soft fields. However, self-mentions in architecture tend to use the impersonal writing of hard fields because this discipline has a close historical relationship with engineering. This is the first corpus analysis of self-mention practices in academic articles in the Design area disciplines. The implications of the findings for academic literacy are also discussed.

## 1. Introduction

Academic writers use different interactional resources to represent and project identity in their writings in various ways. The discoursal self allows us to use multiple multimodal semiotic systems to represent the values, beliefs, and worldviews in our individual, relational, and collective identities reciprocally as writers, researchers, and disciplinary community members. These identities determine the constructions of our writer identity and writing decisions [1,2]. In other words, through our discoursal self, we bring to the writing process the "collection of roles" and "various senses of self" in our identity [3, p.2]. Our discoursal self is closely and dialogically interrelated with our authorial self; the latter lets us project the former into interpersonal spaces.

Through the authorial self, we can project our professional and research authority into the relational, collective dimensions of writing. We use self-mentions and other interactional markers to position ourselves as researchers and authors capable of expressing our opinions on a topic or other authors' ideas, taking responsibility, and owning personal views [4]. We also claim the authorship of new ideas, findings, and textual content in our writings using the accepted self-mention devices in our disciplinary culture's prevailing discourse practices [5,6]. The interaction between the discoursal self and the authoritative authorial self enables us to align our writer

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identity with our disciplinary community's values, beliefs, attitudes, practices, ways of thinking, and epistemological assumptions. In the process, we project a sense of belonging as members of that social group to gain credibility and establish a relationship with future readers [7–10]. We use two rhetorical interactional macro-functions to project our discoursal, metadiscoursal, and authorial selves in academic writing: stance and engagement [11,12]. These relational resources work in tandem to construct the authorial voice with which we represent our authorial self in our texts.

Stance allows us to construct a textual voice to represent ourselves and express our opinions, assessments, judgments, personal feelings, attitudes, and commitments toward new ideas and findings, projecting our authoritativeness (authorial self). The stance interactional resources are hedges, boosters, attitude markers, and self-mentions [12–16].

Through engagement, we converse with the intended readers within a disciplinary community. Through argumentation, we establish an empathetic writer-reader relationship, attract the audience's attention, guide future readers, and acknowledge their convictions, expectations, uncertainties, and possible objections. To make them participants in the written dialogue of our academic writing, we use different interactional engagement resources, such as reader pronouns, directives, questions, shared knowledge, and personal asides.

We make writing decisions to project our authorial and discoursal selves, and we use stance and engagement interactional markers to design an academic discourse. These decisions are determined by the constraints of the reading and writing practices of the disciplinary discourses accepted by the members of a particular academic context. The constraints on the writer's identity constitute the socially available possibilities for selfhood [1]. They reflect the (1) values, (2) beliefs, (3) attitudes, (4) practices, (5) ways of thinking, and (6) the social and epistemological beliefs that the writer shares with other members of a disciplinary community [1,17].

Self-mention can be a persuasive interactional stance marker characterized by "first-person pronouns and possessive adjectives" [13, p.10]. The repertoire of self-mention resources provided by the socially available possibilities for selfhood determines the extent of explicit authorial self-presence and personal intrusion in the academic discourse that, in turn, represent the writer's individual, relational, and collective identities. The projection of these identities through the authorial self-construction using self-mention practices acceptable to the members of an academic discipline can be assessed in corpus analyses [18]. Considering the lack of studies of self-mention within the visual arts, design, architecture, and art and design education disciplines, this study addresses this gap and explores the authorial self-representation within a corpus of academic articles in these disciplines.

#### 1.1. Literature review

As stated above, self-mention is an interactional stance resource characterized by first-person pronouns and other forms of authorial self-representation in academic discourse practices that, in turn, are determined by the socially available possibilities for selfhood inscribed within disciplinary communities. After 1970, positivist researchers and social researchers advocating for post-positivism, interpretivism, constructivism, and critical theory paradigms engaged in discussions and conflicts within the educational research context. These confrontations are referred to as the "paradigm wars" by several authors [19, p.4; 20, pp.23–25; 21 p.613]. Before the paradigm wars, the prevailing positivist-objectivistic-quantitative epistemology constrained the socially available possibilities for selfhood expression by researchers, who, seeking objectivity, avoided imposing themselves and used impersonal and third-person writing. The emergence of non-positivistic epistemologies in social sciences and humanities after the 1970s and the surge of interpretive-qualitative researchers expanded the socially available possibilities for selfhood using narrative accounts and first-person writing [22]. Hyland [23] conducted the first study indexed in the Scopus database to understand the role of first-person pronouns and other authorial self-representation in a corpus of 240 research articles from hard and soft disciplines.

The results of this seminal work suggest that in hard fields, 63.3 % of self-mentions employed plural first-person pronouns, 33 % used self-citations, and 3.7 % utilized other authorial self-representation. In soft fields, 44.6 % of self-mentions employed plural first-person pronouns, 43.5 % used singular first-person pronouns, 10.1 % utilized self-citations, and 1.8 % employed other authorial self-representation in per-paper average frequencies. Overall frequencies showed that 69 % of self-mentions occurred in soft fields, and hard fields experienced 60 % self-citations. The different patterns of self-mention within soft and hard fields reflect the diversity of disciplinary, sociocultural, and epistemological practices.

Dixon [24] analyzed a corpus of 430 academic articles on sciences, social sciences, and humanities. This author found that the most frequently used first-person pronouns by authors were we and I. Raw-frequencies analysis showed that in humanities, 72.0 % of first-person pronouns corresponded to we and 28.0 % to I; in social sciences, 93.8 % corresponded to we and 6.2 % to I. In sciences, 90.6 % corresponded to we and 9.4 % to I. This author concluded that using first-person pronouns in academic writing increased in sciences and social sciences and decreased in humanities.

A research article might be seen as an asynchronous conversation in which we dialogue with other authors and our intended audience to construct and communicate new knowledge [25]. The voices in that conversation are represented by different stance interactional markers such as hedges, boosters, attitude markers, and self-mentions that determine the lesser or greater strength of human agency expressed through the authorial voice [26–29]. Generally speaking, the differences in self-mention practices among hard and soft fields are due to two opposite conversational styles characterized by an impersonal stance at one end and a personal stance at the other. Between these opposites, an epistemological spectrum of self-mentioning and authorial presence is described [30–36].

In hard fields, the positivist-objectivistic-quantitative epistemology continues to minimize the role of human agency in the construction and communication of knowledge. This Weltanschauung privileges an impersonal stance that tends to proscribe the use of singular first-person pronouns to gain credibility and emphasize objectivity, neutrality, empiricism, generalizability, and replicability [37–45]. Although a reduction of passive voice and an increase in plural first-person pronouns have been observed in the hard fields,

the use of the impersonal rhetorical pattern appears to be increasing in these fields due to the enculturation and social conventions available within their disciplinary communities [32].

Plural first-person pronouns and self-citations are not homogenous in hard fields. A gradient use of this kind of self-mention can be observed in the hard fields analyzed by Hyland [23]. In physics, 84.3 % of self-mentions corresponded to *We, Us,* and *Our* pronouns, followed by electronic engineering (73.0 %), biology (57.8 %), and mechanical engineering (38.2 %). Self-citations also are gradient in hard fields; in physics, 13.3 % of self-mentions corresponded to self-citations, followed by electronic engineering (23.9 %), biology (40.3 %), and mechanical engineering (54.4 %). The remaining percentages were other forms of self-mention. These variations in self-mention patterns in hard fields reflect different socially available possibilities for selfhood in each discipline.

On the other hand, soft fields tend to privilege a personal stance that uses singular first-person pronouns. Hyland [23] also observed a gradient usage of singular pronouns in these fields. In philosophy, 89.9 % of self-mentions corresponded to *I, Me*, and *My* pronouns, followed by applied linguistics (47.3 %), sociology (33.1 %), and marketing (3.7 %). The influence of the positivistic epistemology in soft fields is manifest in using plural first-person pronouns, particularly in marketing (82.9 %), followed by sociology (50.1 %), applied linguistics (41.2 %), and philosophy (4.1 %). The remaining percentages reflect other forms of self-mention. Hyland [46] suggested that authors in soft fields use singular first-person pronouns to explicitly represent the personal perspective and authorial self to gain epistemic authority congruent with the values and beliefs within the authorial identity.

The values and beliefs underlying the authorial tendency to represent the objectified and symbolic selves in soft fields are closely related to the effects of the narrative turns in social sciences and humanities and the participant-researcher relationship within qualitative research. The impact of the narrative turn in social sciences starting in the 1980s humanized the research processes, providing a voice to single individuals (who previously were ignored or marginalized) through the epistemic power of personal stories and diversity to explore the complexity of the human condition [47]. Finlay suggests that qualitative researchers should develop their "reflexive embodied empathy" [48, p.271] to establish a reciprocal, dialogical, caring, compassionate, and supportive participant-researcher relationship in which researchers share their personal stories, reflections, and interpretations to understand the experiences and personal narratives of those they interview [49]. In this reciprocal relationship, the researchers use their objectified selves to trigger their meta-self-awareness, learning about themselves and using their symbolic selves to project mental self-representations that can be communicated to others. Researchers' autobiographical memories, self-talk, and inner speech are central to maintaining these self-referential processes that, in turn, are represented by self-narratives and first-person writing through the different writer's identity roles expressed by first-person pronouns [50,51]. As a result, the researcher transforms into a "humanized research objectified self' capable of using stance and engagement to communicate the human experiences of their research process, such as behaviors, attitudes, opinions, perceptions, values, and epistemic emotions [52–55].

Since the self-mention practices reflect the epistemic beliefs, values, and social conventions available in each discipline, first-person writing in hard and soft fields is not monolithic. Diachronic studies suggested that the use of self-mentions has decreased in some disciplines over the last 50 years, like applied linguistics, and has increased in other disciplines, like sociology, biology, and electrical engineering [56,57].

Hyland suggests that a corpus analysis is the only way to critically understand the existing discourse within an academic community, particularly in those considered a minority.

Do we really need another paper complaining that the conventions of academic English discourse deny access to minorities? All community discourses are exclusive - I couldn't join in a legal discussion or debate in surf argot. Apart from expressing academic ideas in common-sense terms, the only way to enhance access (to conventions of academic English discourse) is to critically understand existing discourses, which is what your study seeks to do. An analysis is revelatory - it exposes the arcane and reveals the choices writers make. It shows how we can understand, challenge, and perhaps learn those discourses [58].

The utility of research corpus analyses of self-mention practices is discussed by several authors e.g., [6,9,31,59,60]. After searching the Scopus database, the results yielded 117 academic documents published between 2001 and 2023 containing the term "self-mention" in the title, abstract, or keywords. Cumulative frequencies of these documents grew exponentially after 2012: 92.3 % of the papers were published between 2012 and 2023, and 30.77 % were published in 2021 and 2022. When adding the search terms "academic articles" or "research articles" in the title, abstract, or keywords, only 44 academic documents published between 2001 and 2023 were obtained. These studies only focused on understanding the self-mention practices prevailing within hard and soft fields (sciences, engineering, humanities, and social sciences), excluding other disciplines pertaining to the Design area.

Within education and research, Archer [61] criticized the dichotomic organization of academic disciplines grouped into Sciences and Humanities and suggested a third area of education and knowledge named the Design area. This area clusters the disciplines concerning the representation, production, and use of tangible and intangible cultural capital [62], such as fine arts, performing arts, design, and architecture. With the inclusion of the Design area, Archer proposed a triadic system of Humanities, Sciences, and Design knowledge repositories in which each area constitutes a vertex of an equilateral triangle; the sides of the triangle describe a continuum relationship between the three areas. For example, in the Design-Humanities continuum, some design disciplines might closely correlate to the Humanities (e.g., performing arts). In the Design-Sciences continuum, other disciplines might have a closer relationship with sciences (e.g., AI-based generative art).

The present study aimed to analyze the self-mention forms, represented by first-person pronouns, self-citations, and other references to authors in a corpus of academic articles within Design area disciplines, including (1) visual arts, (2) design, (3) architecture, and (4) art and design education. To achieve this goal, the aims and scopes of the journals listed in the Visual Arts and Performing Arts subject area in the Scopus database were analyzed to select the journals covering these disciplines, and the articles were chosen randomly to construct the academic articles corpus to ensure that each article "in the population have an equal chance to be selected"

[63, p.244; 64, p.70]. A quantitative approach was performed to explore the corpus; it comprised a frequency analysis of first-person pronouns and other self-mention forms. A contextual analysis was used to verify each clause to discard false positives. Considering the above, we decided to address the following research questions to guide this study.

- 1. What are the self-mention practices in the Design area disciplines?
- 2. What are the similarities and differences in self-mention practices between Design area disciplines and hard and soft fields disciplines?

Considering academic literacy teaching and learning language-based and cognitive-based approaches, our study also aimed to provide a starting point for understanding, challenging, and reflecting upon the prevailing discursive practices in the visual arts, design, architecture, and art and design education disciplines.

## 2. Methodology

#### 2.1. Data collection and corpus

We analyzed the aims and scopes of the journals listed in the Visual Arts and Performing Arts subject area of Scopus (pertaining to the 1st and 2nd quartiles) to discard the journals from other disciplines (i.e., Theatre, Drama, Film studies, etc.) and to construct a corpus of academic articles in the visual arts, design, architecture, and art and design education fields.

Considering the limited number of journals in each field, we selected five Q1 and Q2 journals from each discipline. Although the decision to include journals rated in different quartiles might be controversial, several considerations justify this decision. According to Sahel, bibliometric indicators such as the number of citations per article, total number of citations, and H-index are not correctly used in humanities and social sciences (arts included) because "the existing databases do not cover these fields sufficiently" [65, p.4]. The correlation between quartile ranking and impact factor showed that journals are distributed in high, medium, and low-impact classifications. Journal-quartile ranking is complex, requiring multivariate analysis because several bibliometric indicators determine the relationship between journal quartile rankings and cross-journal comparisons [66]. Furthermore, Kurniawan et al. [67] suggested that the journal quartile does not necessarily affect the rhetorical structure of research articles (at least in the applied linguistics study field), supporting the idea that corpus analysis should move from a quartile lens.

The present study selected a randomized sample of academic articles published between 2017 and 2021 from each journal's issues and tables of contents. Five papers from each journal were obtained, comprising a corpus of 100 papers and 625,195 words (Table 1). The journal titles are listed in. Appendix 1.

Hyland [23] selected three papers from 10 journals from each discipline to explore the self-mention practices in eight hard and soft disciplines. Although it might be desirable to have a sample of 10 journals per analyzed discipline as Hyland did, in the corpus sampling process, there is always a contrast between what is considered ideal and what is feasible: "Using a small corpus is not a bad thing," "if wisely used, a small corpus is worth more than a big corpus that is used unwisely." [68, pp.5–6].

### 2.2. Data analysis

After the corpus sampling, the PDF files of selected articles were downloaded from academic databases. The PDF files were converted to Text format files, reference lists were deleted, and the data analysis was performed using AntConc software [69] to determine the frequency of self-mention items. These lexical items included first-person pronouns *I, me, my, we, us,* and *our,* as well as self-citation and *other* forms of mentions made by the same author(s) of each article (e.g., *this writer, the author, the authors, the research team*) as Hyland [23] suggests. All concurrences were analyzed contextually to discard false positives using the AntConc software, and each clause was verified manually in the PDF files to confirm each false positive. The raw frequencies were normalized to a text length of 10, 000 words. The chi-squared test was used to determine if an actual difference in self-mention among analyzed disciplines exists i.e., [31,70,71].

**Table 1**Corpus and subcorpora size.

Discipline	Words
Art & Design Education	130,696
Design	156,220
Visual Arts	181,218
Architecture	157,061
Total	625,195

## 3. Results and discussion

#### 3.1. Results

#### 3.1.1. Frequencies of self-mention forms

A frequency analysis of first-person pronouns and other self-mention forms was conducted to determine the self-mention practices within visual arts, design, architecture, and art and design education academic articles. All self-mention forms were observed in the analyzed disciplines. The chi-squared test showed a significant difference between the frequencies of first and third-person pronouns in the analyzed disciplines ( $x^2 = 15.27$ , df = 3, p < 0.005). A significant difference between the frequencies of all forms of self-mention (self-citations; I, Me, My; We, Us, Our; Other) in analyzed disciplines was also revealed by the chi-squared test ( $x^2 = 28.42$ , df = 9, p < 0.005).

Fig. 1 suggests a gradient of authorial self-mention items per 10,000 words among the analyzed disciplines. The highest density was observed in art and design education (83.4), and the lowest density occurred in architecture (26.2). Design (65.4) and visual arts (42) fell between these extremes.

An overall frequency of 34.1 self-mention items per 10,000 words was observed. The most frequently used self-mention devices within the analyzed disciplines were personal pronouns (77.6 %); self-citations corresponded to 17.4 %, and other self-representation corresponded to 5.0 % of average self-mention devices (Table 2).

Although 44 % of personal pronouns in the corpus corresponded to plural first-person pronouns and 34 % to singular first-person pronouns, different patterns of self-mention were observed in the analyzed disciplines. Fig. 2 shows a higher density of plural first-person pronouns in design articles (69.6 %), followed by art and design education articles (58.5 %). Visual arts and architecture articles showed the same frequency of plural first-person pronouns (43.6 %). A lower frequency of singular first-person pronouns was particularly evident in design (9.6 %), followed by architecture (18 %), and art and design education (24.7 %). These patterns of personal pronoun use contrasted with the visual arts articles, which have a higher density of singular first-person pronouns (43.9 %).

The highest density of self-citation was observed in architecture (31.1 %), followed by art and design education (13.7 %), design (10.3 %), and visual arts (8.9 %). Other author self-representation forms were particularly high in design (10.6 %), followed by architecture (7.3 %); in visual arts and art and design education disciplines, a similar density of this kind of self-mention was observed (3.5 % and 3.1 %, respectively) (Fig. 2).

Table 3 shows the average and relative frequencies of raw self-mention scores per paper. Overall, 32.9 self-representation items per paper were observed. 77.9 % (26.4) of these corresponded to pronouns, 16.0 % (4.5) to citations, and 6.1 % (2.0) to other forms of authorial presence.

#### 3.1.2. Personal pronoun use

As stated, pronouns were the most frequently used authorial representation in the analyzed disciplines. The ratio between the raw frequencies of *We, Us, Our* (1861) and *I, Me, My* (776) in the total corpus corresponded to 2.4:1. In visual arts articles, this ratio was 1.0:1; in art and design education and architecture articles, it was 2.4:1; and in design articles, it was 7.3:1 (Table 4).

The ratio between the raw frequencies of We (1156) and I (546) in the total corpus was 2.1:1. In visual arts articles, this ratio was 0.9:0; in art and design education articles, it was 1.8:1; in architecture articles, it was 2.1:1; and in design articles, it was 7.0:1 (Table 5).

Concerning average personal pronouns per paper, plural first-person pronouns corresponded to 70.6 %, and 29.4 % were singular first-person pronouns. When we compared the percentages of singular first-person pronouns against the plural first-person pronouns of the total personal pronouns per paper used by discipline, 12.1 % of personal pronouns in design articles were singular first-person pronouns, and 87.9 % were third-person pronouns. A similar proportion of singular first-person pronouns and plural first-person pronouns was observed in architecture and art and design education articles; 29.2 % and 29.7 % corresponded to singular first-person pronouns, and 70.8 % and 70.3 % were third-person pronouns, respectively. In visual art articles, 50.1 % of personal pronouns corresponded to singular first-person pronouns, and 49.9 % were third-person pronouns (Table 6).

We, I, and our were the most frequently used personal pronouns, corresponding to 43.8 %, 20.7 %, and 19.1 %, respectively. In

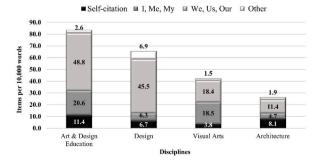


Fig. 1. Self-mention per discipline, items per 10,000 words.

**Table 2**Frequency of self-mention forms per discipline (per 10,000 words) and relative frequencies.

Discipline	Total	Citations	I	Me	My	We	Us	Our	Other
Art & Design Education	83.4	11.4 (13.7 %)	14.3 (17.2 %)	1.5 (1.8 %)	4.7 (5.7 %)	25.6 (30.7 %)	5.1 (6.1 %)	18.1 (21.7 %)	2.6 (3.1 %)
Design	65.4	6.7 (10.3 %)	4.5 (6.9 %)	0.5 (0.8 %)	1.2 (1.9 %)	31.9 (48.8 %)	3.3 (5.0 %)	10.3 (15.8 %)	6.9 (10.6 %)
Visual Arts	42.1	3.8 (8.9 %)	12.7 (30.3 %)	1.2 (2.8 %)	4.6 (10.9 %)	11.1 (26.5 %)	3.2 (7.6 %)	4.0 (9.6 %)	1.5 (3.5 %)
Architecture	26.2	8.1 (31.1 %)	3.6 (13.9 %)	0.3 (1.0 %)	0.8 (3.2 %)	7.6 (29.2 %)	1.7 (6.6 %)	2.0 (7.8 %)	1.9 (7.3 %)
Average	34.1	6.0 (17.4 %)	8.2 (24.0 %)	0.7 (2.1 %)	2.7 (7.9 %)	9.4 (27.5 %)	2.5 (7.2 %)	3.0 (8.9 %)	1.7 (5.0 %)

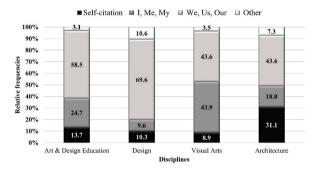


Fig. 2. Stacked relative frequencies per discipline.

**Table 3**Average frequency of self-mentions per paper and relative frequencies.

Discipline	Total	Self-citations	Pronouns	Other
Art & Design Education	43.6	6.0 (13.7 %)	36.3 (83.2 %)	1.4 (3.1 %)
Design	40.9	4.2 (10.3 %)	32.4 (79.2 %)	4.3 (10.6 %)
Visual Arts	30.5	2.7 (8.9 %)	26.7 (87.5 %)	1.1 (3.5 %)
Architecture	16.4	5.1 (31.1 %)	10.1 (61.6 %)	1.2 (7.3 %)
Average	32.9	4.5 (16.0 %)	26.4 (77.9 %)	2.0 (6.1 %)

**Table 4**Raw frequencies and ratios of first-person pronouns per discipline.

Disciplines	We, Us, Our	I, Me, My	Ratios
Visual Arts	333	335	1.0:1
Art & Design Education	638	269	2.4:1
Architecture	179	74	2.4:1
Design	711	98	7.3:1
Totals	1861	776	2.4:1

**Table 5**Raw frequencies and ratios of *We* and *I* pronouns per discipline.

Disciplines	We	I	Ratios
Visual Arts	202	231	0.9:1
Art & Design Education	335	187	1.8:1
Architecture	120	57	2.1:1
Design	499	71	7.0:1
Totals	1156	546	2.1:1

design articles, 8.8 % of personal pronouns were *I*, and 64.7 % were *We*. In art and design education articles, 20.6 % of personal pronouns were *I*, and 36.9 % were *We*. In architecture articles, 22.5 % of personal pronouns were *I*, and 47.4 % were *We*. In visual arts education articles, 34.6 % of personal pronouns were *I*, and 30.2 % were *We* (Table 7).

## 3.1.3. Personal pronouns used in single-authored vs. multiple-authored articles

The corpus comprised 45 (45 %) multiple-authored articles and 55 (55 %) single-authored articles. Among analyzed disciplines, the highest proportion of multiple-authored articles was observed in design (68 %), followed by art and design education and architecture

**Table 6**Frequency of first-person and third-person pronouns per paper and relative frequencies.

Discipline	Total	I, Me, My	We, Us, Our
Art & Design Education	36.3	10.8 (29.7 %)	25.5 (70.3 %)
Design	32.4	3.9 (12.1 %)	28.4 (87.9 %)
Visual Arts	26.7	13.4 (50.1 %)	13.3 (49.9 %)
Architecture	10.1	3.0 (29.2 %)	7.2 (70.8 %)
Average	26.4	7.8 (29.4 %)	18.6 (70.6 %)

(52%); the lowest proportion of this type of authorship occurred in visual arts articles (8%). The highest proportion of single-authored articles was observed in visual arts (92%), followed by art and design education and architecture (48%), and the lowest proportion of single-authored articles occurred in design articles (32%) (Table 8).

When we analyzed the percentages of the total personal pronouns used in single-authored and multiple-authored articles, different patterns of authorial presence were observed among the analyzed disciplines (Fig. 3).

Most third-person pronouns used in the design field were in multiple-authored articles, corresponding to (74.8 %) of the pronouns used. The remaining percentage of plural first-person pronouns (13.1 %) were used in single-authored articles, along with the singular first-person pronouns used in this discipline (12.1 %).

Within art and design education, the higher density of personal pronouns used in this field (36.6 %) corresponded to plural first-person pronouns used in single-authored articles and singular first-person pronouns (29.7 %). The remaining percentage of plural first-person pronouns (33.7 %) were used in multiple-authored articles in this field.

The higher density of personal pronouns used in architecture (49.0 %) corresponded to plural first-person pronouns utilized in single-authored articles and singular first-person pronouns (29.2 %). The remaining percentage of plural first-person pronouns (21.7 %) were used in multiple-authored articles in this field.

Visual arts multiple-authored articles used only 2.4% of the total pronouns within this discipline, corresponding to third-person pronouns. The remaining percentage of pronouns were used in single-authored articles; 50.1% were single-person pronouns, and 47.5% were third-person pronouns.

Table 9 shows that the average frequency of personal pronouns per paper in multiple-authored articles in the analyzed disciplines was 17.8. Only plural pronouns were used. The most frequently used pronoun was *We*, corresponding to 11.7 (65.6 %), followed by *Our* 4.6 (25.7 %) and *Us* 1.6 (8.7 %). The highest density of personal pronouns was observed in the design discipline (35.6), followed by art and design education (23.5), visual arts (8.0), and architecture (4.2).

In single-authored articles (Table 10), the overall average frequency of first-person pronouns was 30.1. A similar average frequency of I and I and I and I average frequency of I and I average frequency of I average frequency of I average frequency of I and I average frequency of I average frequency of I and I average frequency of I and I average f

When comparing the overall average frequency of single-person pronouns against the frequency of plural-person pronouns in single-authored articles (Table 11) in the analyzed disciplines, the plural-person pronouns averaged 16.3 (54.0 %), and single-person pronouns were 13.8 (46.0 %). The plural-person pronouns predominated in architecture, corresponding to 10.3 (62.6 %), and singular-person pronouns were the lowest in the analyzed disciplines at 6.2 (37.4 %). In art and design education, the frequency of plural pronouns was 27.7 (55.2 %), and the use of singular pronouns was 22.4 (4.8 %). Using singular and plural pronouns in visual arts and design articles was more balanced. In visual arts, the frequency of singular pronouns was 14.6 (51.4 %), and the use of plural pronouns was 13.8 (48.6 %); in design, the frequency of singular pronouns was 12.3 (48.0 %) and the use of plural pronouns was 13.8 (52.0 %).

#### 3.2. Discussion

One study objective was to determine if self-mention practices within Design area disciplines correspond to the dichotomic model of authorial self-representation previously reported in hard and soft fields. Our findings can be contrasted with the observations reported by other authors in the literature [23,24]. We are aware that discourse and self-mention practices change over time (e.g., in applied linguistics and sociology, the use of first-person pronouns has decreased, and the use of first-person pronouns has increased in Biology and Electric Engineering [32,57]). The results suggest that self-mentions in design disciplines have different densities of authorial presence, sharing similarities and differences with the authorial self-representations previously noted in the literature in soft

**Table 7**Frequencies of personal pronouns per paper and relative frequencies.

Discipline	Total	I	Me	My	We	Us	Our
Art & Design Education	36.3	7.5 (20.6 %)	0.8 (2.2 %)	2.5 (6.8 %)	13.4 (36.9 %)	2.6 (7.3 %)	9.5 (26.1 %)
Design	32.4	2.8 (8.8 %)	0.3 (1.0 %)	0.8 (2.3 %)	20.0 (61.7 %)	2.0 (6.3 %)	6.4 (19.9 %)
Visual Arts	26.7	9.2 (34.6 %)	0.8 (3.1 %)	3.3 (12.4 %)	8.1 (30.2 %)	2.3 (8.7 %)	2.9 (10.9 %)
Architecture	10.1	2.3 (22.5 %)	0.2 (1.6 %)	0.5 (5.1 %)	4.8 (47.4 %)	1.1 (10.7 %)	1.3 (12.6 %)
Average	26.4	5.5 (20.7 %)	0.5 (2.0 %)	1.8 (6.7 %)	11.6 (43.8 %)	2.0 (7.7 %)	5.0 (19.1 %)

**Table 8**Single-authored and multiple-authored papers per discipline and relative frequencies.

Discipline	Total	Single-authored	Multiple-authored
Design	25	8 (32.0 %)	17 (68.0 %)
Art & Design Education	25	12 (48.0 %)	13 (52.0 %)
Architecture	25	12 (48.0 %)	13 (52.0 %)
Visual Arts	25	23 (92.0 %)	2 (8.0 %)
Total	100	55 ( <i>55.0</i> %)	45 (45.0 %)

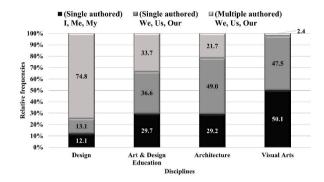


Fig. 3. Stacked relative frequencies of personal pronouns for multiple and single-authored articles per discipline.

**Table 9**Frequencies of personal pronouns per paper and relative frequencies in multiple-authored articles.

Discipline	Totals	I	Me	My	We	Us	Our
Design	35.6	0.0	0.0	0.0	24.9 (70.1 %)	2.2 (6.3 %)	8.4 (23.6 %)
Art & Design Education	23.5	0.0	0.0	0.0	12.0 (51.0 %)	2.3 (9.8 %)	9.2 (39.2 %)
Visual Arts	8.0	0.0	0.0	0.0	7.0 (87.5 %)	1.0 (12.5 %)	0.0 (0.0 %)
Architecture	4.2	0.0	0.0	0.0	2.8 (67.3 %)	0.7 (16.4 %)	0.7 (16.4 %)
Average	17.8	0.0	0.0	0.0	11.7 (65.6 %)	1.6 (8.7 %)	4.6 (25.7 %)

**Table 10**Frequencies of personal pronouns per paper and relative frequencies in single-authored articles.

Discipline	Totals	I	Me	My	We	Us	Our
Art & Design Education	50.1	15.6 (31.1 %)	1.7 (3.3 %)	5.2 (10.3 %)	14.9 (29.8 %)	3.0 (6.0 %)	9.8 (19.5 %)
Visual Arts	28.3	10.0 (35.4 %)	0.9 (3.2 %)	3.6 (12.7 %)	8.2 (28.8 %)	2.4 (8.6 %)	3.2 (11.2 %)
Design	25.5	8.9 (34.8 %)	1.0 (3.9 %)	2.4 (9.3 %)	9.4 (36.8 %)	1.6 (6.4 %)	2.3 (8.8 %)
Architecture	16.5	4.8 (28.8 %)	0.3 (2.0 %)	1.1 (6.6 %)	6.9 (41.9 %)	1.5 (9.1 %)	1.9 (11.6 %)
Average	30.1	9.8 (32.6 %)	1.0 (3.2 %)	3.1 (10.2 %)	9.8 (32.7 %)	2.1 (7.1 %)	4.3 (14.2 %)

**Table 11**Frequencies of personal pronouns per paper and relative frequencies in single-authored articles.

Discipline	Totals	I, Me, My	We, Us, Our
Art & Design Education	50.1	22.4 (44.8 %)	27.7 (55.2 %)
Visual Arts	28.3	14.6 (51.4 %)	13.8 (48.6 %)
Design	25.5	12.3 (48.0 %)	13.3 (52.0 %)
Architecture	16.5	6.2 (37.4 %)	10.3 (62.6 %)
Average	30.1	13.8 (46.0 %)	16.3 (54.0 %)

and hard fields. Despite overall self-mentions in Design area disciplines resembling the authorial self-representation practices available in soft fields, architects also tend to use the impersonal writing of hard fields.

Fig. 4 shows that overall self-mention in these design disciplines resembles the authorial self-representation practices in soft fields. When comparing the average frequencies of self-mentions per paper in design disciplines (32.9) against the frequencies observed by

Hyland [23] in hard (17.6) and soft fields (38.1), our data suggests that the overall self-mention density in architecture is similar to the density observed in hard fields. The average frequency of self-mention items per 10,000 words in architecture is between the average frequencies Hyland [23] observed in electronic and mechanical engineering. The frequency of overall self-mentions per paper in architecture (Fig. 5) was between the average self-mention per paper observed in electronic engineering and lower than the average self-mention per paper observed in physics by Hyland [23]. Furthermore, self-citation observed in architecture (31.1 %) was similar to the average of self-citations observed in hard fields (33.0 %) by Hyland [23].

The hard fields' density, like the overall density of self-mentions in architecture, might be explained by the historical relationship between architecture and engineering, the tendency to seek and integrate the ethics and philosophy of architectural and engineering design [72], and the reciprocal relationships in architecture and engineering education [73]. Despite this tendency to write impersonally in architecture, singular first-person pronouns were used in single-authored papers. This finding contrasts with the self-mentions in the hard fields (Fig. 6), where the use of singular pronouns was null [23].

Since the Renaissance, architecture has been considered an artistic profession closely related to painting and sculpture. Giorgio Vasari (1511–1574) was an architect and painter, and the architect [74]; Leon Batista Alberti (1404–1472) wrote about theoretical aspects of painting and sculpture in his book *Della Pittura e Della Statua* [75]. Although most architects today work collaboratively in firms that subsume individual identity into a company's identity, some architects are still required to design single-authored buildings and landscapes in which they project their personal aesthetic values [72]. In our opinion, the need of some architects to represent an artistic individual professional identity explains the use of singular first-person pronouns in their articles.

On the other hand, the average frequency of self-mentions per paper observed in visual arts was lower than in sociology (soft field) and higher than in biology (hard field), as reported by Hyland [23], suggesting that overall visual arts self-mention density is between soft and hard sciences (Fig. 5). The percentage of singular first-person pronouns in visual arts was higher than the relative frequency observed in sociology and lower than in applied linguistics in the Hyland [23] study (Fig. 6). Considering that visual artists showed the highest proportion of single-authored articles in design fields, this soft field-like use of singular first-person pronouns in visual arts is not rare: Since the Renaissance, visual artists have tended toward a solid individual identity and a developed sense of self that is reflected in their personal works [76]. The close relationship of arts-based research practices to qualitative research, particularly the use of qualitative methods and methodologies by artist-researchers, and the tendency to adopt non-positivistic philosophical positioning such as post-modern, constructionist or constructivist stances within arts-related research [77,78], might also explain the similarities between visual arts and soft-field self-mention practices.

When comparing the average self-mentions per paper observed in the design discipline with the Hyland [23] findings, self-mentions' density is higher than the philosophy frequency and lower than that observed in art and design education and marketing (Fig. 5). Among the design fields, designers had the highest proportion of self-mentions using plural first-person pronouns (87.9 %) and the lowest proportion of singular first-person pronouns (12.1 %) (Fig. 6). The use of plural pronouns and other forms of self-mentions constitute 80.1 % of analyzed devices in this discipline. In our opinion, this authorial representation practice reflects the importance of designers' collective identity within their professional identity and the role of co-design and collaboration culture in their creative space and organizational culture [79,80].

In the analyzed Design area disciplines, art and design education showed the highest authorial self-mention density per paper (43.6) and the highest self-mention frequency per 10,000 words (83.4). The average frequency of self-mentions per paper in this discipline was lower than the frequency observed by Hyland [23] in marketing and higher than the frequency observed in the design discipline (Fig. 5). The percentage of use of singular first-person pronouns in art and design education was higher than the relative frequency observed in architecture and lower than the frequency observed in literature in the Dixon [24] study (Fig. 6). Art and design educators showed a proportion of self-mentions using plural first-person pronouns of 70.3 % and a proportion of singular first-person pronouns of 29.7 % (Fig. 6). The higher self-representation within the art and design education discipline could be explained by the increased sense of individual and collective teacher's agency that determines the construction of educators' individual, relational, and collective identities per their goals, values, beliefs, self-evaluation, and their wanted, unwanted, and awaited future selves. Teacher's agency also allows educators to set and pursue their goals and share their individual and collective stories and narratives [81–84].

## 4. Implications for developing academic literacy skills in design area disciplines

Promoting academic literacy skills within art and design practice-based postgraduate programs is challenging, particularly in those requiring submitting a thesis or a written research report and producing a body of creative products. In this context, it is generally assumed that the world of ideas, theories, ontological and ideological systems, and knowledge production belongs to the territory of sciences; consequently, knowledge production, writing, and research skills development are disregarded [85,86]. Therefore, students perceive writer and researcher identities as alien to their creative identity because research and writing are displayed as objective, logical, abstract, and hyperrational processes that have nothing to do with creativity [87]. Students should start an identity transformation and integration to incorporate researcher and writer identities into their individual identities, overcoming struggle and resistance to explore and commit to these new identities they perceive as feared selves [87–92].

Teaching within this educational setting requires implementing multiple actions to redress students' skill deficits and acculturate disciplinary thinking, writing, and discourse in the literacy practices available in their disciplines [93]. Remembering that academic literacy is an identity transformation process [94], we are convinced that a critical factor in helping students integrate their writer identity into their pre-existing creative identity is providing them with tools and evidence to trigger their self-awareness of their myths and misbeliefs about academic writing. We believe that our study constitutes a starting point to discuss "the myth of impersonality" [46, p.351] and reflect upon the myths regarding self-mentioning and authorial identity representation in the prevailing academic

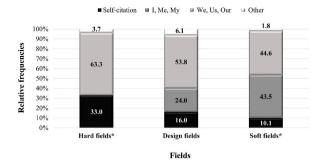


Fig. 4. Comparison of relative frequencies of self-mentions in design fields versus frequencies reported by Hyland [23] (\*) in hard and soft fields.

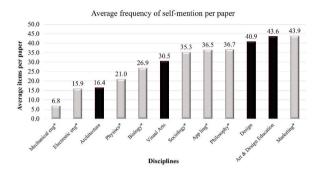


Fig. 5. Comparison of average self-mention frequencies per paper in design fields against frequencies reported by Hyland [23] (\*) in hard and soft fields.

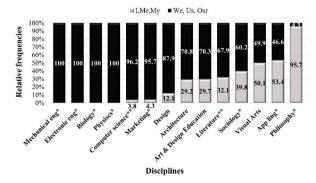


Fig. 6. Comparison of relative frequencies of first-person pronoun usage in design fields against frequencies reported by Hyland [23] (\*) and Dixon [24] (\*\*) in hard and soft fields.

writing practices of the Design area disciplines. This paper may also trigger students' reflections on the socially available selfhood possibilities inscribed in discursive practices in their disciplinary community and help them develop their writer identities and authorial voices [1].

#### 5. Conclusion

This is the first corpus analysis of self-mention practices in academic articles in the Design area disciplines (visual arts, design, architecture, and art and design education). Generally speaking, and considering Archer's triadic system, the results suggest that self-mention practices within visual arts, design and art, and design education are closely related to the Humanities in the Design-Humanities continuum. In the Design-Sciences continuum, architecture self-mention practices are closely associated with the Sciences, despite the fact that singular first-person pronouns are also used in this discipline.

These findings might be used to foster the reflection and self-awareness about the myths and misbeliefs regarding academic writing held in these disciplines. The study also constitutes a basis to discuss the characteristics, similarities, and differences in authorial self-representation practices in design disciplines and their implications for developing writer identity. Our findings might also be a

starting point to trigger reflection on personal and disciplinary epistemology and how the writer identity represents the creative and professional identities within the Design area disciplines.

The limitations of this work are related to the reduced number of journals available in the design fields. The study of other interactional resources of stance and engagement; the analysis of inclusive and exclusive forms of the *We* pronoun and self-promotional functions of personal pronouns [95]; the representation of the identity roles behind the first-person pronouns described by Tang and John [50], and the study of the representation of other self-referential processes [96] in the visual arts, design, architecture, and art and design education disciplines are beyond the scope and aim of this article. The analysis of the differences and similarities of authorial self-representation in empirical and theoretical articles of these disciplines is also beyond the scope and objective of this article. Therefore, further studies should be conducted to increase knowledge of the discourse practices available in these academic communities.

## CRediT authorship contribution statement

**Victor(ia) Batres-Prieto:** Writing – original draft, Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Asad Abbas:** Writing – review & editing, Supervision, Conceptualization.

#### Data availability statement

Data will be made available on request.

#### Additional information

No additional information is available for this paper.

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## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Appendix 1. Journal list

Discipline	Journal	Ranking	Scope
Visual Arts	Journal of Visual Art Practice	Q2	Empirical and theoretical
	Oxford Art Journal	Q2	Theoretical
	Art Journal	Q2	Empirical and theoretical
	Journal of Graphic Novels and Comics	Q1	Empirical
	Animation	Q2	Theoretical
	Visual Studies	Q1	Empirical and theoretical
Design	CoDesign	Q1	Empirical and theoretical
	International Journal of Design Creativity and Innovation	Q1	Empirical and theoretical
	International Journal of Fashion Design, Technology and Education	Q1	Empirical and theoretical
	Fashion Practice	Q1	Empirical and theoretical
	Design and Culture	Q1	Theoretical
	New Design Ideas	Q1	Theoretical
Architecture	International Journal of Architectural Heritage	Q1	Empirical and theoretical
	Journal of Architecture	Q1	Empirical and theoretical
	Spatium	Q1	Empirical and theoretical
	Vernacular Architecture	Q1	Theoretical
	Architecture and Culture	Q2	Theoretical
Art and Design Education	Studies in Art Education	Q1	Empirical and theoretical
	International Journal of Art and Design Education	Q1	Empirical and theoretical
			(continued on next page)

#### (continued)

Discipline	Journal	Ranking	Scope
	International Journal of Education and the Arts	Q1	Empirical
	Art Education	Q1	Empirical and theoretical
	International Journal of Design Education	Q2	Empirical and theoretical

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