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Research visibility and speaker ethos: A comparative study of researcher identity in 3MT presentations and research group videos

Elizabeth Rowley-Jolivet and Shirley Carter-Thomas

Keywords:

Three Minute Thesis presentations, Research Group Videos, Identity construction, Verbal/non-verbal resources, Digital research media

Abstract

This study analyses researcher identity projection in two digitally-mediated genres, both addressed to non-specialist audiences: Three Minute Thesis presentations (3MTs) by doctoral students, and Research Group Videos (RGVs) produced by researchers in university laboratories. Adopting a discursive, socially constructed view of identity, we compare the researchers' identities by considering three dimensions: level of researcher expertise (novice researchers in 3MTs vs senior researchers in RGVs), disciplinary area (STEMM vs SSH), and the different verbal and non-verbal affordances available for identity projection. Results show that in both genres the researchers' credibility or ethos is founded on non-technical arguments (social applications, practical outcomes) in a concern for proximity with the lay audiences. However, there are also numerous differences in the identities projected in the two genres, particularly in terms of the level of researcher expertise (novice vs senior). Disciplinary differences in the identities performed in STEMM and SSH are also observed, reflecting each discipline's epistemic culture.

Introduction

In today's increasingly competitive research world, researchers need to be visible and establishing an appropriate academic identity is vital. We propose to characterize the identities projected by speakers in two spoken academic genres situated at different stages in researchers' careers: Three Minute Thesis (3MTs) presentations by doctoral students, and Research Group Videos (RGVs) produced by researchers in university laboratories.

We adopt a discursive, socially constructed view of identity (cf. Flowerdew & Wang, 2015) which is seen as fluid, multi-layered, and dynamic, varying with the social context of communication, the person's membership of a particular culture or community, the audiences addressed, and the particular facets of identity that are selected or foregrounded, positing that researchers make deliberate choices to project a particular identity or *ethos* (Amossy, 2010).

While this view of identity can be traced back to Goffman's seminal study (Goffman, 1959) on selective self-presentation and identity as performance, it has acquired particular salience in the context of late modernity (Giddens, 1990), where the waning of tradition has weakened socially prescribed roles and accentuated the variety of identities that individuals can project. Furthermore, with the advent of Web 2.0 and the digitization of the knowledge economy (Barbour & Marshall, 2012), the range of genres, semiotic resources, and platforms through which academics can now perform various identities has been immeasurably extended. As pointed out by Darvin (2016), digital media provide multiple spaces where users can perform multiple identities. The shift towards the disintermediation of academic research has led scholars to present themselves and their work directly online, using the digital medium to create online personas, develop professional identities, and claim a place both inside and outside their academic communities (Luzón & Pérez-Llantada, 2022).

Academic institutions, in particular universities, have been quick to seize the opportunities offered by digital media to promote their wares. In "the increasingly marketized and entrepreneurial higher education system world-wide [...] driven by an intense rivalry among institutions forever competing for resources and recognition" (Herman & Nicholas, 2019: 2), one of the most valuable assets in the scholarly marketplace is researchers' reputation and productivity, at all levels of academia from novice (doctoral students) to senior academics and prestigious research groups. Achieving visibility for this output – accomplished nowadays largely through an online presence – is therefore a prime concern for universities. This trend is illustrated by the two digital genres selected here, both of which are hosted on university platforms. At the same time, these developments have however raised several challenges for both researchers and research institutions: how to successfully manage and navigate between different genres; how to communicate esoteric research findings in an environment of context collapse (Marwick & Boyd, 2011), how to train researchers in the new communication skills required (Carter-Thomas & Rowley-Jolivet, 2020), and how to negotiate different research identities: professional, disciplinary, institutional, and individual.

Among the different digital genres available for research communication, we focus on spoken academic communication which is still relatively under-researched compared to written web-mediated documents. More specifically, we have chosen to study videos, as several studies have shown that online video is the preferred option to disseminate science (see e.g. Erviti & Stengler 2016; Léon & Bourk, 2018). To explore whether video is equally suitable for the online dissemination of humanities research, our corpus comprises an equal number of videos in STEMM and SSH disciplines. The two genres selected, however, 3MTs and RGVs, do not stand in the same relation to digital media. 3MTs are initially delivered to a live audience and the video recordings of the successful candidates (winners and finalists) are subsequently uploaded, without any digital post-processing, to the university's website or YouTube channel. They can therefore, like TED talks, be considered "replicated" genres (Shepherd & Watters, 1998), with a small, primary audience (the live presentation) and a vast, secondary audience (YouTube viewers

worldwide). 3MTs also have to follow strict rules (see section 2). The RGVs, in contrast, are web-native genres, produced specifically for online diffusion, have no explicit conventions or rules to respect and can exploit the full range of multimodal resources. Consequently, while both the 3MTs and the RGVs in our corpus are digital in that they are internet-mediated, the means used by 3MT and RGV speakers to construct and project their identities are likely to differ greatly.

After presenting the corpus and method in section 2, we then explore the semiotic resources available for identity construction in each genre, focusing first (Section 3) on non-verbal modes and then (Section 4) on the verbal mode through a linguistic analysis of the transcriptions.

2 Corpus and Methodology

2.1 Corpus

For this study we used a previously collected corpus of 30 3MT presentations, half in science, technology, engineering, maths and medicine (STEMM) and half in the social sciences and humanities (SSH) (Carter-Thomas & Rowley-Jolivet, 2020), and collected a second corpus of 30 RGVs, again half in STEMM and half in SSH (see Table 1).

All the 3MT speakers were carrying out their doctoral research in an English-speaking country (Australia, Canada, United Kingdom, United States) and the majority were native English speakers. The talks were downloaded either from the respective university websites or from the universities' YouTube channels. In selecting from among the large number of 3MT talks available online, an additional criterion was that speakers had to be the winner or runner-up of their competition, in order to ensure that the talk was considered by the jury an excellent example of the genre. As our 3MT corpus was collected in 2011-2016, before the Covid-19 epidemic, the talks were delivered to a live audience, not pre-recorded in a studio and delivered to the camera (cf. the 3MT corpus of Beltrán-Palaques & Morell, this volume).

The aim of the 3MT contest, as defined on the University of Queensland websiteⁱ, is to cultivate “students’ academic, presentation, and research communication skills” and “their capacity to effectively explain their research in three minutes, in a language appropriate to a non-specialist audience.” As this description makes clear, the focus is on communication skills (rather than on research skills) and on targeting a non-specialist audience. Competitors must abide by strict rules: those who overstep the 3-minute time limit are automatically disqualified, speakers are allowed only one static slide and no other props or audiovisual files. Competitors are thus deprived of one of the main warrants (Toulmin 1958) used in academic argumentation to support and provide evidence for the claims, namely visual evidence. The most important defining feature however is that it is a competition. Participants have to give a one-off performance. There is no question time

at the end to explain or clarify matters for the audience as for a conference presentation, and the decision of the adjudicators is final.

The research group videos were downloaded from the YouTube channels of the top 10 research universities in the worldwide ranking system so as to guarantee a homogenous quality of the research presented. To ensure temporal comparability with the 3MT presentations, we selected short videos that lasted between 2 and a half and 4 minutes, and that had been uploaded in the last 5 years (2015-2020). In SSH fields, this proved difficult as many of the available videos were much longer than our 2½-4 minute time limit, indicating either that the use of these short-form 'scholarly soundbites', which have become popular in STEM fields to disseminate research to a wide audience (Rowley-Jolivet & Carter-Thomas, 2019), has not yet caught on in SSH, or that some areas of SSH research do not lend themselves well to very brief presentations. Two of the 15 SSH RGVs were therefore collected from other English-speaking universities (Edinburgh and Queensland). We selected only videos that presented a university research group, and that were delivered by the researchers themselves, i.e. we excluded interview-based videos involving a journalist, voice-off commentaries, videos that presented a department, a course of study, or the university in general.

This gave us two sub-corpora that were comparable in disciplinary scope, length, and time period. All 60 recordings were transcribed by the authors. The resulting oral corpus, after transcription of the videos, comes to 30 500 words.

Table 1. The corpus

	Number of 3MT talks	Ave. length of talks (in words)	Number of RGVs	Ave. length of RGVs (in words)
Science	15	494	15	503
SSH	15	464	15	569
Total	30	14 420	30	16080

2.2 Method

For the analysis of the semiotic resources available, the initial methodological decision to make was between a micro-analysis, i.e. full multimodal analysis of the various modes simultaneously co-deployed, or a macro-analysis of the whole corpus. The two methods are complementary, each having its advantages and drawbacks. Full multimodal analysis enables the interplay between multiple modes to be captured in great detail as the talk unfolds, but is limited to extremely brief extracts (a few tens of seconds of video, e.g. Xia and Hafner 2021; Harrison 2021), cannot inform about the overall features of the genre and produces results that are highly speaker-dependent. A macro-analysis, in contrast, is less suitable for exploring modal combinations or multimodal ensembles, but allows quantitative and qualitative analyses of a much larger amount of data that reveal recurrent features and dominant characteristics. As our aim was to compare identity construction in two genres, 3MTs and RGVs, we opted for the latter method in order to propose

an overview of the whole corpus (totalling 3 hours of video recordings). Using a corpus-driven approach based on close observation of the data, we therefore analyzed the non-verbal and verbal resources separately.

Among the non-verbal resources, a major distinction relevant for our corpus is that between embodied modes, defined here as modes performed with the speaker's body, such as vocal effects, posture or movement, gesture, gaze, and facial expression (Wachsmuth et al. 2008), and filmic modes incorporated during postproduction and editing by the professional media service that produced the video, such as stills, moving images, text, sound effects, animations, and graphics. We additionally drew on Luzón's study of online videos by scientific research groups, in particular the semiotic resources used to establish the group's authority and credibility (Luzón, 2019).

For the verbal resources, using move structure (Swales 1990) we firstly analysed the type of content selected by the speakers before focusing on various interactional resources and the use of first person pronouns that can contribute to creating a particular identity and rapport with the audience. In this second stage, AntConc 3.4.0ⁱⁱ was used to study the initial quantitative distribution of the linguistic features.

3. Non-verbal Identity Construction

We follow Kress et al. (2001) in assuming the "functional specialization" of different modes, i.e. "there are some things that some modes have been developed to do better than others. The meaning-making potentials of the resources of the visual, actional and linguistic modes each perform a special and differently significant role" (Kress et al. 2001: 16). Given the pronounced differences in the modal resources available in 3MTs and RGVs to project their identities, each genre will therefore be dealt with separately in this section.

3.1 Non-verbal Identity Construction in 3MTs

In 3MTs, almost the only non-verbal resources available for identity construction are embodied modes – vocal effects, posture or movement, gesture, gaze, and facial expression. Visual communication *stricto sensu* is limited to the single static slide that is projected as a backdrop to the talk and the speaker is alone on a bare stage in front of a live audience: as in a sketch in a one-man or one-woman show, speakers have three minutes in which to capture and hold audience attention, without any props or audiovisual aids (moving images, music or sound effects, other special effects, etc.) and thus rely solely on their individual, physical presence. In this genre, the notion of identity proposed by Benwell and Stokoe can indeed be understood not only as a construction but as a public performance in the theatrical sense of the word:

identity is a public phenomenon, a performance or construction that is interpreted by other people. This construction takes place in discourse and other social and embodied conduct, such as how we move, where we are, what we wear, how we talk and so on. (Benwell & Stokoe, 2006: 3).

All five embodied modes are used by the winning contestants to interact with the audience and perform their identity. Speakers bring their doctoral research to life by exploiting the expressive possibilities of vocal effects, adopting a lively and energetic delivery, placing vocal stress on key terms to help comprehension or express conviction, using interrogative and exclamatory intonation both to structure their presentation and to attract attention:

- (1) think of the emotions aroused in the first two scenarios. SADness, desPAIR, LOVE - these are **STRONG** emotions (3MT, SSH)
- (2) And you're all looking at me and thinking one thing – Ouf! he's hot (3MT, STEMM)

Proxemics are another embodied mode available to 3MT speakers: as they are unencumbered by notes, a rostrum, or the need to manipulate slides, they are free to move around on the stage and fill the space, adopting an open body position towards the audience, and alternating standing, pacing and other footwork to dynamize the talk and create variety, rather than remaining static as is usually the case during the delivery of conference presentations (see Fig. 1). Gaze direction is principally "mutual gaze", i.e. audience-directed, throughout the talk, except when speakers shift their gaze to the gesture they are making in order to focus mutual attention on it and give it salience.

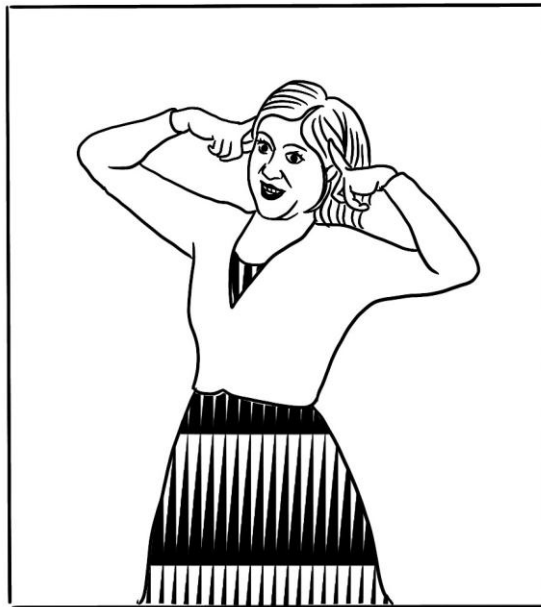


Fig.1: Body posture accompanying the speaker's words "Would you believe me if I told you this was my brain on drugs?" in a 3MT talk (STEMM)ⁱⁱⁱ

Gesture is an abundantly used mode, constantly co-deployed with verbal language in the talks. Although the absence of any visual support apart from their single slide could prove a severe

handicap in many research fields, particularly STEMM, where visualizing the phenomenon or process is an integral part of communication, speakers compensate for this lack as much as possible by exploiting the explanatory and expressive properties of gesture. All four categories of gesture defined by McNeill (1992), namely iconics, metaphors, deictics and beats, are used. Iconic gestures (Fig.2a) serve mainly to explicate technical content, creating proximity with the lay audience by making the research accessible: in STEMM, for instance, precise hand, finger and arm movements, and the different force and amplitude with which the gestures are performed enable viewers to follow the development of processes in 3D and to grasp accompanying abstractions such as speed, strength, resistance, etc. Metaphoric gestures are liberally used by both SSH and STEMM speakers either to convey abstract notions (such as rejection in Fig.2b) or to symbolize the giving of information and interpersonal interaction with the audience (e.g. palm up open hand), while deictics (pointing gestures) and beats (rhythmic up-down hand movements), generally co-deployed with vocal affects, express their enthusiasm and involvement in their work (Fig.2c, Fig.2d).



Fig.2a: **Iconic gesture** accompanying the words "Now if we heat the device from underneath" (3MT, STEMM)



Fig. 2b: **Metaphoric gesture** accompanying the words "Protestants came to REJECT the majority of these interpretations" (3MT, SSH)



Fig. 2c: **Deictic gesture** accompanying the words "THIS is exciting!" (3MT, SSH)



Fig. 2d: **Beat gesture** accompanying the words "as mum always said, 'there's MORE [*beat*] to LIFE [*beat*] than DRUGS [*beat*]." (3MT, STEMM)

Fig.2: Iconic, metaphoric deictic and beat gestures in 3MTs

Lastly, facial expression: here also, 3MT speakers exploit the expressive possibilities of the mode, smiling, raising their eyebrows, or adopting other facial expressions to suit their words, while nonetheless avoiding clowning or overacting (see e.g. Fig 1, Fig. 2b, 2c). Some speakers even adapt their physical appearance (hairstyle, clothing) to suit their topic, visually identifying their whole body with the theme presented. The overall impression conveyed by combining these different embodied resources is that of a young, enthusiastic, and dynamic person, capable of a certain theatricality to convey their work in an entertaining manner, friendly and open to communication with others and capable of modal flexibility and adaptability to the context.

Their institutional identity is of course a given of the communicative context; as the contest is organized by the university, the name and logo of the institution are often displayed on the stage and always constitute the opening screen of the video recording posted on YouTube. However, the main thrust of the presentations is audience interaction rather than foregrounding the academic credentials of these novice researchers. This is also illustrated by the types of slide shown. The single static slides allowed do not project an esoteric academic identity by displaying the sort of figure characteristic of research articles; rather, they provide the audience with an evocative and striking image to interest or intrigue them, using saturated colours, "demand" images and emotively striking pictures (see Rowley-Jolivet & Carter-Thomas, 2020 for some examples of slides).

3.2 Non-verbal Identity Construction in RGVs

In the RGVs, the situation is very different, as in addition to the embodied modes performed by the researchers in the video, they can also exploit all the filmic modes of online videos. These multimodal resources are abundantly used in many popular science videos on the web (see e.g. Muñoz Morcillo et al. 2016), which are often very fast-paced, dramatic and visually impactful, with a high technical complexity of montage. The RGVs in our corpus are considerably more restrained in their use of filmic modes but are nonetheless carefully crafted to project a certain identity (or identities) of the research group and its members. As in the linguistic analysis of speaker roles (see section 4), several different identities can be distinguished: institutional, researcher and personal. Table 2 lists the non-verbal resources observed^{iv} and, where relevant, the number of videos in which they occur.

Table 2. Non-verbal resources for identity projection in the RGVs

		STEMM	SSH	Examples
FILMIC MODES				
<i>Institutional Identity</i>				
1	Shots of university buildings and research centers (outside and inside)	4	8	All Souls College, Oxford Centre for Digital Humanities, Princeton University lecture halls, libraries, seminar rooms, staff rooms
2	Academic status and affiliation	15	15	Researcher's name, title (Prof., Dr, post-doc), position occupied, name of university and/or research laboratory
3	Name (& crest/logo) of the university	15	15	Displayed on the opening and/or closing screens, sometimes on screen throughout the video
4	Teaching role	1	1	Speakers shown lecturing or giving seminars
<i>Researcher Identity</i>				
5	research in the lab	14	1	STEMM: animations, schematics, and video footage of methods and processes to clarify and illustrate the research; high-tech lab equipment shown and operated; teamwork SSH: The sole lab environment is in archaeology (equipment for weighing and measuring bones)
6	research in their office	11	9	Researchers surrounded by their computers, shelves of books...
7	research in the field	6	7	STEMM: Antarctica (counting penguins), on boat (sea-floor expedition), collaborating with colleagues in India, diving in the Maldives (tracking Manta rays), crop-growing SSH: collaborating with teachers in schools, with museum curators, with actors
<i>Personal Identity</i>				
8	Personal life	2	0	Researcher with her baby daughter in the street Researcher with family photos
<i>Special effects</i>				
9	Sound effects	15	13	Very discreet background music in 28 videos No other special sound effects
10	Visual effects	0	1	No special filmic effects apart from fast motion in 1 SSH video
EMBODIED MODES				
11	Dress codes	STEMM: casual everyday dress, appropriate to the working environment (lab coat, T-shirt and jeans, anoraks in the field etc.) SSH: female researchers dress quite smartly (make-up, pearls...)		
12	Gaze, vocal effects, gesture,	Not a stage performance: natural delivery (no histrionics, no lecturing style) and		

	movement	movements or gestures as they work. Gaze directed at the camera or towards the task in hand or colleagues
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Our findings confirm Luzón's (2019) that RGVs firmly establish the institutional identity of the researchers. Their academic credentials (full academic titles and affiliations) are always printed on screen, the name (and also often the crest) of the university features in all 30 RGVs, and we see many shots of the university buildings where they work. We also get occasional glimpses of their teacherly identity through shots of the researcher lecturing to students or giving seminars.

The main focus of both the verbal commentary and the video footage however is their researcher identity, depicted in three main environments: the lab, their university office, and out in the field. Not only do they talk about their research while seated at their desk, but the video medium allows aspects of this identity to be communicated that are difficult to convey in other modes: we see them actually doing research – conducting experiments in the labs, working on their computers, out on field expeditions, or working with pupils and teachers in schools and other external collaborators. The RGVs give a hands-on image of research as an activity that makes a valuable contribution to the general community and to societal issues, while the researchers' peer-directed writerly identity (producing research articles), on which their credibility in their academic discourse communities is established, is almost totally absent: we found only one reference each to a research article in STEMM and SSH. Their expertise is however underlined, as visually attested by the sophisticated lab and field equipment in STEMM (Fig. 3a), and by the impressive shelves of books in SSH (Fig. 3b). Unlike in many scholarly blogs, on the other hand, glimpses of the researcher's private life and identities are extremely rare: in our corpus we found only a couple of allusions, both of which serve to underscore the researcher's personal motivation for his/her work.

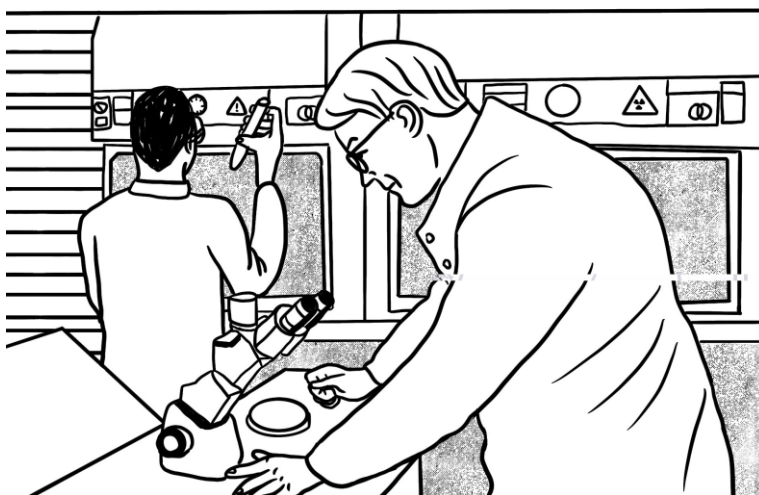


Fig. 3a: Science researcher in his lab (RGV, STEMM)



Fig. 3a: Humanities researcher in her office (RGV, SSH)

Fig. 3: Researcher identity projection in RGVs

There are some differences, however, between the researcher identities of STEMM and SSH researchers portrayed in the videos, which appear to be related to the different “epistemic cultures” (Knorr-Cetina, 1999) of the two fields. As shown in Table 2 and Fig. 3a, in STEMM, the lab is the main locus of researchers' activity. One of the main advantages of filmic modes is that they enable lab research to be made more concrete and easily understandable for the non-specialist audience by visualizing it: animations, schematics, and video footage of methods and processes are abundantly used in STEMM RGVs to clarify and illustrate the research, as also observed by Luzón (2019). This affordance is much less relevant for many SSH fields, where research focuses on intangible topics that are difficult to visualize (e.g. language disorders, collaborative linguistic research, ecological visions in literature). Moreover, STEMM researchers are always shown working in teams, surrounded by lab technicians, colleagues and graduate or PhD students (Fig. 3a), several of whom speak in the videos, revealing another facet of senior STEMM researchers' identity: their mentoring role towards novice researchers. In SSH, in contrast, this mentoring role is absent, and their collaborative projects generally involve working with non-academic practitioners such as museum curators, teachers and pupils, artists and language therapists.

Special effects are a common feature of many popular science videos online (Muñoz-Morcillo et al., 2016), but with the sole exception of fast motion in one SSH video, no special effects were observed in our RGV corpus. Similarly, sound effects are very discreet, consisting solely of quiet background music in 93% of the videos. A similarly restrained style was observed in the embodied modes: unlike 3MT presenters, researchers in the RGVs are not putting on a stage performance but are portrayed going about their usual research activities. They speak simply and

naturally, and are dressed as they would normally be for work (anoraks in the Antarctica, lab coats or jeans in the lab, jackets and open-necked shirts in their offices), though more casually in STEMM than in SSH. Gestures are much less called upon than in 3MTs as moving and static images can be used instead for explanatory and expressive purposes.

4. Verbal expressions of Identity

Both the RGVs and 3MTs target non-specialist audiences who may have little or no knowledge of the precise topic. The subsequent recontextualization that is needed to make the content accessible requires changes in the roles adopted by the speakers and the degree of proximity or authority they wish to communicate. We will examine the verbal means speakers use to establish this identity in the two genres under two main headings: a) Positioning towards topic and audience; b) Establishing a persona.

4.1 Positioning towards topic and audience

For their talks to be accessible, speakers need to decide which aspects to focus on or on the contrary to downplay, whilst considering the constraints and affordances of the genres they are working in. In a previous study on the move structure of 3MTs (Carter-Thomas & Rowley-Jolivet, 2020), we showed how certain categories of content are highlighted, namely: a) the orientation, b) the rationale for the study and its purpose, c) its implications for the future and d) a termination move or coda. Other categories, such as methodology and theory, are omitted or only very shallowly evoked. Results were not always mentioned, probably because some contestants were only in the second year of PhD research and thus did not yet have any results to present. Using similar criteria, we also identified the preferred move categories in the RGVs, where a rather similar profile emerged, with three main aspects foregrounded: a) the research rationale – what are we doing and why is it important? b) the results: what has been achieved? and c) the applications of the research or its usefulness.

The orientation move is a prominent feature of all the 3MT presentations. To capture the audience's attention from the start, several 3MTs begin in quite a theatrical fashion with a verbal 'hook' - a direct question addressed to the audience, a moving personal story, a striking fact or event, or an imaginary scenario. Scenarios, which are specific to 3MTs (Carter-Thomas & Rowley-Jolivet, 2020), evoke a possible but imaginary situation that allows the speaker to explain or introduce a complex event and are very dramatic:

- (3) Picture a monster that can attack at any time, that can change itself to evade the weapons used against it and can come back to life from the dead. [...] It's killed Steve Jobs, Patrick Swayze and when I was fourteen my mother. [...] the monster is cancer (3MT, STEMM)

Other strategies used by 3MT speakers to capture the audience's attention include the use of personal stories (some presenters recount very intimate details of their lives, such as the death of a mother as in (3) or the learning difficulties of a son) as well as what we have previously termed "street cred" (*ibid.*). Here the aim is to create a common ground based on shared cultural values and interests, rather than scientific ones by referring for example, to films or TV series:

- (4) Contrary to what you see on CSI, it's not computers that match prints, it's humans. (3MT SSH)

Speakers present themselves not only as budding academics but as real, approachable people with interests and concerns that many in the audience can identify with. Their authority is not based on the same criteria as those used by examiners at the thesis viva, namely scientific know-how. Instead, 3MT speakers rely more on non-technical arguments, using personalisation and interactional strategies to create solidarity.

The opening sequences in the RGVs are more restrained, with no theatricality and only a couple of personal stories. Instead, speakers emphasize the newsworthiness of their research by presenting its aim and importance (5) or fronting the results (6), adopting the "inverted pyramid" structure of news reports:

- (5) The Crop Science centre is going to make a huge difference. It amplifies our impact. It puts us I think in a very very strong global position. (RGV STEM)
- (6) Bringing archives to light and into the classroom and making archives available at students' fingertips that would previously be really difficult to find or to access – it's really revolutionised the study of a lot of texts from the past (RGV SSH)

One of the main aims in producing research group videos is to enhance the visibility of the research by showing the group's achievements. (Luzon 2018). It is however the social applications and/or practical usefulness of the research, not its theoretical import, that is emphasized:

- (7) we hope that in the near future [this test] will be used to triage patients with active TB and get them the treatment they need, potentially saving millions of lives (RGV STEM)

Despite the fact that the videos came from nine different universities and covered a wide range of disciplines, and that there are no generic conventions, we found a strong homogeneity across the board in their general organization and style. There appear to be some tacit constraints at work that govern how research is communicated. The fact that all our RGVs are posted on university websites and endorsed by the respective universities probably governs these constraints – the university's reputation is at stake, as is the researchers' concern for their own digital reputations. Expertise and seriousness are what are underlined.

This expertise is not however linked to the defence of a claim, as is the case in genres such as the research article. We found only two references to the literature in the RGV sub-corpus. The RGVs seem to take place in a rhetorical vacuum: there is no controversy, no discussion of competing theories and claims, no academic argument. The RGVs give a non-confrontational,

non-agonistic picture of academic research. Although the theoretical background move is not a strong feature of either genre, in the 3MTs theory plays a slightly more important role. Despite the quasi-absence of literature references, speakers quite often provide general background knowledge of their topic, as remarked on below in the discussion of the plural pronoun *we*.

A final remark in relation to content organisation concerns the closing move, where there is a marked difference in speaker positioning in the two genres. In 3MTs, the speakers usually round off their presentation by picking up audience contact again and making an informal remark:

(8) So, next time you see some alien markings on the ground you now know who you're going to call. Thank you (3MT SSH)

In the RGVs, on the other hand, the verbal commentary ends in practically all cases with an emphasis on the social significance of the research, although some also add a striking visual termination move. Given that the web audience is in theory infinite and potentially diversified, it is difficult for speakers to rely on common knowledge or interests, whether cultural or scientific. The relationship with the audience is one that is based more on trust and respect, rather than on solidarity.

The difference in speaker positioning is probably linked to the presence of a live audience in 3MTs, where engagement strategies such as questions and second person pronouns are also more frequently used. Table 3 shows that 3MTs in both SSH and Sciences use six times as many questions as RGV speakers do (52.7 versus 9 per 10,000 words).

Table 3. Questions in the 3MTs and RGVs

		Science	SSH	Total
3MT talks	Number of questions	35	41	76
	Per 10,000 words	47.2	58.5	52.7
	Coverage	11/15	12/15	23/30
RGVs	Number of questions	7	8	15
	Per 10,000 words	9	9	9
	Coverage	4/15	5/15	9/30

Some 3MT speakers open their talk with a question addressed directly in the second person to the audience, involving them in a pseudo-dialogue:

(9) Can you remember learning to write at school? (3MT SSH)

Question-and-answer pairs are another feature. 3MT speakers show their awareness of the audience's needs by foreseeing their queries and forestalling their reservations:

(10) So, you might think why on earth is she talking about this, why is she going round in circles? Well actually, this can prove to be quite a helpful reaction. (3MT STEMM)

In the RGVs, questions are not only infrequent, but when present, concern mainly the research questions addressed, rather than any explicit interpersonal concern:

- (11) In the new world you sequence the genome of the bacterium and from that you derive all the information you need to answer all of the questions you want to ask: what species is it? which other TB samples is it related to? which drugs is it resistant to and which will kill it? (RGV STEM)

Proximity with the 3MT audience is also created through the use of second person pronouns (cf. Hyland 2001b). To compare the use of *you* in the two genres, we distinguished between two main roles: generic *you* and participant *you*. (Other less frequent uses were *you* as a discourse marker, e.g. *as you know*, and the final *thank you* in the 3MT presentations.) As Table 4 shows, in the 3MTs, *you* is mainly used in a participant role. In (12), for instance the presenter appeals directly to the shared knowledge and habits of the audience as smartphone users:

- (12) And any of you with a smartphone which I presume is most of you will know that lithium ion batteries aren't very good at powering it for a long period of time (3MT STEM)

In the RGVs in contrast, *you* is practically only used with its generic and encompassing value, i.e., as an alternative to the more formal *one*:

- (13) In order to detect a bacterial infection, you need to culture the bacteria (RGV STEM)

The sole participant *you* is in a video where the researchers are seen bidding goodbye to the penguins they are observing:

- (14) Bye guys! see you next week! (RGV STEM)

Table 4. Functions of *you* in the RGVs and 3MTs

Function	RGV#	3MT
Discourse particle	9	3
Thank you	0	23
Other	5	3
Participant	1	97
Generic	120	59
TOTAL	135	185

4.2 Establishing a persona

In 3MT presentations the speaker's personality plays an important role. Presenters try to avoid anything likely to bore their listeners and the tone adopted is light and chatty, with many evaluative adjectives and a fairly informal register of language:

- (15) Well I can see that you're absolutely fascinated [*laughter*] and you want to know why (3MT, STEM)

- (16) Now this is brilliant (3MT, STEM)

Above all the aim is to be entertaining.

RGV speakers, while also keen to appear likeable and project a friendly persona, need to appear competent and worthy of the trust the sponsors and university administrations have placed in them. As a result, we find little of the rather bubbly enthusiastic language that is characteristic of

the 3MT speakers. There is no slang or jargon and delivery remains neutral and calm. Drama and humour are not used and very few of the videos begin with a personal presentation of the speaker or speakers, as their names and academic credentials are already given on the screen.

One of the most explicit linguistic signs of the personal involvement of speakers is in the use of the first person pronoun, corresponding to a conscious choice to portray a particular stance and identity. In both RGVs and 3MTs first person pronoun subject pronouns are globally frequent, in comparison^v for example with more impersonal written genres, such as the thesis or RA, with over 25 occurrences per 1000 words overall (Table 5). 3MT and RGV speakers both take responsibility for their research actions and express their opinions congruently. However *we* largely predominates in the RGVs (300 occurrences) and *I* is slightly more frequent in the 3MTs. This is unsurprising as 3MTs are presented by one speaker, whereas there are often several speakers in RGVs. Moreover, 3MTs are initially delivered to a live audience, while RGVs are designed for web diffusion from the outset. As these factors influence how the speaker identities are constructed and perceived, we analysed each pronoun separately.

Table 5. Occurrences of *I* and *we* in RGVs and 3MT

	RGVs		3MTs	
	<i>I</i>	<i>we</i>	<i>I</i>	<i>we</i>
STEMM	40	149	83	107
SSH	73	151	114	77
All	113	300	197	184
Frequency per 1000 words	7	18.6	13.6	12.8
	25.6		26.4	

4.2.1 Identities performed by *I*

We took as our starting point the idea that (digital) identities can be multiple and that individual speakers can move between different identities, performing different roles during their presentations. Building on past typologies (Hyland 2002; Fløttum et al., 2006; Rowley-Jolivet & Carter-Thomas, 2005) we distinguished between:

- a) Personal identity (or ID), where it's the speaker's private identity that is underlined
- b) Researcher / Professional ID, where the professional role of the speaker is underlined
- c) Speaker ID, where the presenter intervenes in a meta-discoursal or interactional capacity.

Fig. 4 shows that in 3MTs a large proportion of *I* are used with a researcher ID to describe and promote the individual thesis research:

(17) So, I found the cells, now I need to find the scaffold: polymers. (3MT STEMM)

This contrasts with RGVs where exclusive *we* predominates over *I* (see below). In both 3MTs and RGVs, there is a tendency for SSH speakers to use *I* more than STEMM researchers, indicating that research at both novice and senior levels is also often conducted individually, not within a research group, in SSH. This was also very apparent in the SSH videos where senior and junior researchers are not seen working together, unlike in STEMM fields.

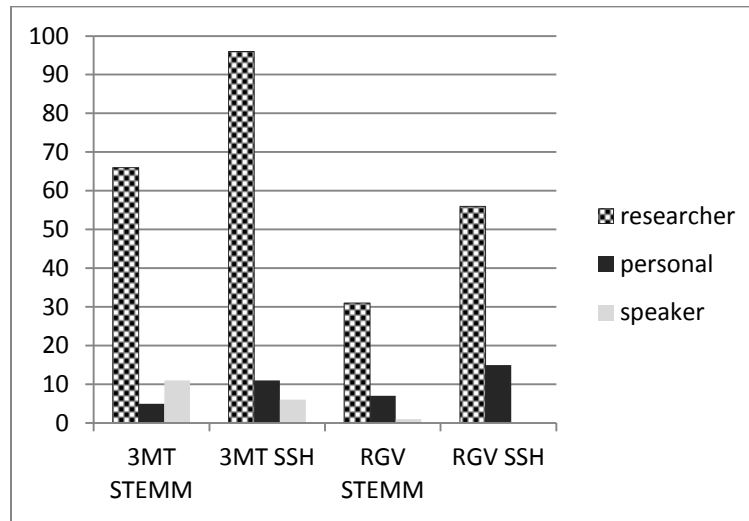


Fig 4: Identities performed by *I* (in number of occurrences)

The pronoun *I* is also used by RGV and 3MT speakers to project a very personal identity, as in (18) and (19) below, where the speakers bring in an aspect of their personal lives as motivation for their research and where (19) explicitly underlines the multiple roles she performs in addition to that of PhD researcher:

(18) I grew up in an almost exclusively black church [...] And within that church there was imagery of a white male god that always just stood out to me (RGV, SSH)

(19) I'm a teacher myself and a mother and an academic and through these various roles I've spent a lot of time in schools (3MT, SSH)

The third category identified, Speaker ID, is only a feature of 3MTs, and is directly related to the live communicative context:

(20) By the time I've finished this three-minute talk, someone in the UK will have a stroke (3MT STEM)

4.2.2 Identities performed by *we*

Some of these same tendencies can be observed when studying the use of *we*, where three values were distinguished:

- i) Exclusive *we*: the voice of the researchers as a group, constructing their identities as experts.
- ii) Inclusive *we*: aligning with viewers and/or the general public, concerning shared knowledge and societal concerns.
- iii) Research community *we*: aligning with the general “state of the art” and summing up current research

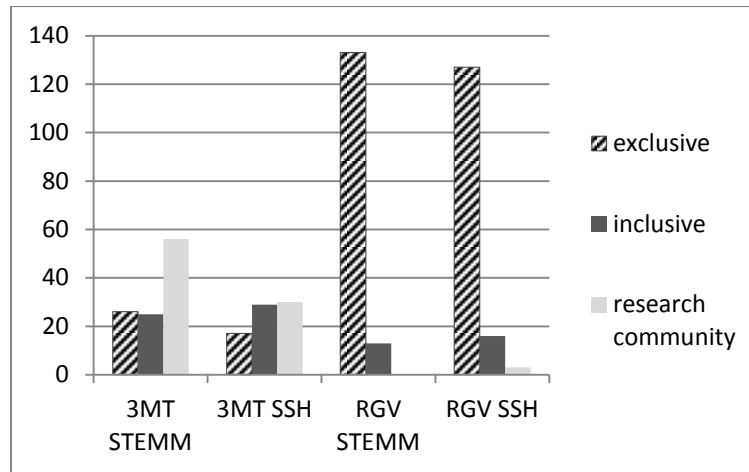


Fig 5: Identities performed by *we* (in number of occurrences)

As Fig. 5 shows, in RGVs the exclusive value of *we* largely predominates. There is on the contrary very little reference to shared public knowledge, with a low occurrence of inclusive *we* and an almost total absence of research community *we*. As noted above, there is very little mention of theory and/or reference to the work of other researchers in the field. The primary aim of these videos seems to be clearly to promote the work of the specific research group.

- (21) What my group does, we apply an electric potential across this channel and we increase it slowly in time and what we find is that bacteria are immobilized (RGV, STEM)

A marked feature of 3MTs is the recourse to research community *we* to sum up and present background knowledge of the field. As novice researchers the majority of 3MT speakers do not yet have any past research experience on which to draw. They are also not necessarily full members of a lab or group and as ‘peripheral participants’ (Lave & Wenger, 1991) maybe feel they aren't authorized to speak in the lab's name with an exclusive *we*. On the other hand, their PhD work involves a lot of reading and summarizing the literature and reporting this broader scientific knowledge thus probably looms large in their daily preoccupations.

- (22) And using machine learning techniques we can do these sorts of analyses over millions of words in hundreds of languages (3MT, SSH)

There is also a higher occurrence of inclusive *we* in 3MTs as the speaker tries to draw the live audience into the account of the research:

- (23) During the nine months of development before birth we are lucky that we have our mothers there to protect us. (3MT, STEM)

Conclusion

In this study of two digital genres, both addressed to non-specialist audiences, we have compared researcher identity along three dimensions: the level of researcher expertise (novice researchers

in 3MTs vs senior researchers in RGVs), disciplinary area (STEMM vs SSH), and the different verbal and non-verbal affordances for identity projection. Results show, first, that in both genres, the researchers' credibility or *ethos* is grounded on different criteria to those conventionally expected in traditional written research genres. Instead of theoretical knowledge, detailed methodology, and academic controversy, speakers use non-technical arguments such as social applications and practical outcomes to justify their work, in a concern for proximity with the lay audiences.

The comparison also reveals, however, numerous differences in the identities projected in the two genres, with the level of researcher expertise (novice vs senior) emerging as a strong factor of differentiation. In 3MT presentations, the entertainment value is paramount. Speakers put on a stage performance, creating the maximum impact through humour, moving personal details, expressive body language and vocal effects, and theatrical opening sequences containing scenarios and stories. They use various strategies to interact and create solidarity with the live audience, such as participant *you*, direct questions, or the creation of common ground through "street cred" and a chatty register. Senior researchers, in contrast, behave as they would normally do in their working environment, speaking in natural but measured tones, working calmly in their labs or offices, with no recourse to drama, humour or scenarios. The image conveyed is of a likeable and approachable person but also someone who is both dedicated and highly competent.

We have also observed some disciplinary differences in the identities performed in STEMM and SSH. In both 3MTs and RGVs, the epistemic culture of SSH, at both novice and senior levels, appears to be more individualistic, while that of STEMM is collective, organized around the lab team. This can be observed in the tendency for SSH speakers to use *I* more than STEMM researchers, and is also very apparent in the SSH RGVs where senior and junior researchers are not seen working together, unlike in STEMM where graduate and postgraduate students feature frequently in sequences shot in the lab, highlighting the strong mentoring role of senior STEMM researchers. SSH RGVs also make very sparse use of filmic modes such as animations, schematics and video footage of methods and processes, which appear to be much less relevant in SSH where research focuses on intangible topics that are difficult to visualize. This raises the question of whether short-form digital videos are in fact the most appropriate medium for the dissemination of SSH research, unlike in STEMM.

The digital affordances for identity projection in the two genres are also very different. 3MTs, like TED talks, are both an offline (live presentation) and online (digitally-mediated) genre, in which almost the only non-verbal resources available to speakers for identity construction are embodied modes, underscoring the performance aspect of these talks, whereas RGVs can call on a wide range of filmic modes in addition to embodied expression. These filmic resources are mobilized to show the social usefulness and participatory nature of their research as well as to clarify the technical content for the audience, and allow them to project various facets of their identities – institutional, teacherly, and researcher. RGVs clearly avoid using, however, any

filmic modes that might appear gimmicky and detract from the professional credibility of the research group.

One can wonder, however, to what extent the identities performed / projected by researchers in 3MTs and RGVs are dictated by external factors beyond their control. In 3MTs, the very strict rules of the contest, the judging criteria imposed, and the prior training received by contestants tend to create a kind of template for the performance, leading to the replication of certain communicative strategies, whoever the speaker may be and whatever the research topic. In RGVs, one cannot exclude the possible influence of two external factors that may have a considerable impact on identity projection: on the one hand, the media logics of the video production team, which are not research-related, and on the other, the institution's agenda – indeed, some studies conducted from a critical perspective (e.g. Thoms & Thelwall, 2005) have claimed that the institution's use of digital media disempowers the researchers themselves, in that the identities of the individual are ultimately lost to the governmentality of the university.

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ⁱ Source: <https://threeminutethesis.uq.edu.au/participating-institutions>, last consulted 22 April 2022. The University of Queensland (UQ) launched the competition in 2008 and continues to keep a fairly tight hold on it, with 3MT being a registered trademark of UQ. Any institutions wishing to hold a 3MT contest are supposed to request permission, use the 3MT brand on any materials, and abide by the rules laid down by UQ.

ⁱⁱ <https://www.laurenceanthony.net/software/antconc/releases/AntConc340/>.

ⁱⁱⁱ All the illustrations are original, specially commissioned drawings by Hai-Hsin Huang based on screenshots from the video recordings.

^{iv} As we were not doing a micro-analysis using multimodal analysis software, we did not take the more technical filmic modes such as cuts and types of camera shots or angles into consideration.

^v Hyland (2001a), for example, in a cross-disciplinary study covering all self-mention forms in RAs found only 5 cases per 1000 words.