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EXPLORING RHETORICAL STRATEGIES OF STANCE AND ENGAGEMENT IN TWITTER CONFERENCE PRESENTATIONS

Abstract

This study examines the emerging digital genre of the Twitter conference, which remediates the traditional academic conference. Twitter conference presentations (TCPs) are composed of six-tweet threads where academics share their ongoing research projects. In the context of Open Science, this paper aims to analyse how academics craft these presentations to reach diverse audiences and increase the visibility and impact of scientific knowledge. The study analyses a corpus of 55 TCPs (330 tweets) to identify textual and multimodal markers of digital academic discourse that can function as stance and engagement markers. The findings show that engagement markers were more frequent than stance markers, particularly in terms of appeals to shared knowledge and attention-getting resources. Appeals to shared knowledge are conveyed through specialised terminology, abbreviations, references, and hashtags, while attention-getting resources consist mostly of symbols, images, emojis, and mentions. The results highlight the importance of effectively orchestrating modes and capitalising on Twitter affordances to balance academic discourse conventions with the informal register. This approach can aid in disseminating scientific knowledge on this platform to a wider audience, thus contributing to the democratisation of science.

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Key words

digital academic discourse, digital genres, stance, engagement, Twitter, computer-mediated communication.

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1. INTRODUCTION

Researchers are currently required to meet new social demands related to the dissemination, legitimisation, and accessibility of scientific knowledge to expert and non-expert audiences (Luzón & Pérez-Llantada, 2022; Puschmann, 2015). Digital genres play a crucial role in the democratisation of science through a wide range of academic and professional genres such as online research articles (Harmon, 2019; Pérez-Llantada, 2013), academic blogs and microblogs (Freddi, 2020; Luzón, 2017; Mauranen, 2013; Puschmann, 2014), open lab notes, or crowdfunding proposals (Luzón & Pérez-Llantada, 2022). Additionally, the technological affordances of Web 2.0 have enabled researchers to engage in new science-making practices such as collaborative science or citizen science that address audiences with diverse backgrounds, interests, and expectations (Puschmann, 2014). As a consequence, scientific and scholarly communication has undergone significant changes that have led to the recontextualisation of specialised knowledge through a variety of linguistic devices, multimodal semiotic resources, technological affordances, and interpersonal strategies to increase the visibility and comprehension of scientific knowledge (Kuuteva & Mauranen, 2018; Luzón & Pérez-Llantada, 2022).

This study aims to contribute to the investigation of digital genres and digital academic discourse, which is understood as the extracts of “writing authored by academics and researchers and disseminated online with the support of digital media” (Kuteeva & Mauranen, 2018: 2), by examining a specific type of discourse published on Twitter by scholars. Previous studies investigating why scholars and researchers use Twitter for academic purposes have identified common usage patterns and communicative purposes such as disseminating scientific knowledge to diversified audiences, sharing information about events, networking, promoting publications and research-related activities, or reporting work-in-progress (Büchi, 2016; Côté & Darling, 2018; Lee et al., 2017; Luzón, 2023; Luzón & Albero-Posac, 2020; Mazarakis & Peters, 2015; Orpin, 2019; Puschmann, 2014; Tardy, 2023). This paper focuses on the objective of sharing work-in-progress through the analysis of an emerging digital genre coined as Twitter conference, which is defined by the conference organisers as an “online [academic] conference that takes place on Twitter [with] research presentations delivered via a series of no more than 6 tweets” (<https://www.linguisttweets.org/en/about/>). This genre first appeared in 2020 as a consequence of COVID-19 mobility restrictions, demonstrating how scholars can benefit from Web 2.0 technological affordances and therefore host a conference on an Open Access platform to meet their academic needs (Falk & Hagsten, 2021; Raby & Madden, 2021).

Previous research carried out on Twitter conference presentations (henceforth TCPs) has shown that multimodal resources and Twitter affordances were employed extensively in the tweets’ rhetorical structure and their communicative functions such as justifying arguments, engaging with the audience and presenting a credible authorial identity (Villares, 2023). This paper intends to

continue this line of research and focus on the way tweets are composed at the textual level. Therefore, this study has two main objectives:

- to investigate if the conventions of traditional academic discourse, particularly stance and engagement markers, are present in the TCP genre
- to establish if Twitter's technical features and multimodal resources bring innovation to digital academic discourse, particularly in terms of stance and engagement markers.

2. THEORETICAL FRAMEWORK

2.1. A credible authorial identity: stance and engagement

One of the main objectives of the dissemination of scientific knowledge is to reach large audiences with different backgrounds, interests, and expectations. For this purpose, certain linguistic devices are employed to represent the writer's opinions, evaluate their arguments, and encourage their interaction with readers. Hyland's framework of stance and engagement (2005) offers a well-known approach to analysing such aspects of academic discourse. According to Hyland (2010: 117), "writers display who they are and construct a convincing argument drawing on different discursual conventions to establish proximity with readers". Thus, it is essential to understand how writers establish and express their position on a topic, as well as how they help the reader approach science "not as something distant and separate, but as a heritage belonging to the whole community" (Scotto di Carlo, 2015: 219).

Stance is defined as the writer's "textual voice [...] and includes features which refer to the ways writers present themselves and convey their judgements, opinions, and commitments" (Hyland, 2005: 176) and it is realised through hedges (*might, perhaps, could*), boosters (*obviously, clearly*), attitude markers (*hopefully, remarkable*), and self-mentions (*I, we*). Engagement, on the other hand, is understood as the way "writers acknowledge and connect to others, recognizing the presence of their readers, pulling them along with their argument, focusing their attention, acknowledging their uncertainties, including them as discourse participants, and guiding them to interpretations" (Hyland, 2005: 176). Markers identifying engagement rely on reader pronouns (*you* or inclusive *we*), directives (call for action or imperative), questions (as a dialogic strategy to arouse interest), appeals to shared knowledge (specialised terminology, acronyms, references, or detailed descriptions of methods that help create communities around shared interests), and personal asides (comments marked with hyphens or brackets that address a previously mentioned idea) (Hyland, 2005: 183).

Yet, stance and engagement linguistic markers are typical of only one mode of communication whereas in digital genres meaning is often conveyed through a combination of text, images, and audio. As contended by Luzón, the “flexibilisation of [Hyland’s] model is particularly important to account for the role of visual semiotic resources in the construction of interpersonal meaning in the digital context” (Luzón, 2023: 19). In the case of tweets, the text goes hand in hand with multimodal resources that play an important role in engaging readers and creating the writer’s authorial persona. Luzón adapts Hyland’s model in order to include new markers that combine emojis, pictures, non-verbal resources, and even Twitter affordances (Luzón, 2023: 19). These non-linguistic resources are dealt with in the following section.

2.2. Twitter affordances and multimodal resources

Communication on Twitter is characterised by a series of affordances inherent to the platform such as mentions or hashtags. Zappavigna (2017) identifies five main technical features of Twitter: *mentions* correspond to the use of the symbol @ before a username to tag and interact with different Twitter users; words preceded by # form a *hashtag*, which creates searchable terms that allow the grouping of tweets by topic or interests; *retweets* and *quote retweets* are popular ways of sharing tweets publicly on one’s timeline; users can *comment* or *reply* to already published tweets, which highlights the dialogic side of Twitter; and lastly, tweets can embed hyperlinks, images, GIFs, locations, and polls to foster interaction with readers.

Twitter discourse is represented by a combination of formal and informal registers as well as the blurring of borders between written and spoken discourse, one of the main features of digital discourse (Crystal, 2006; Jones & Hafner, 2012). This social network was born as a microblogging platform to share daily activities in a concise manner with friends and acquaintances, but nowadays, it has become an additional channel of communication for academics, institutions, and even corporations. Authors like Puschmann (2014), Luzón and Albero-Posac (2020) or Luzón (2023) have identified informal lexico-grammatical features in tweets written by scholars and researchers that aim to engage readers and create proximity between the writer and the readers. Some examples of these features are informal attitude markers, intensifiers, wordplays, questions, and emojis.

In addition to the mixture of registers and writing styles, Twitter is well-known for its writing space constraints. Tweets are limited to 280 characters, but to facilitate sharing complex ideas, the platform has added a functionality that allows users to connect several tweets written by a single author with a sequential reading process known as *threads* or *threaded tweets*. Still, space constraints pose a challenge to writers, and this situation prompts the use of non-standard orthography and punctuation, a feature of the informal register. A strategy to capitalise on the limited space refers to lexical and structural compression such as

using phrases instead of full sentences, and acronyms or abbreviations instead of full words.

Another strategy frequently employed in tweets to overcome space restrictions is the combination of multimodal resources and hypertextuality such as text, images, and hyperlinks. Particularly in the case of visuals such as pictures, emojis or memes, the interrelation between text and image can indicate concurrent, convergent, and divergent meanings (Jones & Hafner, 2012). Likewise, hyperlinks can be used to associate “the text with other texts on the internet” in order “to provide more information about concepts relevant to the topic under discussion” (Jones & Hafner, 2012: 38). Regarding visuals, they are often used as an attention-catching device and to engage readers (Luzón, 2023). Images can take the form of photographs, graphs, drawings, and animated images (GIFs). Additionally, emojis have become a relevant feature of digital discourse as they visually represent emotions and ideas to “align with the interlocutor, to express informality or to enhance phatic communion and expressive speech acts, especially greetings” (Sampietro, 2016: 109). According to Coats (2016), emojis can be associated with pragmatic functions such as interpersonal value, semantic value, and metaphoric value. Logi and Zappavigna (2021) analysed emojis by applying Systemic Functional Linguistics because they can represent lexical, affective, and textual meanings. Luzón (2023) identifies emojis as non-linguistic markers of stance (attitude markers) and engagement (attention-getting resources, appeals to shared knowledge, and discipline-related humour).

Thus, Twitter prompts the use of well-established characteristics of computer-mediated communication (CMC) such as multimodal markers, structural compression, informal lexis, orthography, and punctuation.

3. METHODOLOGY

3.1. Corpus design and compilation

The data were collected from the Twitter conference “Linguisttweets” organised by the Brazilian Linguistics Association (ABRALIN). A total of 96 participants from all over the world presented their ongoing research projects in English, Portuguese, and Spanish. The participants followed the same selection procedure as in an on-site academic conference: they submitted an abstract that was evaluated by a scientific committee. If the proposal was accepted, participants would deliver a presentation consisting of six threaded tweets posted within 15 minutes during an allocated timeslot.

The presentations included in the corpus covered the first edition of Linguisttweets held in 2020, as the retrieval process took place during the months of

October and November 2021 from the conference website¹ and the participants' respective Twitter accounts. Only the presentations written in English were considered for the study, therefore the corpus consisted of 55 TCPs, which amounts to a total of 330 tweets (13,961 words). Each TCP had an average of 253.83 words. The tweets were stored in a PDF format to keep the multimodal features of the presentations (e.g., images, GIFs, emojis, hashtags, mentions) as well as in plain text to annotate and analyse them with corpus linguistic software. Presentations were anonymised and labelled with the term TCP and a number ranging from 1 to 55 (i.e., the first presentation was labelled TCP1).

3.2. Analytical procedures

3.2.1. Linguistic markers of stance and engagement

The data analysis was carried out on Lancsbox v. 5 software (Brezina et al., 2020) to identify the linguistic markers relevant to the stance and engagement framework (Hyland, 2005). Lancsbox offers a “smart searches” service which is an advanced search tool with predefined categories that allows users access to complex searches such as word classes, complex grammatical patterns, and semantic categories. This service was used to retrieve frequencies and dispersion values from the following categories: *booster*, *modal*, *verb*, *infinitive*, *adverb*, and *proper noun*. Additionally, simple search terms of specific words such as first-person and second-person pronouns and possessives were carried out. The results were imported into an Excel spreadsheet to provide an overview of the linguistic markers found.

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3.2.2. Twitter and multimodal markers of stance and engagement

As corpus linguistic techniques cannot identify specific symbols such as exclamation marks, question marks, # or @, they were manually annotated on the qualitative data analysis software Atlas.ti v 8.4.5 to explore the use of Twitter affordances. Multimodal resources were also annotated. An initial coding level identified with descriptive labels multimodal resources (e.g., image, GIF, hyperlink, emoji), typical textual features from the informal register (e.g., contractions, acronyms, capitalisation, repetitions), symbols (e.g., !, ?, &) and Twitter affordances (e.g., hashtag, mention). Then, a second coding level, based on Luzón's (2023) model of stance and engagement, was carried out to find similarities between stance and engagement categories, the multimodal resources and the Twitter affordances included in the corpus.

As far as visuals are concerned, this category included both images and GIFs (228 occurrences, 93% text dispersion). I followed Rowley-Jolivet's (2002)

¹ <https://www.linguistweets.org/linguistweets-2020/en/program/>

taxonomy of visuals used by academics in conference papers to organise visuals into:

- *Graphical visuals* included graphs, maps, and tables.
- *Figurative visuals* included drawings, photographs, cartoons, or memes that conveyed abstract concepts (e.g., photos of participants, the experiment stages, or methodological procedures).
- *Scriptural visuals* contained text like examples of sentences and words, definitions of concepts and theoretical frameworks, transcriptions, sections of papers like the table of contents or reference lists, and the author's contact details.

Emojis (123 occurrences, 31% text dispersion) were classified into several groups to fit Luzón's (2023) stance and engagement framework:

- *Self-mention emojis* represented the author.
- *Attitudinal emojis* took the form of facial expressions or body parts.
- *Attention-getting emojis* could replace words with the same literal meaning (e.g., ☁ instead of "cloud") or represent a visual cue to catch the reader's attention (e.g., 📣) because they break the reading flow, and include colours and different shapes.
- *Textual organisation emojis* evoked a signposting function that helped organise the tweet's contents.
- *Appeals to shared knowledge emojis* represented concepts known among the academic community like positive or negative results, different moves and sections within a paper, or the reporting of results (e.g., 📊 to indicate results).
- *Discipline-related humour emojis* used emojis in a humorous way to create wordplays.

Hyperlinks (26 occurrences, 21.5% text dispersion) were organised around:

- *Self-mention links* that included group websites or project websites.
- *Self-citation links* that often conveyed a promotional purpose.
- *Reference links* to external sources (e.g., software, database, frameworks) that expanded the information and validated the researcher's credibility.

Regarding hashtags (264 occurrences, 100% text dispersion), three main categories were identified:

- *Classificatory hashtags* referred to either the conference hashtag (#linguisttweets) or a specific ID granted to each presentation (e.g., #lt0015). The main purpose of this type of hashtag was to facilitate finding the presentations. The conference hashtag was required to be included at least in the first tweet of the TCP.
- *Semantic hashtags* were often understood as appeals to shared knowledge because writers marked down keywords and methodologies relevant to the research (e.g., #language, #tense).
- *Attitudinal hashtags* indicated an author's opinion or comment. Since they were located at the end of the sentences, they were often considered personal asides.

Another Twitter affordance identified in TCP was mentions (46 occurrences, 16% text dispersion), and they were divided into:

- *Reader mentions* were references to the conference organisers' official Twitter account (@abralin).
- *Self-mentions* included references to the author's research group or project Twitter account. Self-mentions that appeared automatically when a thread is created were not taken into consideration for the analysis.
- *Mentions to colleagues* referred to co-authors or supervisors who have a direct relationship with the author and had a Twitter account.
- *Mentions to institutions* were, for example, Twitter accounts of universities or organisations.
- *Citations* indicated the Twitter accounts that the authors were including in their TCP to reference specific datasets, software, or published papers. For example, instead of writing a traditional citation style like APA, the author could mention the person directly taking advantage of the interactive side of Twitter.

4. RESULTS

4.1. Stance markers

Table 1 shows the frequency of occurrence of stance markers divided into linguistic features and multimodal resources (427 occurrences in total) sorted by frequency.

	LINGUISTIC MARKERS	FREQ.	MULTIMODAL MARKERS	FREQ.
Self-mentions	1 st person pronouns (I/my, we/our)	162	Self-mentions	19
			Self-mention links	15
			Mentions to colleagues	10
			Mentions to institutions	3
			Figurative images	2
			Self-mention emojis	1
Hedges	Modal verbs	122		0
Attitude markers	Adjectives, adverbs, verbs	48	Attitudinal emojis	16
			Scriptural images	4
			Figurative GIFs	3
Boosters	Adverbs	21		0
SUBTOTAL		353		73
TOTAL				426

Table 1. Stance markers and their frequency of occurrence

4.1.1. Self-mentions

At the textual level, self-mentions occur 162 times and appear in over half of the presentations (47.27% for singular “*I/my*” and 54.55% for plural “*we/our*”). There is a higher tendency in using the plural form “*we/our*” to refer only to the authors and their contribution (75.34%) than the use of inclusive “*we*” (27.39%). Therefore, “*we/our*” is used to refer to the author’s work, often followed by the present tense to inform about objectives, current work, or methodological aspects. In the case of “*I*”, authors use it to introduce methods and data information (past tense), state a hypothesis (present tense), and introduce the topic (future tense). Possessive pronouns “*our/my*” precede simple noun phrases mentioning the topic of the tweet (e.g., “*our/my data*”, “*our/my hypothesis*”, “*our project*”, “*my idea*”). With roughly half of the authors using self-mentions, it seems there is a tendency to report findings from a first person perspective instead of using impersonal constructions.

Mentions are used to refer to the official Twitter accounts of research groups and research projects (e.g., @megambiaproject, @resdatall), followed by co-authors and other colleagues such as supervisors. Institutions are also mentioned to back up or anticipate the importance of the claims (e.g., @arc_gov_au, @uwaresearch). All in all, this interactive feature of Twitter tends to appear in the first and sixth tweets of the presentations, the ones with a predominant interpersonal orientation because they introduce the research topic and conclude with acknowledgements or addressing the reader (Villares, 2023).

Fulfilling a similar function as mentions, hyperlinks take the reader to the writer’s group website or project website that the presentation is based on. This promotional strategy has been identified as a common communicative function on Twitter for scholarly communication, where users share links to papers and repositories to promote their work (Luzón & Albero-Posac, 2020; Luzón & Pérez-Llantada, 2022). Hyperlinks are often preceded by directives (“go here”, “see more”) and take the form of DOI numbers, online repositories, and research websites. By sharing these resources, the authors showcase their work, facilitate access to the sources that grant credibility to their research, and allow readers to continue exploring the information contained in the presentation.

Few visual resources are used with a self-mention function, except for one emoji representing the author (👤) (Figure 1) and two photographs showing the authors’ faces to resonate with the audience.

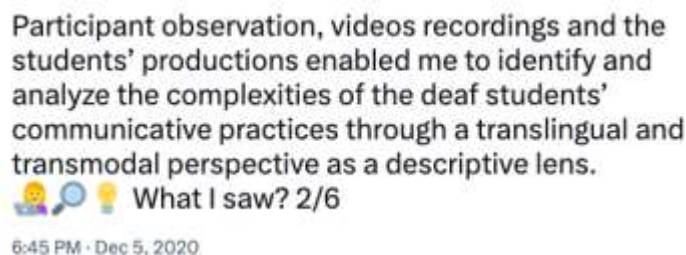


Figure 1. The tweet displays the following markers: self-mention emoji, linguistic self-mention, appeals to shared knowledge, and questions. *Source:* TCP49

4.1.2. Attitude markers

The corpus includes a low range of attitudinal verbs like “agree/disagree”, adverbs like “yes” or “no”, and adjectives like “relevant” or “important”. Innovative rhetorical functions rely on emojis to express the authors’ attitude towards findings. Attitudinal emojis are intended to create a bond with the reader, so emojis representing faces and body parts are very frequent (Sampietro, 2016). These emojis can have different communicative functions such as questioning (🤔, 🤨), conveying surprise or scepticism (e.g., 🤯 🤨, 😮), expressing happiness (e.g., 😄, 😊), or greeting and thanking the audience (e.g., 🙌, 🙏).

Animated images or GIFs represent yet another novel form of marking attitude (Figure 2). Although not very common, GIFs containing popular culture references highlight the medium informality and authors can use them to express attitude while offering a glimpse into their personal interests. Figurative GIFs and scriptural images are also used to thank the audience for their time and interest.



Figure 2. The tweet displays the following markers: attitudinal GIF, linguistic self-mention, and appeals to shared knowledge emoji. *Source:* TCP9

4.1.3. Boosters

Boosters are infrequent in the corpus. At the textual level, adverbs such as “highly”, “very”, “completely” and “strongly” are the preferred choices. However, it seems that authors prefer to be rather cautious with their claims, following the conventions of academic discourse.

4.1.4. Hedges

On the other hand, hedges are commonly found in the corpus. Modal verbs occur 122 times in the corpus with a dispersion value of 71%. The modal verb “can” is the preferred choice (n=47), followed by “may” (n=18), and “should” (n=10).

4.2. Engagement markers

In comparison to stance markers, engagement markers appear over four times more in the corpus (1,668 occurrences). Table 2 outlines the main markers of engagement, divided into linguistic markers and multimodal markers, and their frequency of occurrence.

	LINGUISTIC MARKERS	FREQ.	MULTIMODAL MARKERS	FREQ.
Attention-getting resources	Symbols (&, +, *, :, =, >)	274	Classificatory hashtags	131
	Exclamation mark (!)	44	Scriptural images	131
	Capitalisation	38	Graphical images	61
	Contractions	33	Attention-getting emojis	26
			Textual organisation emojis	31
			Figurative images	22
			Figurative GIFs	1
Appeals to shared knowledge	Acronyms	236	Semantic hashtags	131
	Abbreviations	187	Shared knowledge emojis	39
	Proper nouns (citation)	48	Citation mentions	11
			Reference links	11
			Scriptural images (citation)	6
Reader mentions	2 nd person pronoun (you/your)	35	Reader mentions	3
Directives	Bare infinitive	30		0
Questions	Question mark (?)	85	Polls	1
Personal asides	Parentheses, hyphens ((, --))	40	Attitudinal hashtags	2
Discipline-related humour	Wordplay, puns	1	Discipline-related humour emojis	10
SUBTOTAL		1,051		617
TOTAL				1,668

Table 2. Engagement markers and their frequency of occurrence

4.2.1. Attention-getting resources

Although standard capitalisation and punctuation are used consistently throughout the corpus, there are some orthographic resources borrowed from CMC discourse and informal register. Contractions appear 33 times, mainly when the authors include examples in their presentations. Symbols and mathematical signs are common tools used with a two-fold objective: to deal with tweets' space limitations and to break the linearity of the message by visually representing the relations between two parts of speech (e.g., :, =, +, >). In this way, the authors can omit certain words and use the spare characters to introduce more information and ideas. A similar strategy happens with the symbol "&" when it replaces the conjunction "and".

The asterisk symbol serves to emphasise a word (e.g., **very**). Likewise, the capitalisation of certain words highlights relevant information, like a finding or a section heading, as shown in Figure 3. Additionally, capitalisation can be used to anticipate an abbreviation (e.g., *PRONoun* > *PRON*) that will be used later in the presentation.



Figure 3. The tweet displays the following markers: capitalisation, symbols, attention-getting emojis, attitudinal emojis, and images. *Source:* TCP24

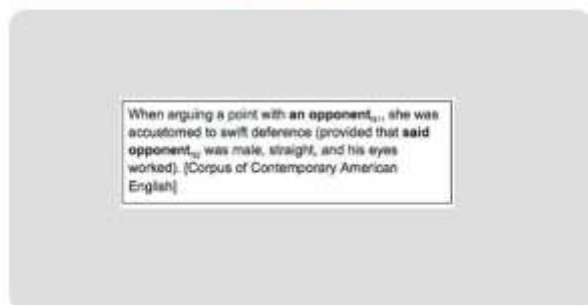
Exclamation marks appear at the end of sentences when giving instructions to tone down the formal register and show a friendly side of the author. Exclamations are especially frequent in the introduction or closing sections of the presentation, but

they might also appear whenever the author describes some results or implications. Again, this strategy offers a more approachable and friendly representation of the author.

Regarding multimodal markers, images are the most frequent resource to catch the reader’s attention and substantiate the author’s claims with evidence. This replicates the use of images in other academic genres such as conference presentation slides or research articles. Images can converge, correlate, or diverge with the text regarding the semiotic information they convey. The type of images found in the corpus were grouped into scriptural, graphical, and figurative according to Rowley-Jolivet’s (2002) classification.

Scriptural images often appear in slides designed to provide examples or definitions while presenting the theoretical framework, to report methodological procedures, or to include contact details as well as sources in the closing tweets (Figure 4). The relationship between the image and the text can be convergent or divergent; in this way, authors manage space limitations by combining text with multimodal resources.

#linguistweets Can a determiner-like construction carry social meaning? My work focuses on said used to refer to a previously mentioned noun (the said construction or SC. See example image). I present data showing emoji reactions to sentences w SC vs a standard determiner #It0330



Upward checking and downward valuation are not the only option for Agree: B&Z’s proposal falls short empirically. Before considering conceptual arguments about the directionality of Agree, the theory has to be empirically adequate. Thank you for reading and retweeting!

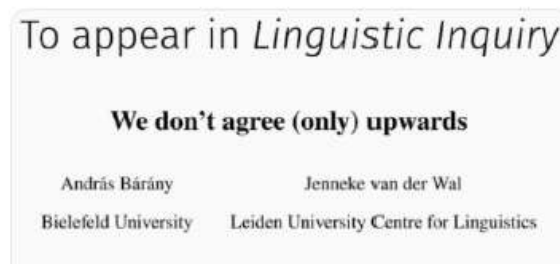


Figure 4. Examples of scriptural images. Source: TCP10 and TCP18

Graphical images include tables, graphs, and maps that offer thorough methodological descriptions, particularly in the case of statistical procedures and software, but also complement the textual information in a visual format. As seen in Figure 5, symbols, abbreviations, and acronyms are especially frequent when concisely reporting findings to prove the professionalism of the research.

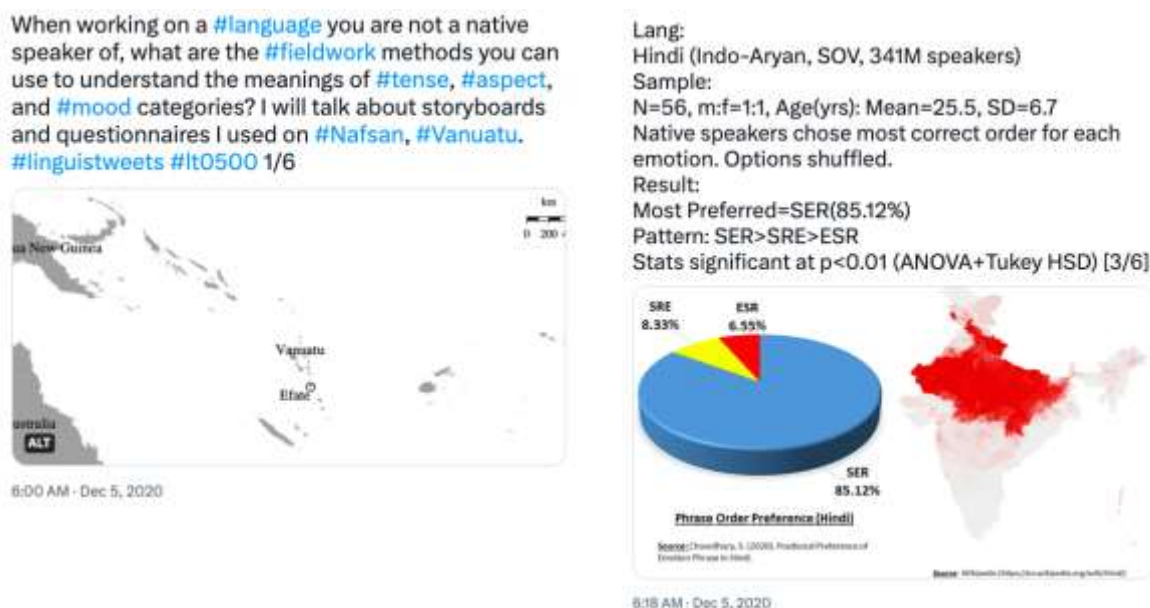


Figure 5. Examples of graphical images. Source: TCP16 and TCP17

To a lesser extent, figurative images included pictorial representations of abstract concepts or the procedures of experiments in the form of drawings, cartoons, or photographs (Figure 6).

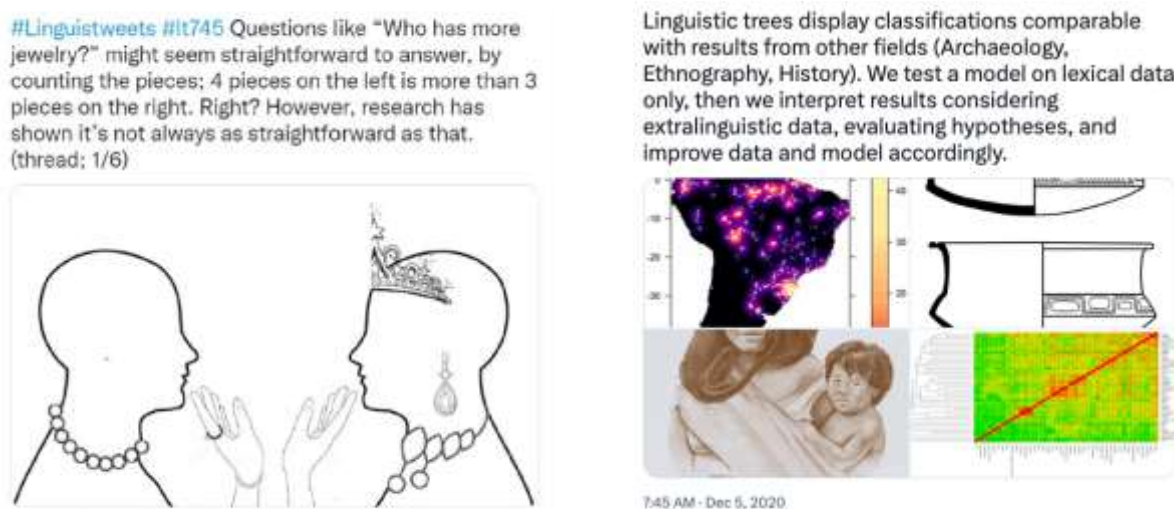


Figure 6. Examples of figurative images. Source: TCP27 and TCP23

Regarding Twitter affordances, classificatory hashtags appear 131 times spreading throughout the whole corpus as a consequence of a conference requirement. According to the conference organisers' guidelines, authors should include the

hashtag of the conference and the TCP code in the first tweet to facilitate the searching and identification of the presentation (e.g., *#linguisttweets*, *#lt0015*).

Attention-getting emojis are used for several purposes: at the beginning of the tweets next to headings to catch the reader's attention (e.g., 📣, 📌), to differentiate concepts discussed in the TCP (e.g., 💬, 🗣️, 📌), or to provide a visual representation of a concept either by substituting the word (e.g., 🌊 for "wave", 🚢 for "ship") or accompanying the word (e.g., 🗣️ for *talking about vaccines*, 📖 for *talking about children's stories*). Additionally, emojis such as pointing fingers and arrows (e.g., 👉, ➡️, 🖱️) help organise the textual information contained in the tweets and thus serve to quickly create connections between ideas.

4.2.2. Appeals to shared knowledge

Shared knowledge can be found in the form of technical vocabulary. Despite the organisers' recommendation for making scientific knowledge comprehensible for the sake of the diversified audience, the authors relied heavily on acronyms and abbreviations. While acronyms often refer to the object of study or methodologies employed for the analysis (Figure 5), abbreviations involve a certain level of shared knowledge regarding both academic and informal discourse. The former accounted for 63% of abbreviations in the corpus including academic terminology that is common knowledge to all readers (e.g., "concl", "hypoth"), specific terms that will be repeated multiple times in the presentation (e.g., "adj", "pron"), or signposting terms that are well-established in the academic community (e.g., "fig.", "pic", "ex."). The latter (informal discourse abbreviations) represented 37% with examples like "w/" for with, "bt" for between, and "yo" for year old. Apart from two presentations fully written with abbreviations, all the TCPs tried to reduce informal abbreviations to grammatical words to maintain a neutral/semi-formal register and thus facilitate readability.

In order for the findings to be presented as credible, authors' arguments and research interests rely on previous studies and frameworks; therefore, the use of references through proper nouns is another strategy that authors have transferred into TCPs from other academic genres. Interestingly, there is an emerging use of Twitter mentions as citation tools when writers include the Twitter username of other academics to cite previous studies (e.g., @labov) or to inform the readership where the analysed data were collected (e.g., @eu_2020, @statelibrarywa). In this way, authors amplify the reach of their tweets by interacting with other people and institutions. In a similar vein, hyperlinks are used to include direct access to external sources such as other studies or databases; and some scriptural images may include lists of references.

Semantic hashtags were identified as the most frequent multimodal marker. Writing keywords such as frameworks, methods, or disciplinary fields with hashtags helps identify disciplinary communities and mutual interests. From a multimodal

perspective, the blue colour of hashtags also makes the keyword stand out from the rest of the text, promoting the identification of relevant information.

Regarding emojis, they often referred to methods and result-reporting as observed in the representation of different tools to gather data (e.g., 📧, 🖨, 📄, 📁, 📧) or in the reporting of positive and negative findings (e.g., ✖, ☑, 👍, 📧).

4.2.3. Reader-mentions

Second-person pronouns are sparingly used, with only 31 occurrences of “you” and 4 occurrences of “your”. Out of this, 19% are part of the phrase “thank you” showing the importance of the thanking communicative function. The remaining instances directly address the reader during a greeting and a directive. Mentions addressing a potential reader refer only to the conference organisers’ Twitter account.

4.2.4. Directives

Directives in the form of bare infinitives are used by authors when they call for action while reading the presentation (e.g., “Follow my next 5 tweets to see what I’ve been up to on my PhD journey!”). Thus, most of the actions have a signposting function to guide the reader through the presentation and navigate the different semiotic resources (text, visuals, or hyperlinks) with endophoric markers typical of academic discourse like “see sentence” or something more informal like “See infographics & alt text for more!”. Directives are frequently followed by exclamation marks to tone down the imposition on the reader, as illustrated in the previous two examples.

4.2.5. Questions

Questions are one of the preferred strategies employed by authors to create engagement at the beginning of the TCP, as they are used in 41 presentations (74.55% dispersion rate). This stems from the conference organisers’ recommendations, who advise using questions to attract readers. Since they work as hooks, they often included keywords or problems to tackle (Figure 6). Simultaneously they are aimed at anticipating some reader’s potential questions like “so what?” or “what do I learn with this presentation?”. In this way, the presentation’s main topic is located at the beginning of the presentation alongside its relevance and novelty. Sometimes, questions also function as a device to introduce results and surprising findings.

Direct questions can be combined with polls, a Twitter affordance that can boost interaction with readers. The author poses a question and waits for responses, which can go in line or not with the presentation’s contents (Figure 7). Likewise, it could prompt further discussion in the comment section.

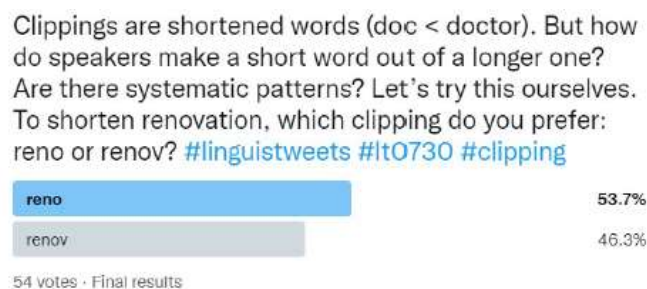


Figure 7. Tweet displaying a poll, as well as classificatory and semantic hashtags, symbols, and questions. *Source:* TCP26

4.2.6. Personal asides

Personal asides were identified through parentheses or hyphens that work as a resource to explain or specify certain information mentioned previously by the author such as “(but see Schlegl 2019)” or “(observed freqs less than expected)”. Some instances with attitudinal load were also found, such as “(hello job/tenure application!)” referring to a common situation academics face, “(That would spoil the fun!)” discussing findings and “(MAC —sadly not YMCA—)” including a joke. Concerning personal asides in the form of hashtags, they refer to attitude hashtags to express the authors’ opinion towards a specific situation and are located at the end of the tweet (e.g., #weirdbutok, #despitewhatmomtoldyou).

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4.2.7. Discipline-related humour

Only a wordplay was found in the whole corpus, “presen-tweet-ion”, introducing a blend of “presentation” and “tweet”, which accurately describes the TCP nature. Some emojis were used alone or in combination with a humoristic tone (e.g., 🐘 🤔 for *bullshit*, 🍒 🍷 for *cherry-pick*, 🕺 for *DISCO*). Humour is an infrequent strategy in the corpus even though the conference was hosted in a potentially informal context like Twitter.

5. DISCUSSION

This study has examined a corpus of Twitter conference presentations to identify some features of this emerging digital genre. The first objective of the study was to investigate the presence of linguistic markers regarding stance and engagement in the TCP genre. The most frequent categories were appeals to shared knowledge and attention-getting resources from the engagement dimension, followed by self-mentions and hedges from the stance dimension. In terms of appeals to shared knowledge, technical and specialised terminology is a common feature of all TCPs, although the level of specificity varies. Authors combine the use of these resources

with a previous reference to the term, capitalisation, or using punctuation. Additionally, proper nouns functioning as citations show that authors rely on previous research and studies to position themselves in favour or against them, demonstrating the value of their research as well as their credibility and academic foundation.

Attention-getting linguistic markers are expressed through resources commonly found in informal contexts, such as exclamation marks or mathematical symbols that express syntactic relations between ideas. However, the use of symbols is similar to what is found in other academic genres such as conference presentation slides that rely on mathematical symbols and punctuation aiming at syntactical and lexical compression (Rowley-Jolivet, 2002). This is a useful strategy in tweets given the space limitations of the medium (280 characters) and the genre (6 tweets).

In the case of self-mentions, the interactive and informal nature of the Twitter platform leads to the transfer of such features into TCPs, projecting the authors' persona through first-person pronouns that stress their active role in the research process. The use of self-mentions, especially the first plural person, shows the collaborative nature of the work under discussion because the authors acknowledge all the participants involved in the research process. Related to the authorial voice of authors, hedges are yet another feature borrowed from academic discourse. The use of hedges, particularly the modal verb "can", is common in academic writing as authors tend to follow conventions and report results rather than make bold claims, which is contrary to what is expected of popularisation or dissemination of science, as reported by Orpin (2019).

The second objective of the study was to explore how Twitter's technical features and multimodal resources can enhance digital academic discourse, particularly concerning stance and engagement markers. The study found that attention-getting resources and appeals to shared knowledge are the preferred engagement markers used by the authors. Attention-getting resources, particularly images, are used in other academic genres, such as research articles, conference papers, or science blogs (Mauranen, 2013; Orpin, 2019; Rowley-Jolivet, 2002). Images in TCPs function in the same way as images in traditional conference presentations, underpinning arguments by presenting evidence, and creating cohesion by repeating or expanding information in a visual format. In TCPs, a divergent relationship between text and image is found occasionally, acting as a tool to challenge tweet space limitations. Scriptural images are the preferred type, aligning with the academic discipline of the presentations by explaining complex concepts in detail and providing examples of language-related situations. More interestingly, though, are the innovative uses of Twitter affordances that act as attention-getting resources and play with different semiotic resources like colour and interactivity. For instance, classificatory hashtags help to identify different presentations while emojis are used to highlight significant sections of the presentations and organise textual information.

Appeals to shared knowledge are carried out through semantic hashtags and emojis. The strategic use of hashtags makes keywords stand out so that shared interests can be easily tracked by readers, while emojis represent well-known general academic vocabulary and academic conventions that readers are familiar with. The combination of modes lightens the cognitive load of the tweet since there is a concurrence interrelationship between text and visual (Jones & Hafner, 2012). Another strategy that frames the research within the academic discipline is the use of links to direct the reader to primary sources of information such as other studies, software, or methods that were used to frame the research within the academic discipline.

Regarding stance markers, self-mentions and attitude markers are the most frequent categories in the corpus. Self-mentions are realised both as Twitter account mentions and hyperlinks with a two-fold purpose: to provide credibility for the research and to promote the authors' work, attaching a self-promotional communicative purpose to the TCP. In the case of mentions, they refer either to the author's research group websites or other co-authors. This strategy acknowledges institutional support and authority that supports the author's claims as their research is carried out by a group of people easily identifiable, with a reputation, who can engage in the discussion (Büchi, 2016).

Attitude markers are realised through emojis and GIFs, in opposition to linguistic markers where we observed a lack of adjectives and adverbs (probably due to space constraints). The use of multimodal resources highlighted the informal nature of Twitter and blurred the boundaries between formal and informal registers.

Overall, digital academic discourse in TCPs presented traces of transferred practices from other genres such as conference presentations. A balance between informal discourse and formal academic discourse, especially in terms of hedges and appeals to shared knowledge, promoted the circulation of specialised knowledge by framing it within previous research and being cautious with claims. Although the use of hashtags, mentions, hyperlinks, images, GIFs, or polls cannot be generalised, the corpus has provided evidence of innovative practices of stance and engagement that could be included in Hyland's (2005) or Luzón's (2023) model to analyse digital genres. The study highlights the potential of emerging practices that capitalise on Twitter's affordances to promote research, boost interaction, and start discussions with a broader public that otherwise would not engage in dialogic conversations.

6. CONCLUSIONS

This study has provided insights into the main features of stance and engagement in digital academic discourse from both textual and multimodal perspectives that take into consideration Twitter's technical features and its informal nature. The findings suggest that a balance between the conventions of academic discourse and the

discursive features of social networks can be advantageous for authors, who can leverage Twitter's affordances to increase the visibility of their research and engage in conversations with readers of different backgrounds. Hyland's (2005) model and Luzón's (2023) adaptation of Hyland's model have proved to be useful for the identification of practices that depict a credible authorial position and seek reader engagement in the composition of tweets for scientific knowledge dissemination.

Nevertheless, the study several limitations, which could be tackled in future research. Firstly, this small-scale study has covered only the first edition of the emerging digital genre due to time constraints. It would be interesting to include the subsequent editions in the corpus to examine if the results validate this study's findings or if diachronic changes are found as authors become more familiar and confident with the genre. Another line of research could apply the stance and engagement model to other types of tweets and threads (e.g., tweetorials, research project threads, citizen science threads) disseminating science to wide audiences to validate the taxonomy developed in this paper (Luzón & Pérez-Llantada, 2022; Tardy, 2023). Furthermore, TCPs are part of a genre chain consisting of the call for papers, abstracts, presentations, and comments section. Measuring the level of interaction and engagement achieved through stance and engagement markers, the analysis of the discussions prompted by the TCP, and therefore the level of writer-reader interaction, could offer relevant insights into knowledge construction practices.

In conclusion, this study has provided evidence of how acquiring new digital academic writing practices will be useful for scholars and researchers willing to engage in Open Science practices and disseminate science on social networks.

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