Trust in the academy: a conceptual framework for understanding trust on academic web profiles

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Abstract

Purpose – Institutional and commercial web profiles that provide biobibliographic information about researchers are used for promotional purposes but also as information sources. In the latter case, the profiles’ representations of researchers may be used to assess whether a researcher can be trusted. The article introduces a conceptual framework of how trust in researchers may be formed based on how the researchers’ experiences and achievements are mobilized on the profiles to tell a multifaceted story of the “self.”

Design/methodology/approach – The framework is an analytical product which draws on theories of trust as well as on previous research focused on academic web profiles and on researchers’ perceptions of trust and credibility. Two dimensions of trust are identified as central to the theoretical construction of trust, namely competence and trustworthiness.

Findings – The framework outlines features of profile content and narrative that may influence the assessment of the profile and of the researcher’s competence and trustworthiness. The assessment is understood as shaped by the frames of interpretation available to a particular audience.

Originality/value – The framework addresses the lack of a trust perspective in previous research about academic web profiles. It provides an analysis of how potential trust in the researcher may be formed on the profiles. An innovative contribution is the acknowledgement of both qualitative and quantitative indicators of trustworthiness and competence, including the richness of the story told about the “self.”

Keywords Trust, Credibility, Cognitive authority, Academic web profiles, Academic social networking sites, Researchers, Framework, ResearchGate, Academia.edu

Paper type Conceptual paper

Introduction

Researchers, as well as many other professional groups, experience expectations from their employers, colleagues, journalists and others that they should be visible online. Research is increasingly competitive, and the most important currency in the academy is still contributions in prestigious, peer reviewed publications (e.g. Abrizah et al., 2014; Kjellberg and Haider, 2018; Nicholas et al., 2014). It is thus in the researcher’s career interest to promote such publications and to connect themselves with their publications. The academic web profile is a genre which allows researchers to do this; to display information both about...
themselves and their publications to various audiences online. Such profiles are today often maintained on the employer’s website, although some researchers create their own webpages. A large number of researchers also make use of commercial platforms, such as ResearchGate and Academia.edu, where primarily contact information, lists of publications and metrics are presented.

The function outlined above of these web profiles, and the one which has achieved most scholarly attention, concerns how the profiles add to and support the researchers as “entrepreneurial selves” (Bröckling, 2016), who promote themselves and, not least, their publications. At the same time, the profiles also fulfill a need, for various stakeholders, as a source for learning more about a researcher in the context of activities associated with career development, employment and collaboration (Greifeneder et al., 2018; Jordan, 2019a; Náñez and Borrego, 2013; Radford et al., 2020). As part of international research communities, researchers are invited to take on various positions of trust, such as to review publications, sit on committees for appointments and examinations, or be partners in research projects (Náñez and Borrego, 2013). Sometimes such appointments are made based on established professional relationships, but often the individual comes with a recommendation, is suggested by somebody who read their publications, or simply found though a web search. Furthermore, needs arise to assess the expertise and credibility of authors of publications, either before acceptance (by editors) or after publication (by readers), and to assess potential new staff members (Greifeneder et al., 2018). On such occasions, others will need to learn more about the researcher, since the research communities in most cases by far exceed the number of people one can be well acquainted with. In addition to the potential usefulness of web profiles for such consultation by colleagues, students may rely on them to determine if the researcher is a suitable supervisor or lab leader who can further their career and life paths. The web profile is also one of several ways in which professionals, policymakers, journalists and the general public can review information about the researcher. When a researcher’s web profile is consulted for such intentions, it is important for the researcher to come across as not only successful and impactful but as a person who can be trusted. This article contributes to previous research about academic web profiles through a discussion of how these promotional online presences may also serve as information sources. In particular, the article engages with the issue of how various features may contribute in the assessment of the profiles, and the researchers they (re)present, as sources with a potential to be trusted. The perspective of trust has largely been missing in previous studies of web profiles.

A commonly expressed theoretical as well as empirical claim is that “assessing the trustworthiness of members of epistemic communities is fundamental to all scientific endeavors and represents the groundwork of (scientific) knowledge creation”, as phrased by Judith Simon (2010, p. 347). She follows up with the question: “Yet which criteria do we have to assess trustworthy agents?” Academic web profiles may not aid in establishing the classical answers to that question, which often concern the researcher’s disinterestedness, freedom from ideological and economic pressure, as well as lack of self-interest in the outcomes of the research (e.g. Merton, 1973; Shapin, 1994). In fact, such assessments often rely on trust in an academic system which will ensure that these principles are upheld (Rolin, 2020; Shapin, 1994). However, trust in researchers may also build on other criteria, such as expertise, peer acceptance and institutional reputation, for which the “biobibliographic information” (Kaltenbrunner and de Rijcke, 2019) on web profiles can provide support, if not conclusive evidence.

This article introduces a conceptual framework of how trust in individuals (here: researchers) may be formed based on documents (web profiles) that mobilize their experiences and achievements to tell a multifaceted story of the “self.” The framework draws on theories of trust and on findings from previous research of how academic web profiles are constructed and of researchers’ perceptions of credibility and trust of relevance to online
(re)presentations. Of particular importance for developing the framework has been an empirical study of web profiles I conducted (reported in Francke, 2019). Rather than presenting a normative model of how researchers should come across as trustworthy, or a list of criteria which show if they can be trusted or not, the framework contributes to the broader discussion of credibility and trust online. More specifically, it suggests how academic web profiles provide an interface between an audience and a researcher and various ways in which trust may (or may not) be constructed through online (re)presentation and documentary traces. The framework may inform methodological considerations and study design when investigating how trust in individuals is shaped by online “selves.” It can also guide the creation of (academic) web profiles by the researcher being (re)presented, communications staff, or systems designers, as well as be an analytical tool for assessments of trustworthiness based on web profiles.

**On trust and credibility**

There may be many reasons for researchers to present themselves (or allow others to present them) on web profiles, the most basic of which may be to provide contact information. However, a likely element in the presentation, if at least some effort has been put into it, is to portray the researcher in a way that will come across as credible and trustworthy—that will invoke trust. Communicating such an impression in the public sphere has a very long tradition. Aristotle, drawing on predecessors, pointed to the value for orators to consider “practical wisdom, virtue and goodwill” in order to persuade “through character” (Fortenbaugh, 2010, pp. 114, 116). In today’s academic settings, practical wisdom may be expressed as competence or expertise. There are many different approaches to trust (and the related concept credibility), but in sociological and social epistemological discussions of trust, a similar emphasis is often placed on a combination of competence and trustworthiness or goodwill in descriptions of what are important factors in attributing trust.

For instance, a classical text by John Hardwig (1991, also discussed in Simon, 2010) points to the central role played by trust in the sciences, not least because creating knowledge through research is such a complex task that researchers must rely on second-hand knowledge; they cannot produce and analyze all necessary evidence themselves to reach conclusions about the world and society (see also Shapin, 1994). Trust is thus “inherently entangled” with knowledge creation (Simon, 2010, p. 347). Hardwig identifies the truthfulness, competence, conscientiousness and ability to identify the limits to knowledge claims as key criteria required for trusting both collaborators and others one relies on to further one’s research (1991, pp. 699–700). By placing such trust in (other) researchers, one may argue that one views them as cognitive authorities. This is the term Patrick Wilson (1983, p. 15) uses to describe a person or entity whose influence on our actions and meaning-making we accept as proper. Wilson’s definition of a cognitive authority is someone or something that we consider to be competent in the area and to whom/which we attribute trustworthiness, and thus similar to the reasons Hardwig identifies for believing another researcher. It should be acknowledged that in some cases, the expertise one person thinks enough to consider somebody a cognitive authority is not necessarily convincing to another person. This indicates that the assessments about whom to trust are both situational and dependent on the understandings, norms and values acceptable to the individual making the assessment. Trust or cognitive authority is furthermore something which is attributed, not an inherent property of a person or thing (Wilson, 1983).

On the web, trust needs to be viewed not only as situated but also as socio-technical (e.g. Simon, 2010). In Simon’s words, the web is an example of “socio-technical epistemic systems” where trust may “be placed in human as well as non-human agents, in processes as well as in epistemic content itself” (Simon, 2010, p. 347). This conflation between various agents has
also been observed in communication research, with regards to source, message and media credibility (Flanagin and Metzger, 2008). Credibility is a concept often used in the study of web resources, and as trust it is theorized differently depending on discipline and analytical focus. It will be used here as a concept closely related to trust and cognitive authority, drawing on a tradition in psychology and communication research which aligns with the above understandings to conceptualize credibility as primarily drawing on the two dimensions of “trustworthiness and expertise” (Flanagin and Metzger, 2008, p. 8; Rieh and Danielson, 2007).

Based on what reasons or indicators may trust, cognitive authority or credibility then be attributed in science and scholarship? Wilson identifies a number of “bases of authority” (1983, p. 21) which can be used in relation to experts in general, including formal education, occupational specialization, and accomplished achievements in a field relevant to the situation for which the assessment is made. For a researcher, achievements may include, for instance, publications, research grants and positions at prestigious institutions. Here, researchers can draw on being part of science as an institution or expert-system, which is itself trusted (Giddens, 1990; Shapin, 1994), at least partly because it has checks and balances in place to ascertain that its members conduct research in a trustworthy way (Rolin, 2020; Shapin, 1994). Similarly, association with trusted individuals or organizations may confer trust to researchers or web profiles (Flanagin and Metzger, 2008; Wilson, 1983), as in the case of co-authorship with researchers who are themselves trusted or affiliation with an institution of high esteem.

Another important base of authority put forth by Wilson is reputation. A researcher’s reputation among peers, if favorable, may be taken as a reason to trust them, and some researchers have developed a reputation among non-peers as well (or primarily). According to Wilson, the most convincing reputation is when the person holds it among people whose opinions one trusts. Earning a reputation as a competent and trustworthy person is likely to happen over time and through extended interaction with the person or their achievements by the people who build the reputation. However, people may also rely on a more general reputation or brand-name recognition in society (Metzger et al., 2010).

Research has shown that in assessing competence and credibility in areas where they lack expertise of their own, people often rely on such “proxies”, “indicators of [. . . ] competence” (Simon, 2010, p. 347) or cognitive heuristics (e.g. Metzger et al., 2010) as, for instance, brand-name recognition. When assessing a researcher’s profile, proxies, such as number of publications, h-index or academic title, may be used to estimate the researcher’s achievements. Important for how proxies are interpreted, but also in any assessment of trustworthiness, is intrinsic plausibility (Wilson, 1983). Intrinsic plausibility will come into play in relation to any feature or idea that fulfills our expectations or, as Wilson writes, “ring true” (p. 24). For example, research results may confirm what we believe to be true (based on our own research, previous reading or what suits our interests), the researcher’s h-index may correspond to what we consider reasonable given the researcher’s field, geographical location and seniority, or it may simply be that grammatical mistakes on the web profile violate our expectations.

Adding to the perspectives described above, credibility research has brought attention to how metadata, paratexts and information architecture may provide information which can form a basis for assessing the credibility of the document (Andersen, 2004; Francke, 2008). The profile’s metadata or architecture may be used by the audience to assess the potential of the (re)presentation’s credibility (e.g. by visualizing how the document is connected to people, organizations or other documents that may confer credibility), as well as its intrinsic plausibility (e.g. by how it aligns with genre and media conventions). Furthermore, the web medium lends itself to various forms of metrics and peer ratings, as in the case when the web profiles include indicators of interest or popularity, such as endorsements, followers, profile
visits, downloads or citations. Flanagin and Metzger (2008) describe this as tabulated credibility.

To conclude, attributions of trust and assessments of credibility have been described above as social and situated activities which take the two dimensions of competence and trustworthiness into account and require a socio-technical analytical perspective when applied to documents such as academic web profiles.

Presenting the public researcher “self”
The platforms in focus here are those that present the researcher with the possibility of maintaining a profile to provide information about themselves to various stakeholders. The most common platform for this is the institutional website, which presents the researcher as part of an established institution, and as an employee (Hyland, 2011, 2012). Some researchers also provide a personal website which presents their academic self. These are often less formal, more personal and focus more on the discipline than their employment, compared to profiles on institutional websites (Hyland, 2012). Many researchers also maintain profiles on commercial platforms (e.g. Van Noorden, 2014), which to varying degrees allow the researcher to add content about themselves and to form networks with others, sometimes called academic social networking sites (ASNSs, e.g. ResearchGate and Academia.edu).

In her review of empirical studies of ASNSs, Jordan (2019b) identifies studies of users’ views on ASNSs as gaining more and more interest. The following overview of platform affordances and profile construction is based on a selection of such studies of why and how researchers say they use the platforms, as well as on studies of how researchers discuss issues of trust in relation to academic web profiles and more broadly when assessing the credibility of other researchers. It also draws on a small number of studies available that have researched the content and design of academic web profiles. The selection of studies was made from English language publications, which constitutes a potential limitation. The purpose of the brief review is to show what is known about how profiles are constructed and how researchers approach them, in order to provide a point of departure for discussing how the profiles and platforms can form a basis for assessing trust. The ambition has not been to provide a comprehensive review, but it shows that the results from several studies do largely corroborate each other.

Platform affordances
The platforms used for academic web profiles have different affordances. These affordances will facilitate and restrict what content the researchers can add about themselves (Hyland, 2011, 2012). Hyland (2012, p. 310) draws on Levi-Strauss to describe the resulting page as a bricolage, “where the author does not so much write, but assembles a depiction of the self through rational, conscious, and deliberate inclusion, exclusion, adaption, and arrangement of material” in a way which anticipates a particular audience. The bricolage will also include content provided by the institution whose main website design it is part of (Hyland, 2011). Furthermore, content is often added by the system (e.g. publications and metrics), as well as potentially by others, as when followers and endorsements become visible on the profile on ASNSs (Francke, 2019).

Although several studies have found that non-use or very limited use of web profiles is common (e.g. Bukkova, 2012; Francke, 2019; Greifeneder et al., 2018; Van Noorden, 2014), other studies with researchers (primarily but not exclusively from the Global North) have shown what features encourage use of profiles both as author and as audience (Greifeneder et al., 2018; Jordan, 2019a; Jordan and Weller, 2018; Kjellberg and Haider, 2018; Meishar-Tal and Pieterse, 2017; Nicholas et al., 2014; Radford et al., 2020; Van Noorden, 2014).
These features range from networking opportunities to keeping up-to-date and to promoting one’s work. For instance, whereas some researchers maintain a profile in case somebody wants to contact them, others use the profiles to network, follow researchers of interest, find future collaborators or other relevant peers, or to support the feeling of belonging to a peer community. However, the profiles are primarily a source for finding and sharing information, not least finding publications and presentations, and—probably most importantly—a place to promote one’s output. This is also associated with the use of some platforms for tracking metrics.

The construction of/ on academic web profiles

Findings based on both analysis of profiles and on researchers’ replies in interviews or questionnaires show that researchers contribute content on their profiles which corresponds to the expressed motivations and purposes for using web profiles outlined above. Some researchers primarily provide information to make themselves possible to contact, as a business card (Francke, 2019; Greifeneder et al., 2018; Hyland, 2011; Meishar-Tal and Pieterse, 2017). Bukvova (2012) in her categorization of types of academic profiles calls this a “Visit Card” which makes it possible to identify the researcher. A second form of “Visit Card” (Bukvova, 2012) contains a curriculum vitae (CV), which can include various types of information that help establish the expertise and experience of the researcher (Francke, 2019), such as current and previous employment (Hyland, 2011), awards, fellowships and reviewing experience (Bukvova, 2011; Greifeneder et al., 2018). Descriptions of research and research interests (Bukvova, 2011; Greifeneder et al., 2018; Hyland, 2011; Kapidzic, 2020) further facilitate possibilities to identify the researcher as someone with particularly valuable experience in a field. Of relevance for showing expertise and experience are also publications and other forms of output, which are often displayed on the profiles (Bukvova, 2011; Francke, 2019; Greifeneder et al., 2018; Hyland, 2011; Kapidzic, 2020; Meishar-Tal and Pieterse, 2017). Along with various forms of metrics based on them, lists of output contribute to the self-quantification that Hammarfelt and colleagues (2016) associate with a quantified academic self. More rarely is information included which describes the researcher as a teacher (Greifeneder et al., 2018; Hyland, 2011) or as somebody other than a professional self, for instance information about hobbies or family (Hyland, 2011). In fact, in one study, such information was never available on the ASNs (Jordan, 2020).

This raises the issue of platform differences. In a study of non-academic presentations in social media, Van Dijck (2013; in dialog with Manovich’s ideas) outlined a “connective turn” from a spatial-visual, database-structured ordering of profiles to a more linear-textual, narrative ordering. The two types of ordering can be used to understand differences in the architectures of platforms for academic web profiles. The ASNS platforms are mostly database-oriented and contain primarily “Visit Cards” and lists of publications with related metrics; institutional web profiles are a combination of the two logics, including “Visit Card” information and generally publications, but also narrative accounts of research and experience; whereas the personal websites are often more flexible and oriented towards a narrative logic, with a more descriptive account of the researcher’s work and—sometimes—personal situation (comp. Francke, 2019; Hyland, 2012). The profiles that draw on a linear-textual ordering tend to tell a richer story of the researcher self, although detailed CV and publication lists also add information about the researcher (Francke, 2019). Bukvova (2011, no pages) terms this “verbosity” and includes in the concept “(1) the amount of factual information provided; (2) the level of personalisation; and, (3) the level of interaction”.

Most studies of academic web profiles report on content, but some also pay attention to how the content is narrated. For instance, researchers’ use of the first person (singular or plural) or the third person, and the use of first or last name when referring to oneself, has been
identified as varying on institutional and personal websites, with a higher tendency towards the use of first person in the Humanities and Social Sciences and on personal websites (Francke, 2019; Hyland, 2011, 2012). Hyland (2011) also noted a disciplinary difference in ethos in the narratives on institutional and personal websites between a more individualistic one (Philosophers) and a more collective and cooperative one (Physicists), aligning with a difference in how research is conducted in the two disciplines. Adding to the impression and level of professionalism or individualism are also photos provided on the profiles. Studies with limited data points indicate that the photos are often formal portrayals, generally with smiling subjects, but sometimes they show the researcher in a leisure context. This seems to be more common on personal websites, which often also include pictures of others (including pets; Francke, 2019; Hyland, 2011, 2012).

The narrating of the researcher self in particular ways has led me to suggest in a previous article that there are different strategies for how a researcher profile may portray the academic self as exceptional or noticeable (Francke, 2019). These academic selves may also influence how trust in the researcher is established. They highlight for instance the importance and quality of the research conducted; the researcher’s rich academic experience; recognitions in terms of for example awards and grants; high metrics and other tabulated indicators of academic success; richness or importance of the researchers’ academic connections and networks; excellence in teaching; expertise from non-academic work; strong social engagement and a willingness to let the audience get to know more about the researcher as a (private) person. Hyland (2012, p. 321) notes the importance of both conforming to the norms and displaying individuality, of showing the expected expertise and at the same time being personal: “An impressive publications list or collection of prizes may be one way to carve an individual persona, demonstrating virtuosity in one’s field, but as [researcher’s] page suggests, another is to reveal a human face behind the monographs and articles.”

How researchers attribute trust to academic web profiles

There are not very many studies that directly address the issue of trust and credibility in relation to academic web profiles or ASNSs. In a Swedish focus group study of how researchers view online visibility in terms of reputation and trust, some participants mentioned that personal information, including photos, was considered as contributing to building trust, but it was important to include the “right” and “right amount” of personal information (Kjellberg and Haider, 2018). Finding the balance could be difficult and not everyone necessarily agreed on where the line for not being professional enough should be drawn. Revealing suitable information about oneself has also been identified as contributing to build trust in other contexts, such as selecting team members or employment (Ren et al., 2020). The line between being visible and branding oneself too much was also discussed in the focus groups, and it was implied that too obvious branding could impact negatively on the perception of a researcher (Kjellberg and Haider, 2018). At the same time, such branding is often expected of researchers in neoliberal society (Hammarfelt et al., 2016). Hyland reflects that when the profile is part of a university-managed website, the researcher becomes “linked into networks of colleagues, publications, interests, courses and students, all of which are carefully selected to assert both the professional credibility of the subject and the status of the employer” (2011, p. 286).

Nicholas and colleagues note that researchers in UK- and US-based focus groups were reluctant to discuss trust and reliability, and that they often turned to proxies or “markers of trust” (2014, p. 124). Although more experienced researchers based their assessment of what was trustworthy on “personal trust” and a feeling for what was intrinsically plausible, this study as well as others confirm the very strong role played by peer reviewed publications and
traditional metrics based on citations, such as the journal impact factor (JIF), in any placement of trust in science (Herman and Nicholas, 2019; Kjellberg and Haider, 2018; Nicholas et al., 2014). Contrarily, several studies have shown that altmetrics are not viewed as contributing to trust (Jamali et al., 2016; Nicholas et al., 2014; Tenopir et al., 2016), although social media may serve to boost the importance of traditional metrics (Herman and Nicholas, 2019; Kjellberg and Haider, 2018). Concern with the credibility of the for-profit platforms hosting the profiles has also been voiced in interviews with researchers (e.g. Radford et al., 2020). In their estimation of what factors may contribute to building reputation for a researcher, based on a literature review, Herman and Nicholas (2019) conclude that several academic activities may be of importance for reputation but that teaching has the least potential.

The framework introduced below contributes conceptually to the so far fairly little researched empirical issue of how trust may be afforded to researchers based on their presentation on academic web profiles. In doing so, it draws on the presented findings about how researchers perceive what is trustworthy, as well as on how researchers build and use the profiles for various purposes.

**Conceptual framework for understanding trust in (re)presentations of researchers**

In the following, I outline a framework that illustrates how a complex set of perspectives, factors and considerations can contribute to assessments of credibility and attributions of trust in the context of researchers being (re)presented on academic web profiles.

To begin with, I will start by introducing the idea of frames of interpretation, which captures the knowledge that guides a person’s situated assessments of academic web profiles. The frames of interpretation available to an audience will influence what factors are valued as important in their assessment, which is in line with the view of credibility and trust as attributed qualities (e.g. Wilson, 1983).

An important distinction to make is that between the researcher, the (re)presentation of the researcher (the profile) and the platform on which the profile is hosted. These levels are important to keep apart analytically even though the (re)presentation is generally used to say or communicate something about the researcher (but is not necessarily an accurate and objective representation of the researcher). At the same time, the representation’s affordances and design is partly determined by the platform. These three entities may all be attributed different levels of trust, even though potential trust or lack thereof in any one of the entities is likely to influence trust in the others.

Focusing on the profile, two distinctions are made, namely that between different representational foci and between different bases of trust. The presentation focus on the profile may differ in how much it emphasizes the researcher’s life and career moves, the research they conduct, and the outcome of the research and other activities, e.g. publications (Francke, 2019). How each of these foci are described and what basis there is for assessing credibility and attributing trust further depends on for instance how the story is told, what it contains, what external entities confer credibility and what metrics are available, as outlined in the theories of trust and previous research presented above.

Finally, five representational strategies that can form the basis for representations that evoke trust and esteem to a researcher through their web profile have been identified. These are considered categories that summarize other aspects of the framework, without making the other parts redundant. The strategies are based on the representational foci, the various bases of trust and the frames of interpretation, together with nine types of academic “self” identified through an empirical study of academic web profiles (Francke, 2019).

Together, these various features form a conceptual framework intended to support understanding and analysis of how researchers’ achievements and experiences are mobilized
on academic web profiles that may serve as potential information sources for attributing trust to researchers.

Frames of interpretation
The assessment of how to interpret or value the quality of a feature on the academic web profile is likely to require contextual understanding which is the result of having learnt the norms and values of a network of practice (Brown and Duguid, 2001). In assessing what trust to place in a researcher, relevant forms of contextual understanding may draw on knowledge of the academic system, which is often the result of more or less prolonged studies and work within academia, or on knowledge of a particular subject or discipline, also likely to be the result of studies or work but with a focus on knowing about a particular section of academia (or related research activities) (comp. “personal trust”, Nicholas et al., 2014). Other knowledge systems are likely to also come into play.

I will approach these different epistemic categories or reading practices as frames of interpretation. There is a distant kinship in the use of this phrase with the way in which Goffman employs the notion of “frame” to discuss how social events are perceived through elements or principles which form expressed or tacit “frameworks or schemata of interpretation” (1986, p. 21). As understood here, frames of interpretation provide the epistemic context through which status and esteem as well as certain characteristics and values are attributed to features or information based on the norms and values in a particular practice or bundle of practices. These frames of interpretation are mobilized when the audience reads the web profile and will be important for what is perceived as intrinsically plausible (Wilson, 1983). The degree to which the audience commands the relevant frames of interpretation, as well as the situation in which the assessment is made, will determine how qualified the bases are for the audiences’ trust in the researcher, and which features inspire trust. Somewhat similar analytical tools have been described by Müller and Kaltenbrunner (2019) when they discuss how disciplinary and local frames of reference come into play in evaluation of good research in the case of interdisciplinary research practices, and by Rieh (2002) who distinguishes between domain knowledge and system knowledge (e.g. familiarity with a database) as tools used when people assess the quality or credibility of web sites.

Much of the biobibliographic information found on institutional websites requires academic system knowledge for the audience to interpret, for instance, the meanings and implications of academic positions or the difference between a peer reviewed article and a data set. Academic system knowledge translates across academic communities to some degree, but there are also disciplinary and geographical differences that govern the interpretation. The interpretation of descriptions of research problems, on the other hand, often requires a certain degree of domain knowledge. Grasping what research results are about and being able to judge their significance does not require knowledge of (a particular) academic system but of the subject domain. Cultural frames of interpretation are also likely to influence expectations and judgments, for instance on what is perceived as trustworthy or signs of expertise in relation to particular academic stages, gender, and country of work or origin. It is important to keep in mind that frames of interpretation are not neutral and that they may mirror power relations and prejudice in a network of practice (comp. Rolin, 2002; Wennérás and Wold, 1997).

The potential audience for the institutional and personal web sites is mixed, including other researchers but also current and prospective students, funders, policymakers, the media, professionals and the general public. This is evident, for instance, when the profiles include accounts of teaching and supervising interests, or popularly held descriptions of research that do not require much in terms of academic system and domain knowledge for interpretation (Hyland, 2011). The profiles on the ASNSs, with their reliance on lists of
publications and metrics, pose high demands on both academic system knowledge and domain knowledge and can be expected to target primarily other academics and professionals. To assess credibility based on these profiles, the audience needs to interpret such aspects as the prestige of journals, co-authors and followers, as well as what is considered high indicators.

Superimposed with these two frames of interpretation, which are primarily associated with how trust or esteem is attributed in the academy, is the distinction between how this trust or esteem is situated in intra-academic or extra-academic contexts. An audience which does not possess the academic system or domain knowledge required to identify variations in merits or the impact and novelty of a research result may still turn to the web profile of a researcher. In some cases, this is acknowledged through the information presented on the web profile, such as in the case where researchers explain their research in layman’s terms (Hyland, 2011), but also when they refer to professional activities or contributions to society or industry (Francke, 2019). In these cases, other frames of interpretation, springing for instance from professional or activist practices, will be invoked.

Key frames of interpretation are:

1. **Academic system knowledge**
2. **Domain knowledge**
3. **Cultural knowledge**

### Levels of researcher (re)presentations

When assessing the degree to which one may trust a researcher based on their web profile, the researchers as “human epistemic agents” (Simon, 2010) or academic performers are assessed through the (re)presentation of them available on a particular platform or system. This means that (at least) three levels are involved in the assessment: performer, (re)presentation and platform. It is important to keep these levels apart analytically, since they may be considered to have differing degrees of credibility. At the same time, the researcher (performer) and the platform co-construct the information available on the profile (Francke, 2019). As a consequence, how trust is attributed to the profile will be a consequence of how the three levels interact and how trust is formed at each level.

The platform or site may in itself be more or less trusted by the audience, depending on the **Uniform Resource Locator** (URL), reputation or one’s previous engagement with the site. Paratexts, such as URLs, logos and links, may indicate that the profile is indeed located at the institution to which the researcher claims to be affiliated, which may contribute to both the researcher and the profile becoming more trustworthy (Francke, 2008; Hyland, 2011). Similarly, some ASNSs will verify institutional affiliation through the e-mail address. Depending on how one evaluates this conformation (in terms of how well it is executed by the platform and how well the information is kept updated by the researcher), this may contribute to trusting that the affiliation given on the site is correct.

The audience may have a sense of the reputation of the platform which can influence their willingness to trust information offered on profiles, particularly on the ASNSs. This is a heuristic which is quite commonly found in relation to assessing the credibility of other sites online (Metzger et al., 2010). Not least, the content added by the platform (see Francke, 2019), such as lists of peer reviewed publications and metrics, may contribute to establishing trust (Herman and Nicholas, 2019; Kjellberg and Haider, 2018; Nicholas et al., 2014). Here, reputation as well as more or less in-depth knowledge may play a role in the assessment. For instance, knowledge about how the various platforms collect and generate metrics and altmetrics based on such entities as publications or followers may influence what value one attributes to the indicators provided. Similarly, the more one knows about the researcher, the
better one may be able to evaluate the exhaustiveness of the information provided. Furthermore, extended use of the platform may result in “earned credibility” (Fogg, 2003), which can influence the audience’s trust in the platform.

Different platforms will afford different content to be uploaded and the researchers to control their presentation to varying degrees. Along with the researcher’s interest and motivation, external expectations and time available to shape and upload content on the profile (Greifeneder et al., 2018), these affordances will have consequences for how the researchers, their achievements and experiences are represented on the web profiles. For instance, many ASNSs contain limited amounts of content uploaded by the researcher, apart from publications (focus on a spatial-visual, database-structured ordering), whereas institutional web profiles generally allow the researcher to contribute content in free-text form, often combined with explicit encouragement to add certain types of information to the profile (more of a linear-textual, narrative ordering). To this is added system-generated information, such as affiliation, contact information and lists of publications, presentations and research projects. On personal websites, the researcher’s skills in designing the site may influence the audience’s assessment (Hyland, 2012; Kjellberg and Haider, 2018).

Thus, an assessment of the researcher’s trustworthiness and competence based on how they are (re)presented on their web profile(s), builds on a combination of assessing the information provided on the web profile (by the researcher or somebody acting on their behalf and by the system) and assessing the platform on which the profile is hosted.

The levels of researcher (re)presentation are:

- **Performer**
- **Profile**
- **Platform**

**Representational focus and types of academic “self”**

The web profiles can be said to varying degrees to (re)present the *performer* (the researcher), the *process* (the research, teaching or outreach conducted), and the *production* (publications and other research or educational output). Although they may all contribute to strengthening (or weakening) the trust attributed to each of them, it is important to distinguish between the three different foci when assessing what each may contribute to credibility. Furthermore, there are connections to the types of academic “self” I identified in a previous work on academic web profiles (Francke, 2019) as used to highlight particular aspects of the researcher’s career and work in the narration of the academic “self.” Some of these types have been indicated in parentheses in the description below.

As will be developed further below, a focus on the researcher as *performer*–the one who performs academic tasks that can be evaluated and measured–may draw not only on academic progress and production but also on such aspects as how they tell the story of themselves as a professional (*professional self*) and possibly private person (*private self*; Kjellberg and Haider, 2018), including illustrations such as photos, the way the story is told, and how the reader is addressed (Bukvova, 2011; Francke, 2019; Hyland, 2011, 2012). The researcher may also be portrayed as part of a network of other performers, for instance by mentioning collaborators, advisors and students, or through the semi-automated networks of co-authors, followers/followed, endorsers and readers visualized by the ASNSs (*connected self*). Some web profiles focus primarily on the *process*, presenting the research and/or teaching conducted by an individual or group (*researcher self; teaching self*; Francke, 2019; Hyland, 2012). Finally, the *production* or output in the form of publications, grants, patents, etcetera is the primary content on the ASNSs (*quantified self*), although the breadth of content is usually broadest on those institutional websites where researchers either choose to include...
their full CV or where the system adds content from a comprehensive current research information system, in effect potentially providing significant parts of a CV (experienced self; Francke, 2019).

Depending on where the audience direct their focus when reviewing the web profile, different proxies or interpretative approaches may become relevant, and different types of situated knowledge may be needed to assess what is the basis for trustworthiness and expertise.

Key representational foci are:

- Performer
- Process
- Production

**Bases of trust**
The academic web profiles provide various bases for attributing trust to the profile and to the researcher (comp. Wilson, 1983). How available features are used in the assessment will depend on a number of factors, such as the situation in which the profile is encountered and the assessment made, on the frames of interpretation available to the audience, on the time available for making an assessment and so on. Trust in a researcher may be based on features associated, on the one hand, with the person’s character in terms of their trustworthiness or truthfulness and, on the other hand, with the person’s competence or expertise with regards to the relevant situation or subject (Hardwig, 1991; Wilson, 1983). Below, I will discuss these two dimensions based on various features available on academic web profiles, acknowledging that these features may serve to strengthen both trustworthiness and competence.

Providing “the right” information, not only of personal information (Kjellberg and Haider, 2018) but also of one’s professional persona, as well as providing it in the right way is a criterion used for assessing whether or not to trust a researcher. Trust in the (re)presented researcher is thus at least partly established through the story which is told about them, and how that story is told. Studies of web profiles show that the richness of the stories told varies a great deal (e.g. Buknova, 2012; Francke, 2019; Greifeneder et al., 2018; Hyland, 2011, 2012). In some cases, the story is limited to features such as title/position and affiliation. In other cases, a rich narrative is provided, which includes a descriptive text, CV, lists of publications, grants, awards and teaching assignments. The descriptive text may serve to present the person as both a researcher (for example by describing the researcher’s career trajectory or what attracted them to the academic world in the first place) and as a private person, with a professional past outside the academy, but also with hobbies, family and pets. Adding to the story and the perception given of the researcher are any photos or other illustrations which are found on the profile (Francke, 2019; Hyland, 2011, 2012).

Richness of description may in this way spring from including a mix of information (including personal development, current activities, teaching/supervision, non-academic professional engagement, research problem and personal interests), which can provide a full impression of the performer, process and production, thus introducing the researcher’s expertise. Furthermore, how the story is told may add to how the researcher’s trustworthiness is assessed, because there is a feeling that one gets to know them in the “right” way (Kjellberg and Haider, 2018) or because the presentation is made with a neutral and objective tone often associated with academic discourse (Francke, 2019; Nicholas et al., 2014).

Even though a very brief presentation (“Visit Card”) may provide information about affiliations, degrees and to some extent achievements, a richer story will more likely include information which can form a basis for assessment. Features such as affiliation, position and
title are likely to be important for the initial assessment, and to serve as proxies or to verify assumptions about the researcher. Judging the researcher’s expertise within a relevant area will likely rely on both academic system and domain knowledge and may be based on qualitative and quantitative evaluation (see tabulated credibility below). Domain knowledge will often be pivotal when determining subject expertise based on the profile’s description of research problem, methods and results, along with projects, publications and CV. On ASNSs, which rarely include other building blocks than publication lists, keywords or tags may contribute to an understanding of how the researchers themselves, or their colleagues, specify their expertise. Furthermore, information about for instance debate contributions, media appearances or membership in respected and publicly visible associations may affirm a general reputation or name recognition, not least among an extra-academic audience.

Conferred credibility (Flanagin and Metzger, 2008) through trusted people, institutions or publications may add to the trustworthiness attributed to the researcher’s character but also contribute confidence in their expertise or competence (Francke, 2019; Herman and Nicholas, 2019; Kjellberg and Haider, 2018; Shapin, 1994). Details available in CVs and publication lists, such as having publications in trusted journals, having presented at well-reputed conferences, co-authorship with a respected colleague (Herman and Nicholas, 2019), and being a member of venerable learned societies and professional associations, may also confer credibility to the researcher, if the audience draws on pertinent frames of interpretation (comp. Hyland, 2011). In the case of the ASNSs, conferred credibility may come in the form of endorsements of skills and expertise. To some extent particular followers on ResearchGate and Academia.edu can also be considered to confer credibility in this sense. This is in cases where endorsers or followers are people who themselves are considered trusted. A potential form of endorsement is the citation, and citations from well-respected authors can thus be argued to contribute credibility to a researcher through their publications (but see below). Trustworthiness through conferred credibility is thus established because the researcher is part of relevant, possibly exclusive, networks of practice (comp. Cook and Santana, 2020; Wagenknecht, 2015).

When citations, endorsements and, to some extent, followers are considered in terms of metrics rather than in terms of who has cited, endorsed, or followed, they can also be considered to attribute tabulated credibility to a researcher through a kind of “peer rating” (Flanagin and Metzger, 2008, p. 11). This means that the interest shown by other users of the platform or impact in publications are calculated and provided as input in metrical form about the researcher’s credibility. There are, however, reasons why such metrics should be treated as situated and potentially unreliable. Endorsements may be indicators that the researcher’s work is appreciated, but encouragements to endorse a researcher for a particular skill are often prompted by the platforms. Followers could be attracted to a controversial figure. The number of citations are also not fully reliable indicators of trust as publications may be cited not because of quality but because the findings are disputed or simply of subject relevance. This illustrates that we need to be attentive to the difference between credibility/quality and impact/visibility (e.g. Aksnes et al., 2019). Yet, whereas altmetrics seem to arouse very little trust among academics (Jamali et al., 2016; Nicholas et al., 2014; Tenopir et al., 2016), institutionalized (though often platform-specific) citation metrics (e.g. JIF and h-index) are very often used as proxies of quality and thus invite trust (Heman and Nicholas, 2019; Kjellberg and Haider, 2018; Nicholas et al., 2014). When these metrics are assessed, the trust attributed to the platform is brought to the fore.

Creating an exhaustive list of all possible features that may form the basis for making assessments about trustworthiness and competence based on academic web profiles is a Sisyphean task. By providing some examples above, a point I wish to make is that the foundations for such assessments often overlap. However, it can be argued that the narrative structure and voice used to tell a story on the profile contribute primarily to the
assessment of the researchers’ trustworthiness (Kjellberg and Haider, 2018; Nicolas et al., 2014), whereas the epistemic content (descriptions of process and production) included may support the impression of trustworthiness, competence or both. A profile which consists primarily of a list of publications and metrics is likely to provide a basis primarily for assessing expertise, although conferred credibility may influence trustworthiness as well. A very frugal profile contributes very little to go on in making any kind of judgment.

Key aspects that form the basis of trust are:

- Richness and style of story
- Content of story
- Conferred credibility
- Tabulated credibility

Representational strategies
Above, I suggested that when establishing whether or not to place trust in a researcher based on their (re)presentation on a web profile, focus may be on the performer, the process, the production or a combination of them and that in this process the types of academic “self” (Francke, 2019) used to present the researcher on the profile will invite different interpretations. The representational content will, of course, provide different grounds for making these assessments. Below, the various aspects presented above as part of analytically approaching issues of trust and credibility on academic web profiles have been interpreted in terms of five representational strategies for profile content and for describing the “self,” which form different contexts for credibility assessments. These strategies may, of course, be combined on the web profile. The assessments are aligned with frames of interpretation which influence what is perceived as highly esteemed and respected by a particular audience, and thus which expectations the representation needs to fulfill in order to contribute to the researcher being trusted. The representational strategies are not necessarily entirely intentional. They can be a consequence of contributions by the researcher, the platform algorithms, and others interacting with the profile (Francke, 2019). Yet, the strategies may serve as an analytical tool that combines several of the aspects outlined above, at the same time as they should not be viewed as a summary that the rest of the framework leads up to. The various parts of the framework can form a basis for focused analysis.

The representational strategies aim to establish trust in the researcher by drawing on:

Intra-academic esteem with a focus on the performer
A rich description and, not least, an extensive CV can provide information for making assessments about the researcher’s level of experience (the experienced self), including accounts of teaching experience (the teaching self) and lists of grants, prizes and honors received, or of invitations to prestigious institutions and events (the recognized self). Another factor which may contribute to trust being attributed by some audiences is indications that the researcher is engaged in activities which show a social responsibility (the responsible self).

Intra-academic esteem with a focus on the process
Descriptions of the research conducted by the researcher (or their group), which illustrate the importance and originality of the work and possibly its contribution to society and (sustainable) development, will be important as a basis for the assessment of the process (the researcher self; the responsible self), as will indicators that the research has been successful, such as lists of grants, collaborators, and patents (the recognized self), and descriptions of implementations and use.
**Intra-academic esteem with a focus on the production**

Assessments of the researcher’s production can be formed based on lists of publications, where the names of journals or publishers may lend credibility (the experienced self). Various metrics and indicators, such as number of publications and citations, the h-index and (possibly) altmetrics, form a basis for tabulated credibility (the quantified self). Which genres and publication outlets are considered prestigious will depend on discipline (and possibly sub-specialty and geographical location), as will be the case when determining which amount of publications and citations are considered to be impressive.

**The intra-academic esteem of others**

The researcher’s connections in the academic community, which may take the form of for instance co-authors, collaborators or supervisors, may attribute trust both based on the number of connections and on whether the connections are trusted others (the connected self). Various types of acknowledgements, through prizes and grants, may also confer credibility on the researcher (the recognized self). When focus is on connection metrics, as with number of co-authors, endorsements or followings by colleagues, there are also links to tabulated credibility. Employment by a well-known university or having publications in journals which are often mentioned in the media confer credibility based on reputation, which may not be restricted to an academic audience.

**Extra-academic esteem with a focus on the performer**

Intra-academic esteem may be important also for audiences who do not themselves work in the academy. Any of the above categories may thus be of importance regardless of audience. However, extra-academic esteem may factor into how trust is attributed by audiences both within and outside of academia (see Kjellberg and Haider, 2018). Indications in the researcher’s descriptions and CV of the researcher’s professional experience and expertise from relevant non-academic work (the professional self), including teaching experience and excellence (the teaching self), may contribute to assessments which look beyond the academic sphere. Furthermore, descriptive text and photos that allow the audience to get to know something about the researcher’s personal life, such as hobbies, background and family situation (the private self), can contribute to establishing trust, especially if told “right” (Kjellberg and Haider, 2018).

**Conclusion**

Much of the research on academic web profiles conducted so far has focused on the profiles as sources of metrics or on their use for promotion or interaction (Jordan, 2019b). Studies of trust and credibility in relation to the profiles have been few and approached the topic at a general level. The conceptual framework proposed in this article draws on available research of academic web profiles and on theories of trust and credibility from a social epistemological perspective, which emphasizes the dimensions of competence and trustworthiness in attributions of trust. The framework can form a conceptual basis for future investigations into how specific features of the profiles and decisions made when creating them influence how the profiles can form a basis for trust and how audiences with varying knowledge of the academic system and with different information needs attribute trust to the profiles. Thus, the framework may inform methodological considerations and study design when investigating how trust in individuals is shaped by online “selves”, either through analysis of web profiles or through user studies. The framework points to the key role in any assessment of trustworthiness and competence of the frames of interpretation available to the one making the assessment. Expectations and accepted norms and values within particular communities (disciplines, countries, etc.) will influence the audience as members of networks of practice in their interpretation of what distinguishes competence and trustworthiness and
of how web profiles may provide bases of trust. In the case of user studies, understanding how user groups with varying frames of interpretation who approach profiles for different purposes mobilize trust can also contribute valuable insights applicable more broadly in the appreciation of how trust in individuals is supported through narratives of “self.”

How the researcher is presented and what the audience learns about them will determine how the profile contributes to meaning-making and trust in the researcher. The presentation may draw on the trust placed in institutions, the research system or in other people. Trust may also be placed in the researcher based on metrics or other tabulated data available. In addition, I argue that an important aspect in gaining trust stems from the richness of the story of the researcher self and how it is told, that is, how the researcher’s experiences and achievements are mobilized to tell a multifaceted story of the “self.” The framework supports the analysis of how credibility may be assessed on academic web profiles and how these profiles may form a basis for attributing trust to a researcher. Future work can also develop the framework, with its focus on trust, through combining and expanding it with theories of impression management and social interaction (e.g. Goffman) in order to gain a broader understanding of how impressions are managed on the profiles and which role trust plays in such considerations.

Furthermore, the framework can be implemented in practical situations, for instance as inspiration when constructing a profile or when designing the features and prompts of a platform. By directing attention to how various features of academic web profiles can become considered from a perspective of trust, the framework may help individual researchers (or communications officers or librarians who advise researchers on constructing profiles) in making informed decisions about what information to include, how to present it and how to take advantage of platform characteristics. Similarly, as a basis for instructing researchers and students on how to approach the information available on the platforms when seeking information about other researchers, the framework (in a simplified form) can serve as a basis both for distinguishing between different types of platforms and between different types of content.

The framework outlines a theoretical approach that can enrich our understanding of how trust is attributed in a distributed, global and networked academic system. While this may be of value when discussing academic web profiles as websites used for promotion of one’s work or for contact with other researchers, it is primarily intended to contribute to the view of web profiles as useful information sources about individual researchers.

References


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