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Published in:
Transforming politics and policy in the information age

Document version:
Publisher's PDF, also known as Version of record

Publication date:
2014

[Link to publication](#)

Transforming Politics and Policy in the Digital Age

Jonathan Bishop
Centre for Research into Online Communities and E-Learning Systems, Belgium

A volume in the Advances in Public Policy and Administration (APPA) Book Series

Chapter 15

Who Cares for Identity Information in Government 2.0?:
An Empirical Study

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ABSTRACT

This chapter presents the results of an empirical study on the effects of identity information on government-citizen interaction in government 2.0 applications. It triangulates findings from a survey among government 2.0 users and quantitative and qualitative analyses of Dutch government 2.0 Websites. This reveals the identity information Web 2.0 users want to have of other participants and are willing to provide about themselves, the importance of role information of civil servants, and the relationship of identity information with the interaction level on government 2.0 applications. The results show that, contrary to what the literature suggests, there is no significant correlation between identity information and interaction levels on government 2.0 discussion forums. The findings suggest that government 2.0 initiatives should be designed with a flexible and liberal approach to identity information.

1 INTRODUCTION

1.1 Background and Research Question

Web 2.0, also called social media, is an umbrella term for technologies and applications that facilitate user interactions and user-generated content, leading to new forms of social networks. Government 2.0 can be seen as the use of Web 2.0 by governments, more specifically – in the sense that we are interested in in this paper – to facilitate government-citizen interactions. Many discussion platforms are being set up where government and citizens can meet, but not all of these are successful. Several factors affect the

potential for success of government 2.0 (Meijer, Koops, Pieterson, Overman, & Ten Tije, 2012). One possible factor that we want to explore in this paper, which has significant implications for the design of government 2.0 Websites, is the amount of identity information that users have to give when participating in government 2.0.

The reason we focus on identity information is that the literature suggests this to be a key enabler of trust, and mutual trust is a necessary condition for these government-citizen relationships to be successful. Particularly in online interactions, trust can never be taken for granted; it has to be established. Since online interactions involve communications at a distance, traditional trust-enhancing factors that we rely on in face-to-face interactions may not necessarily apply (Pettit, 2004). For the purposes of this paper, we focus on the context of virtual relationships, for which Haenni *et al.* (2009, p. 40ff) describe trust as a subjective, context-dependent characteristic of one party (the trustor) in relation to another party (the trustee) in a relevant context. Trust has many aspects; in this paper, we are interested in preconditional aspects or enablers for trust to be possible in the first place: availability (is the trustee available when needed?) and identity (is the identity of the trustee established?) (Cofta, 2007).

Closely related to these enablers of trust in the trustee are enablers of confidence in the reliability of the trustee's statements. In government 2.0 applications, the latter are perhaps even more important: do governments and citizens trust the *content* of their Web 2.0 interactions? Content reliability can be gauged from two types of criteria: content criteria, related to the content itself, for example consistency, coherence, and accuracy; and pedigree criteria, related to the information source, for example whether information comes from a source that is authoritative or that proved reliable in the past (Vedder & Wachbroit, 2003). In online contexts (as in many offline contexts), people find it hard to apply content criteria and usually rely on pedigree criteria (Vedder & Wach-

broit, 2003). In other words, trust in the Web 2.0 content often boils down to trust in the content's source, that is, in the counter-party who contributes content. Since many pedigree criteria are connected to the information's source, knowing who the source is becomes important. This underpins the importance of identity as a preconditional dimension of trust: it is a facilitating enabler for the other enablers of trust.

1.1.1 Background

What, then, is identity? Given our focus on online interactions, we focus on the three aspects of identity most relevant in online environments. First, identity knowledge, i.e., the knowledge of identity information available about someone, for instance on the Internet. Gary T. Marx (2006) distinguishes five types of identity knowledge that can be placed on a continuum, ranging from identity information very close and specific to the individual (core identification and unique identification) through identity information specific to the type of individual (sensitive information and private information) to any identity information that can be attached to a person (individual information). These five types can be thought of as concentric circles, with core identification as the inner, most limited category, and individual information as the outer, most comprehensive category. It is useful to distinguish between these types of identity information, precisely because identification seems such a key element in government-citizen relationships.

A central policy question is how much and what kind of identity information is necessary in various contexts. In particular, whether identification of a unique person is appropriate and, if so, what form it should take (Marx, 2006). For government 2.0 applications, one can hypothesize that, based on identity being a key facilitating enabler for trust, people's willingness to participate in government 2.0 initiatives will be proportional to the availability of identity information. In particular, one

can hypothesize that participation increases as identity information comes closer to the core of the identity circles.

The second aspect of identity relevant for online interactions, and closely related to the first, is that of numerical identity. This refers to the notion that something is identical to itself by being a unique object that may resemble other objects yet has some properties that set it apart from all others (Parfit, 1984). This is the main reason why we can identify objects or people as the unique beings they are. Numerical identity is relevant for online interactions, since the identities individuals express online consist of a collection of attributes that together uniquely identify an individual within a relevant group in a particular context (Pfitzmann & Hansen, 2010, p. 30).

The third aspect of identity relevant for this study is the notion of narrative identity (Ricœur, 1992), viz., the fact that individuals express and experience their identities to others and to themselves by telling stories about who they (think they) are. In online interactions, especially in environments that are designed to invoke identity expressions, users actively engage in building such stories about themselves, thereby constantly balancing between their self-conceptions and ideas of what they believe others would like to hear of them. At the same time, the actual stories that others tell about them are also relevant in Web 2.0 environments.

This brings us to a downside to high levels of identity knowledge, which risks *diminishing* people's willingness to participate in government 2.0, especially on the citizen side. The fact that identity information often relates to personal information implies a significant potential of privacy infringement of Web 2.0 participants. The information becomes more sensitive if it comes closer to the centre of Marx's circles of identity knowledge. From an informational-privacy perspective, the amount of personal data disclosed and processed should be kept to the minimum of what is necessary for the purpose at hand. A central

data-protection principle, enshrined in the Council of Europe Convention 108 and the European Union's 1995 Data Protection Directive, is that personal data should not be excessive in relation to the purposes for which they are collected, stored, or processed. This data minimization or purpose-binding principle points in exactly the opposite direction from the hypothetical conclusion above that government 2.0 applications should incorporate as much identity knowledge as possible.

Privacy concerns are compounded in the context of Web 2.0, particularly with social media where traditional social contexts blur. Individuals always play roles in social life, e.g., husband, employee, fire brigade volunteer, clarinet player, etc., presenting themselves to their audiences in different ways (Goffman, 1959). These contexts are governed by norms and social practices particular to the context, for example related to the questions you are expected or allowed to ask (Nissenbaum, 2010). In today's social media, audience segregation is difficult to manage, resulting in 'friends' from various contexts seeing information they would not acquire in offline contexts (Van den Berg & Leenes, 2011). This infringement of 'contextual integrity' is one of the crucial current threats to privacy (Nissenbaum, 2010).

Although privacy is traditionally seen as a citizens' concern vis-à-vis the state, Web 2.0 introduces a complicating factor: state officials can take dual roles on the same media, as officials and as citizens. The networks in new media do not contain straightforward distinctions between 'the state' and 'the citizen', making the issue of 'contextual integrity' salient for all parties involved. Guidelines for civil servant participation in social media tend to stress role specification, for example in Britain: 'Wherever possible, disclose your position as a representative of your department or agency' (Cabinet Office, 2008). At the same time, most guidelines warn against giving too much (personal) information, because of the Internet's everlasting memory and the potential for abuse of information. Civil servants are al-

lowed or stimulated to participate in Web 2.0 as private persons under a separate account, but warned that citizens can find them through search engines using identity information to combine their public-function and private profiles; hence, they should be careful which information they provide, both as a civil servant and as a citizen (Birza, Frank, & Klok, 2010). Providing more identity information, then, also poses risks on the government side of Web 2.0.

From this literature overview, we hypothesise that identity information is a major factor in people's willingness to participate in online applications, but that it is a double-edged sword. Having more identity knowledge of counter-parties will enhance people's participation, but having to provide identity knowledge to counter-parties risks diminishing people's participation in a context where risks to privacy arise. This paradox implies that applications must run the gauntlet of stimulating the exchange of identity information without forcing people to disclose more identity information than they feel comfortable in providing in the particular context of the application.

No research has been conducted yet on how users – both citizens and officials – deal with this ostensible paradox. Very little empirical evidence is available of the importance of identity information in government 2.0 applications. To fill this gap, we aim at answering the question: how does identity information impact on the interaction of governments and citizens in government 2.0 applications? To answer this question, we have conducted empirical research about the identity information Web 2.0 that users want to have of other participants, the identity information they are willing in practice to provide about themselves, and the importance of role information of civil servants, in the context of government 2.0 interactions.

The relevance of this research for politics and policy in the information age is that the use of social media in government-citizen interac-

tions is increasing, but many initiatives are not altogether successful in terms of enhancing interactive participation of citizens in politics and policy-making. Our results may help in designing government 2.0 platforms in such a way that the identity information requested of users is in line with what citizens and civil servants are actually comfortable with to engage them in online interaction. This will give government 2.0 initiatives a better chance of success.

1.2 Methodology

We assume that the interaction in government 2.0 correlates with identity information. Interaction can be measured quantitatively – the number of discussions on a platform, the number of reactions to a posting – or qualitatively – the type and depth of responses. We therefore set out to study both quantitatively and qualitatively how identity information relates to the level of interaction on government 2.0 applications. We have studied this for Dutch government 2.0 Websites, using the eParticipation Dashboard[1] as our starting point, as this provides an almost comprehensive list of over 600 Dutch government 2.0 initiatives.

Our quantitative analysis consisted of three parts. First, we performed a quickscan of initiatives, looking at a random sample of around 50 interactive Websites. To create this sample, for each letter of the alphabet, we chose the first and last initiatives until we had sufficient interactive Websites. Since many Websites on the eParticipation Dashboard turned out not to be really interactive – they were either unidirectional (e.g., municipalities' YouTube channels or a Website requesting citizens to e-mail ideas) or they were no longer in use – we looked at 197 initiatives overall, of which 54 initiatives had some sort of active discussion platform. In this subset, we looked at how much identity information people had to provide in order to participate; we counted the number of profiles of platform participants,

how many discussion lines the platform had, and how many postings each discussion line had (i.e., the initial posting plus the number of reactions). We performed various analyses to find correlations between the amount of identity information and the number of discussion lines or reactions.

Since many of the initiatives in the quickscan had relatively little interaction, making overall statistical analysis difficult, from the more active platforms we subsequently generated a larger data set of around 500 discussion lines, consisting of identity information of the initiator of a discussion line (i.e., the one making the initial posting) and the number of reactions. We then analysed the possible correlations between the amount of identity information of the discussion initiator and the number of reactions.

Third, we zoomed in on one particular initiative that had a high level of interaction. We chose a random sample of a 100 user profiles and categorised these into profiles with a low, intermediate or high level of identity information. We then analysed whether the level of identity information correlated with the number of connections users have or the number of reactions (similar to Facebook's wall postings) that other people post on their personal profile.

Since the quantitative analysis turned out not to yield any insight into role information (in almost all cases it could not be determined from the postings which role the initiator of a posting played), we subsequently performed a survey of how people perceive the use of identification information on Web 2.0, including how they perceive roles and role markers of civil servants. We opted for an online survey, which yielded 72 completed responses. Although this is a limited number of respondents, and there is the issue of self-selection that applies to all online surveys, the respondents fit well in our target group of Web 2.0 users. Hence, the results are indicative, yielding some interesting insights for further research. Since the survey also covered opinions about the

role of identity information in Web 2.0 in general, we present these results first in the next section, before the results of our quantitative study.

Finally, since the quantitative study only measured the number of reactions as an indicator of the interaction level on government 2.0 Websites, but not the content or quality of the reactions, we also conducted a qualitative study. We chose Websites from the e-Participation Dashboard that had a substantial amount of interaction, clear visibility of government representatives participating, and sufficient variation in identity information. Very few Websites fit this profile. We found two Websites, one in the legislative (Wageningen council) and one in the executive (Smallingerland municipality) branches of government, which we studied by looking at the content of discussions and the identity information in profiles, postings and reactions. We operationalised the quality of the interaction in terms of elementary criteria for good discussions, i.e., the *process* and the *product* but not the *procedure* of an argument (Wenzel, 1992). The process of an argument refers the idea that individuals use techniques to increase their chances of convincing the other, while the product refers to the content of that which is argued, and whether or not it is convincing and aligns with the ongoing debate (Wenzel, 1992). We have translated this into the following qualitative assessments: does a contribution to the discussion make sense in itself; does it address the topic of discussion; and does it argue on the basis of content arguments (instead of, e.g., ad hominem arguments)? We operationalised identity information in terms of (for Wageningen) discussants using a first name, a first and last name, or a nickname or (for Drachten) how many personal characteristics (age, profession, relationship status, personal interests, personal favourites) the users included in their profile. Both authors analysed separately, on the basis of these operationalisations, whether the presence or absence of identity information correlated to the quality of the discussion.

2 FINDINGS

2.1 User Survey

We performed a survey of how people perceive the use of identification information on Web 2.0. We opted for an online survey, which we advertised particularly on Ambtenaar 2.0, the major Dutch platform for civil servants. 106 people responded, of which 72 people completed the survey; we analysed the results of the completed surveys. Because the same of respondents is small, our findings yield only indicative results (N=72, unless specified otherwise), yet these point in interesting directions that seem to contradict established ideas in the literature.

Of the 72 respondents, 38 were male and 34 female. They were between 25 and 63 years old; the average age was 42. The respondent group was highly educated: 86% had a Bachelor's or Master's degree. The majority (64%) worked as civil servants, the rest were citizens. They were very experienced Internet users (average 4.29 on a scale of 1-5) and they say they trust the Internet for serious applications (average 4.43 on a scale of 1-5). Respondents frequently used Web 2.0 applications, notably Twitter, LinkedIn, YouTube, and Facebook. Less popular were blogs, Flickr, and Hyves, a Dutch variant of Facebook. From these background characteristics, the respondent group seemed to consist largely of skilled professionals well-versed in using social media. Although this is not representative for the Dutch population, it does fit our target group of Web 2.0 users, but because of the self-selecting response, we cannot say whether the results are representative for this target group.

Of the 26 citizens, less than half use Web 2.0 frequently or often to communicate with or about the government; they largely do so to obtain information (46%), to discuss government matters with others (46%), and also to ask questions (35%), voice their opinion (38%) or to discuss with the government about their policy (31%). The 46 civil servants use government 2.0 applications primarily for sharing information with colleagues (63% frequent users); fewer officials use it to discuss public policy with colleagues (24% frequent users). They also use government 2.0 for voicing their opinion about government policy (30% frequent users) and for providing information to citizens (30% frequent users). Government 2.0 is rarely used by civil servants to engage in discussions with citizens (17% frequent users) or to answer questions about government services (9% frequent users).

Citizens' responses are in line with our hypothesis that they prefer having identity information of others in Web 2.0 platforms: they like knowing exactly who the discussion participants are (58% (totally) agree, while 12% (totally) disagree), and they reject the statement that it does not matter *who* says something, but it matters *what* they say (58% (totally) disagree, while 23% (totally) agree). 77% frequently look at other people's profiles on Web 2.0 platforms. Still, 38% of the citizens do not hesitate to respond to anonymous contributions, just as many as those who do not respond to anonymous postings.

Both civil servants and citizens tend to attach weight to knowing the (real) name of discussion participants; 58% find this (very) important. This contrasts with a majority (57%) who find it not (at all) important that postings include a picture of discussants. When asked which types of identity information people like to have of other Web 2.0 participants, they are particularly interested in the name and profession. Age, address, and personal interests are less important (see Table 1).

We found no differences between civil servants and citizens in relation to the importance they attach to knowing others' identity information. There is some suggestion that people who frequently or often use LinkedIn tend more to find it (very) important to know other people's last name than people who do not, or only now and then, use LinkedIn (χ^2=3.6, df=1, p=.056), but

Table 1. Types of identity information and respondents' attitudes

Type	Important to Know about Others 1 = Not at All Important 5 = Very Important	Willingness to Provide when Joining a Website 1 = Very Little Willing 5 = Very Willing
First Name	3.4	3.8
Last Name	3.1	3.2
Employer	3.2	3.1
Profession	3.1	3.0
Photo	2.7	2.7
Personal Interests	2.5	2.7
Age	2.5	3.0
Email Address	2.3	2.3
Place of Residence	2.3	2.3

this does not apply to other identity information types (such as photo, profession or employer). Nor is there such a suggestion for other frequent Web 2.0 users; frequent Facebook users, for example, are no different from non- or occasional Facebook users in terms of wanting to know other people's last name.

Among the 46 civil servants, those who frequently use Web 2.0 to provide citizens with information, attach significantly more importance to knowing the last name of people participating in discussion platforms, compared to civil servants who do not, or only seldom, use Web 2.0 to inform citizens (χ^2=9.07, df=1, p=.003); no such association was found in relation to other types of identity information.[2] There is a weaker suggestion that civil servants who frequently use Web 2.0 to voice their opinion about public policy or services attach more importance to knowing the employer of other discussants on a site (χ^2=3.55, df=1, p=.06).

Among the 26 citizens, a significant difference was found between people who say they do not respond to anonymous contributions and people who do not mind responding to anonymous contributions; the former find it more important to know other discussants' last name (χ^2=6.83, df=1, p=.009) and employer (χ^2=4.47, df=1, p=.03).

No such difference was found for other identity attributes, such as profession (χ^2=1.53, df=1, p=.22), age (χ^2=.08, df=1, p=.78), or a photo (χ^2=.44, df=1, p=.5). Among all respondents, 58% find it (very) important that Web 2.0 discussants mention their (real) name, and this group attaches more importance to knowing discussants' last name (χ^2=23.7, df=1, p<.001) but also to knowing other discussants' age (χ^2=6.58, df=1, p=.01), photo (χ^2=6.17, df=1, p=.01), employer (χ^2=6.12, df=1, p=.01), and profession (χ^2=3.98, df=1, p=.05).

When asked which types of identity information people are willing to provide about themselves when they register at a discussion platform or site, they tend to be willing to provide the same types of information they find important to know of others (see Table 1). For example, people who are (very) willing to provide their last name tend to find it more important to have a photo of other discussants, as opposed to people who are less willing to provide their last name (χ^2=8.2, df=1, p<=.01). Frequent users of LinkedIn are more willing to give their last name when registering on discussion platforms than non-users or sporadic users of LinkedIn (χ^2=4.2, df=1, p=.04); this does not apply to frequent users of Facebook (χ^2=0.5, df=1, p=.5). We did not find a correlation,

however, between frequent LinkedIn users and willingness to provide a photo of oneself (χ^2=1.7, df=1, p=.2): while 61% of frequent LinkedIn users are (very) willing to provide their last name, only 39% are willing to provide a photo on a discussion platform or site.

People who say they think it (very) important that other discussants know who they are (63%) are also more willing to provide identity information of themselves, in particular their last name (χ^2=13.9, df=1, p<=.001) and employer (χ^2=7.86, df=1, p<=.01), and also a photo (χ^2=5.0, df=1, p=.03) and their profession (χ^2=4.40, df=1, p=.04); no such association was found for email address, age or residence.

One issue we were particularly interested in for government 2.0 applications, is the role(s) that civil servants have when discussing on Web 2.0 platforms. Do they speak in their professional role as government representatives or do or can they voice their personal opinion? And should they signpost in which capacity they speak? Our results suggest that government 2.0 participants appreciate civil servants participating in Web 2.0 discussions, and they also tend to find that civil servants can voice their personal opinion when participating in government-citizen discussions (47% (totally) agree, 21% neutral, 32% (totally) disagree). However, they overwhelmingly want the role in which government people speak signposted: someone from the government should always be clear whether s/he speaks on behalf of the government or voices a personal opinion (see Table 2).

We did not find significant differences between civil servants and citizens on the first three statements. On the fourth statement, civil servants seem to attach even more weight to clarifying the role in which they speak than citizens do; civil servants are more inclined to totally agree than to merely agree with the fourth statement, while citizens tend to agree rather than totally agree (N=66, χ^2=7.3, df=1, p=.01).

2.2 Quick Scan of Dutch Government 2.0 Initiatives

Of all 616 initiatives available on the eParticipation Dashboard[3] in March 2011, we looked at 197 initiatives. Of these 197 initiatives, 53% were established by the government and 45%

Table 2. Opinions about role information

Opinion (N=72) Statement	Totally Disagree	Disagree	Neutral	Agree	Totally Agree	Mean (Scale 1-5)
If citizens discuss with each other on a website, the government is allowed to participate in the discussion.	0%	1.4%	11.1%	72.2%	15.3%	4.0 (sd=.6)
A civil servant can participate in discussions among government and citizens, also if he voices his personal opinion.	9.7%	22.2%	20.8%	40.3%	6.9%	3.1 (sd=1.1)
A civil servant always speaks on behalf of his/her municipality or ministry.	8.3%	40.3%	19.4%	20.8%	11.1%	2.9 (sd=1.2)
Someone from the government should always make clear whether he or she speaks on behalf of the government or voices a personal opinion.	0%	5.6%	2.8%	37.5%	54.2%	4.4 (sd=.8)

were established by citizens, as classified by the eParticipation Dashboard Website. Of these 197, only 54 (27%) were suitable for further examination, i.e., had some kind of discussion forum on their Website on which citizens and government representatives engaged in discussions.

2.2.1 General

Of the 54 initiatives included in the quick scan,[4] 37% were political in character, followed by 28% local/cultural and 28% related to transportation; 22% were related to environment, 22% to public order, 20% to education, 15% to health, 9% to a specific age group, 7% to law, 6% to agriculture, and 2% was related to defence.

Over 85% of the Websites provide the opportunity for a personal profile and more than a third (37%) are linked to an existing social network site, particularly Hyves and Facebook. If the Website included the possibility to make a personal profile, users typically had to fill in their first (80%) and last name (74%). Other information, such as a profile picture (37%), age (51%) and gender (51%) was asked for less frequently. Additionally, people were usually not required to fill in their street name (10%) or city (32%).

The platforms we surveyed ranged in size, but the majority had more than a 100 profiles: 33% had more than 1000 profiles, 26% had between 100 and 1000 profiles, 28% had between 10 and 100 profiles, and 11% had less than 10 profile pages. Of the initiatives, 74% were active when we performed the quick scan; about a third had been active 1 and 2 days prior to the quick scan, and a third had been active more than 2 weeks before. Around 30% had only had 1 or 2 contributions in the past month, 26% had between 3 and 5 contributions, 13% had 6-10 contributions, while 19% had over 10 contributions in the past month.

A chi-square test did not reveal a significant difference between the government or citizens as the platform initiator in terms of how many pro-

files, discussions or reactions within discussions the platform had.

For some initiatives, it was clear that both citizens and representatives of the government had made a personal profile and/or engaged in the discussions, whereas for most others this was unclear. Since this information could only be extracted with certainty from very few Websites, we cannot make any statements about the number of citizens and the number of government representatives with profiles and discussion contributions.

2.2.2 Amount of Identity Information in Profiles and Interaction Level

In order to explore whether having to provide much identity information inhibits people to participate, we looked at the information people are asked to provide when making a personal profile and the number of personal profiles on a Website. Of the 45 Websites for which information was available about the type of personal information people are asked to provide when creating a profile, 27% requested only people's name, which we classified as little personal information; the remaining 73% requested more than the name, which we classified as more personal information. Of the 45 Websites, 89% included information about the number of profiles; 63% had less than 500 users with a personal profile as compared to 37% with more than 500 profiles. A chi-square test did not reveal a significant difference between initiatives with less than 500 profiles and those with more than 500 profiles with regard to how much personal information is required for a profile.

We also found no significant relation between whether or not people were asked to provide a photo and the number of profiles ($\chi^2=.11$, $df=1$, $p=.74$) or reactions ($\chi^2=0$, $df=1$, $p=1$) on the discussion platforms. In addition, there was no significant relation between whether or not the majority of users had provided their (last) name and the number of reactions ($\chi^2=0$, $df=1$, $p=.99$), nor between whether or not the majority of users

had provided a photo and the number of discussions ($\chi^2=0$, $df=1$, $p=1$) or reactions ($\chi^2=.46$, $df=1$, $p=.5$).

Next, we analysed whether having to provide little or more identity information inhibited people to participate in discussions. A chi-square test did not reveal a significant difference between initiatives having few (i.e., up to 10) discussions on their discussion platform and those with more than 10 discussions, in relation to how much personal information users had to provide ($\chi^2=.96$, $df=1$, $p=.33$). Neither did we find a significant difference in relation to the identity information people had to provide, between platforms that had on average less than 5 postings within each discussion and those with on average more than 5 postings within discussions ($\chi^2=.00$, $df=1$, $p=1$). The amount of identity information people are asked to provide was also not related to the average number of people participating within a discussion, classified as 1 or 2 discussants versus 3 or more discussants.

2.3 Detailed Study of Discussion Lines

Twenty initiatives were explored in more detail. These initiatives used Hyves discussion platforms, which offer a convenient way to analyse the identity information of someone initiating a discussion and the number of responses to such an initial posting. The identity information consists of a name (categorised as: first name, first and last name, and/or nickname), a photograph (categorised as: non-real (e.g., a cartoon or a picture of an object), real (a picture of a recognisable person, but with the face not clearly visible), or face (a clear picture of someone's face)), and the name-on-mouseover, which indicates the name in the Hyves profile that appears when you move the mouse over the discussant's name or photo.

From the Websites, we inventoried 543 discussion lines in total. Of these, 502 were initiated by an individual; we excluded from further analysis the 41 that were initiated by someone posting on behalf of a company, action group, or other organization.

82% discussion initiators indicated their first name, 5% their first and last name, and 24% used a nickname.[5] 34% had indicated a last name in their Hyves profile, and hence in the name-on-mouseover, while 12% used a nickname there. In combination, 31% had indicated their first and/or last name on the discussion platform and their last name in the mouseover; 10% had indicated a nickname on the discussion platform as well as in the mouseover; and 3% did not use a real name on the platform but had used their last name in the mouseover.

Of all discussion initiators, 10% did not provide a picture, 26% used a non-real picture, 26% used a real picture but without a clearly recognisable face, while 38% used a clear face picture. Of the individuals using a nickname on the platform, 38% had a personal picture (17% face, 83% non-face). Of the people using their first and last name on the platform, 65% had a personal picture (88% face, 12% non-face).

The mean number of reactions to a posting was 3.8 (sd=14.3). The number of reactions is highly skewed due to the fact that half of the postings received no reaction, while very few had very many reactions. Therefore, this variable was re-coded into a categorical variable with 50% discussions having no reaction, 16% having 1 reaction, 14% having 2-3 reactions, 13% having 4-10 reactions and 8% having more than 10 reactions.

No significant relation was found between the number of reactions in a discussion and whether or not the individual who initiated the discussion had indicated his first name ($\chi^2=6.7$, $df=4$, $p=.15$) or a nickname ($\chi^2=1.21$, $df=4$, $p=.88$). In addition, no significant relation was found between the number of reactions to a posting and whether or not the last name was indicated in the mouseover ($\chi^2=5.93$, $df=4$, $p=.2$). Likewise, no significant relation was found between the number of reactions to a posting and whether or not the discussion initiator

had provided a personal picture (χ^2=4.32, *df*=4, *p*=.37) or a face picture (χ^2=7.37, *df*=4, *p*=.12).

In order to explore the overall relation between the degree of personal information people provided and the number of reactions, we classified discussion initiators into three categories depending on whether they used a first name, last name, last name in mouseover, and a clear face picture. 19% were categorized as high degree of personal information, i.e., with three or all four of these attributes; 33% had a medium degree of personal information, i.e., with two of the four attributes; 34% had a low degree of personal information, i.e., only one attribute, and 14% had no personal information at all. A chi-square test did not reach significance, although it might suggest some tendency that the degree of personal information is linked to the number of reactions, with people providing much personal information receiving more reactions (χ^2=19.7, *df*=12, *p*=.07).

Next, we compared individuals who provided 'false' information (i.e. a nickname, a nickname in the mouseover and/or a non-personal picture) (N=56) with individuals who provided 'real' personal information (i.e. real-looking first and/or last name, last name in the mouseover and/or a personal picture) (N=274).[6] There was no significant relation between the number of reactions in a discussion and whether or not the discussion initiator had used 'false' or 'real' information (χ^2=1.72, *df*=4, *p*=.79).[7]

As an aside, our results showed that people on the Christian-right political platform (Christian Union) provided significantly more personal information than people on left/progressive platforms (Socialist Party, Party for the Animals, GreenLeft, Democrats '66). And political platforms showed more discussion, with significantly higher numbers of reactions, than environmental discussion platforms. However, since there was no signification relation between identity information and the number of reactions in terms of political orientation or of politics/environment topic of the platform, we do not detail these findings further.

2.4 Study of User Profiles on a Local Platform

To tease out more the interaction between members of a single government 2.0 initiative, we analysed the profiles on a local discussion platform called 'Drachtenwiljemeemaken' or DWJM for short.[8] (This platform was also chosen for a qualitative analysis; see section 2.5.2 *infra* for more details.) DWJM is one of the rare examples we encountered of a government-initiated Web 2.0 environment that has a high level of interaction. In October 2011 the site had almost 2000 members, which is significant for a small town such as Drachten (45,000 inhabitants)[9]. These members had made over 17,000 connections, so each profile page had an average of 9 connections. Moreover, 65,833 so-called 'reactions' had been added to profile pages (comparable to Facebook's wall postings), an average of 34 responses per page. Also, 845 polls had been conducted.

When members create a profile on this platform they are asked to fill out several fields: first and last name and/or company, age, gender, city, relationship status (married, single etc.), professional and educational background, interests and hobbies, personal motto, favourite films, series and music, and 'How do you contribute to Drachten?' None of these fields are mandatory. Users can restrict access to their profile to platform members only, but the majority of profiles is accessible to anyone visiting the platform. When users post information on the platform outside their own profile (e.g., a comment in a discussion, a poll, posting an event), a link to their profile page is used. This way, readers can always find out who is 'behind' the posting.

We randomly chose 100 profiles and stored the following details:

1. **Name:** Did the user supply a full name, nickname, first name, company name, or a combination of one of these?

2. **Picture:** Did the user provide a recognisable profile picture?
3. **Rich or Limited Identity Information:** Did the user provide many details regarding his identity or not? Whether or not information was deemed 'limited' or 'rich' was based on the number of fields filled on the profile page, the amount of words used to fill those fields, and whether or not other personal information was available (pictures, video, Weblogs etc.).
4. **Number of Connections:** How many connections did a user have?
5. **Number of Responses:** How many people have responded to the user's page?

In our sample of 100 profiles, 62% had a full name, while 7% used a full name and a company name. Of these 69 profiles, 20% did not provide a (recognisable) picture; 80% used a profile picture in which they were recognisably depicted. Roughly half of the profiles that use a full name had detailed information on the user's identity; the other half provided only some or very few details.

8% of the profiles used only a first name, or a first name combined with (presumably) the first letter of the last name. A further 4% of users provided a first name together with a company name. Of these users, 75% provided a profile picture, suggesting that choosing only a first name was probably not intended as a means of remaining anonymous. Indeed, over half of these users provide rich identity information on their profile page.

13% of the users offered a nickname instead of their full or first name, and 1% combined a nickname with a company name. Almost half of these users provided a recognisable profile picture. Again, remaining anonymous cannot have been an important motivation here.

Finally, 5% of the pages in our sample was owned by a company, without an individual's name or photo. We discarded these from the data set, and then analysed the remaining 95 profiles for their identity information and interaction levels.

Following our hypothesis that more identity information on a profile triggers more responses from others, we expected that DWJM users with more identity information have more connections and more responses on their profile page. This hypothesis was confirmed. When we grouped together our 95 users into three groups, there were:

- 28 users with a relatively low level of identity information (i.e., no identity information at all, or a first name or nickname with a photo but an information-poor profile, or a last name but no photo and an information-poor profile);
- 28 users with a medium level of identity information (i.e., a last name and a photo but an information-poor profile, or a first or last name and an information-rich profile but no photo);
- 39 users with a high level of identity information (i.e., a last name, a photo, and an information-rich profile).

We grouped the number of connections into three groups: few (0-5), intermediate (6-15) and many (16-384). We also grouped the number of reactions into three more or less equally sized groups: no reaction, some reactions (1-10) and many reactions (more than 11).

A chi-square test revealed a relation between users' level of identity information and the number of connections they have, with people providing much identity information having many connections ($\chi^2=25.4$, $df=4$, $p<=.001$). In addition, people with a low level of identity information have significantly fewer reactions than people providing intermediate or high levels of identity information ($\chi^2=20.7$, $df=4$, $p<=.001$). These results are presented in Table 3.

Table 3. Correlation between level of identity information in profile and interaction level on DWJM

ID Info Interaction	Low	Middle	High	Total
Low 0-5 Connections 0 Reactions	21 17	9 5	6 5	36 27
Middle 6-15 Connections 1-10 Reactions	4 6	8 14	14 19	26 39
High 16-384 Connections 11-1363 Reactions	3 5	11 9	19 15	33 29
Total	28	28	39	95

2.5 Qualitative Study of Two Initiatives

Since the quantitative study only measured the number of discussions, reactions and connections as an indicator of the interaction level of government 2.0 Websites, but not the content or quality of the reactions, we also conducted a qualitative study. We selected two Websites from the e-Participation Dashboard, one in the legislative and one in the executive branches of government, that had a substantial amount of interaction, clear visibility of government representatives participating, and sufficient variation in identity information.

2.5.1 Case 1: Praat met de Raad! (Wageningen)

For the legislative branch, we studied the initiative 'Praat met de Raad!' ('Talk with the council!') of Wageningen municipality, a small-to-medium-sized town in the Netherlands best known for its life sciences university. 'Talk with the council!' is part of the municipality Website, where nine of the 25 council members keep a blog.[10] Some council members have only a few postings, while others keep a more active blog. The public can respond to blog postings, and the council members and others can respond to the reactions in turn. We analysed

the blog postings of all members in the past two years (June 2009 through June 2011) that had at least four reactions (to ensure sufficient variety in discussants' identity information), which yielded around 35 interactions in total.[11]

The blog functions partly as a discussion platform with citizens, but partly also as a platform for political discussions among council members and political parties themselves; regularly, council members respond to and engage in discussions regarding each others' blogs. Citizens also engage in discussions among themselves besides having discussions with, and sometimes requesting information from, council members. Judging from the discussions we read, the blog can be considered a success: there is lively interaction between council members and the public, with many discussions on the content of municipal policy issues. Discussants also refer to how parties in the council voted on certain issues, and citizens sometimes refer to upcoming elections – a sign that the discussions on the blog are taken seriously politically by both council members and the public.

Most citizens tend to use their first name, some also use their last name; only a few use a nickname. Often, we encountered the same people in the discussions, which creates the impression of a relatively small community where people tend to know one another, in virtual space if not also in

real life. This implies that even citizens who use nicknames, initials, or only first names (such as DulacV, TeVe, and Bastiaan), tend to be familiar to the discussants, even if their real-life identity is not necessarily known.

We found that council members generally tend to respond to citizens regardless of the amount of identity information citizens provide. For example, council member No. 5 responds to both Bolleke (a nickname meaning something like 'small head') and 'un Woageninger' ('a citizen of Wageningen', spelled in dialect) with 'Dear Bolleke' and 'Dear Woageninger'. Also council member No. 6 responds to Bolleke and Guus in a discussion on half-pay for politicians; initially, she does not respond to citizen Guido van V[…] who uses his last name, but later on, she does respond to another comment of his. Council member No. 4 responds both to Henk and to mark van der V[…]. To a positive reaction by 'Wageningse zorgenmaker' ('worrier from Wageningen'), he politely responds with 'Thank you for your trust'. Overall, we could not see differences in the way that council members responded, in terms of elementary criteria for good discussions, whether they responded to citizens using a first name, a first and last name, or a nickname.

An exception is perhaps council member No. 3, who responds mainly to other council members, but often not to citizens' reactions. When he does, it often is to someone using a first and last name, while postings by citizens using only a first name or a nickname, such as Vrije Burger ('Free Citizen'), do not always get a response. An illustrative example is at the end of a long discussion about opening shops on Sundays, where council member No. 3 does not respond to short, well-formulated arguments by Henk and Jacco, while he does respond to a longer but sloppily typed and awkwardly formulated posting by mark van der v[…]. Nevertheless, earlier in this discussion thread the council member did respond to Frans and TeVe, so the pattern is not

consistent, and council member No. 3 does not really alter our overall impression.

It was interesting to notice that sometimes the blog discussion focused on anonymous or pseudonymous discussants. When council member No. 8 blogged on diminishing rules for cutting trees, a lively discussion ensued among three discussants, Bastiaan M[…] (VVD) (providing his right-wing political affiliation in brackets), Joris T[…], and 'De Politiek-Geleuter-Vigilant' or PGV ('The Vigilant of Political Piffle'). The latter responded to the former two: 'First of all: I am NOT going to make myself known. Would you have appreciated my opinions differently if I had been called Jacco, Bastiaan, Marc, Jan, Robin, or Joris? Even more so: I think you will listen better to the content of my argument, if you don't know from which angle it comes…' Following a suggestion by 'rpgv' (presumably short for a 'vigilant of right-wing political piffle', or anti-PGV) that 'I think pgv is martin from the cinema', 'De Politiek-Geleuter-Vigilant' called himself 'just an ordinary, hard-working, middle-class citizen paying too much realty tax' while denying he was Martin from the cinema. Subsequently, another politician (associated with but not an official member of the council) invited PGV to come to the council meeting in person to really influence public policy, ending with the challenge: 'A disadvantage for you is that you then lose your anonymity…' Perhaps significantly, council member No. 8 did not enter into this discussion about anonymity between citizens at all.

Another aspect we looked at was whether and how discussants refer to their roles. Obviously, the council members publish blog posts in their function as council members, but in subsequent discussions, and in their reactions on other members' blogs, it need not always be clear whether they provide a private opinion, a personal political opinion, or a party opinion. We did not see explicit or even implicit references to the roles of government participants, nor instances where private and political opinions are explicitly sepa-

rated. Only one council member, No. 5, states at one point that 'Personally, I support the second variant', but the use of 'personally' seems to be used here more for rhetorical emphasis than as a flag for distinguishing personal from professional or political opinions. Similarly, citizens provide few references to their roles, although they sometimes provide information about their profession or background when it is relevant for the discussion. One citizen, Sander-Jan, positions himself in a discussion with the statement 'I am an academic, not a politician', which also has more of a rhetorical than a role-identifying function.

From this government 2.0 initiative, it can be concluded that, although identity information is being discussed by participants in relation to pseudonymous postings, with a substantial part of discussants expecting people to provide their real names (at least a first name), identity information does not have a significant effect on the level or quality of discussions. Council members and other citizens generally respond to postings in similar ways regardless whether a citizen provides a first name, a first and last name, or a nickname. Role information is absent in the discussions; council members do not use any signposts as to whether they voice private, political, or party positions.

2.5.2 Case 2: Drachtenwiljemeemaken

For the executive branch, we analysed a local discussion platform called 'Drachtenwiljemeemaken',[12] a Web 2.0 platform that was initiated by the local government of Smallingerland, a municipality in the Netherlands of which Drachten, with 45,000 inhabitants, is the major town. The platform name is well chosen: in translation it can mean either 'You want to co-create Drachten', 'You want to be a part of Drachten', 'You want to experience Drachten', or even 'Drachten wants to be a part of you'. Drachtenwiljemeemaken (or DWJM for short) was launched in March 2009 as part of a citywide campaign to involve citizens in local politics and governance and to strengthen

social cohesion. The leading slogan was 'Wat doe jij eigenlijk voor Drachten?' ('How are you actually contributing to Drachten?').

DWJM has a number of features that facilitate interaction between citizens, similar to those of social network sites such as Hyves and Facebook. Individuals can create a profile page, on which they can present themselves to others (using text, images, video, Weblogs etc.), and through which they can connect with others ('friending'). At the same time, local government uses this platform as a means to inform the public of many topics relating to the city, and to respond to citizens' questions or comments. Finally, the platform incorporates polling features: platform members can create polls on topics they find interesting and important, and others can respond. Only part of these polls are related to municipal issues, but obviously this functionality may be an important source of information to local government as an easy and direct way to discover what 'moves' Drachten citizens.

A quantitative analysis of the interaction on user profiles on DWJM has been discussed above in section 2.4. For our qualitative analysis of the relationship between identity information and interaction level on DWJM, the following procedure was followed:

1. We began by loosely surfing the network to get an overview of its functionality, activities and key players. Data were stored in a document of notes, including snapshots of user profiles, and highlights from conversations. We searched the platform using specific keywords, such as 'identity', 'anonymity' and 'local government'. Findings again were stored in notes.

2. We began a draft of hypotheses on the basis of these first surfing sessions, and formulated tentative overall findings, which were to be validated in the next step of the research.

3. In the second round of research, which was informed by the hypotheses we had formu-

lated, we looked more closely at the content of a selection of the data stored in the first round, focusing especially on government-citizen interactions on profile pages and in polls.

Before presenting the findings, it is important to make two remarks. First, among DWJM members, a relatively small set are very active, responding to (each) other's blog posts, contributing to discussions, initiating and filling out polls, posting events, and adding comments to other's profile pages. In many cases it is obvious that members also know these individuals in real life. Many are citizens in 'visible' positions and apparently well-known in the community, e.g., the presenter of a local radio show, a political activist, and a welfare worker.

Second, related to the first point, a complicating issue is the fact that platform members share an important offline characteristic, viz. their geographical location. This may imply that providing less identifying information (e.g., no profile picture, only a first name) does not necessarily mean that the person is not known. As we conducted the analysis, we noticed that for some individuals DWJM replicates their offline visibility and connectedness, rather than generating a new space for connection.

DWJM as an Information Channel for Local Government

DWJM is more than a social network site for citizens alone. It was initiated and developed by local government, and as such is also used as a channel for government/city information by local government. The 'news' section of the platform is used for this purpose. Here, one can find information on renovation plans for the city centre, traffic issues, the local government's budget plans, and cultural issues. Each news item has a possibility to leave feedback or ask questions, and several items indeed invoked some, or sometimes quite

a few, citizen responses. Interestingly, sometimes citizens also respond to each other's comments, and the government's officials sometimes also join the discussion. This results in a real discussion of the government's plans and ideas. But DWJM is more than merely a news channel *from* government *to* citizens. The polling functionality, which enables any platform member to poll all other members on any topic, provides local government with another source about what citizens find important and interesting. Many polls are unrelated to city/governance/political matters (e.g., 'Who will win X factor?', 'Should pictures of the dead Osama bin Laden be released to the public?', 'Is Job Cohen [the former social-democrat leader] the right man to lead his party?'), but a significant number also relate to local policy, e.g., annoyance over dog poo in the streets, whether organising festivals improves city life, a smoking ban at bus stops, or whether Drachten is a city or a village. Interestingly, the three polls with most responses all deal with topics regarding municipal life: 'which supermarket in Drachten is the best?', 'what is Drachten's nicest area?' and 'who will you vote for in the local elections?'

DWJM as a Means of Communication between Citizens and Local Government

Local government uses a functional profile page to interact with citizens, under the name 'Gemeente Smallingerland', which is used by the municipality's communication department. Sometimes, when citizens raise a question or express an opinion on government issues, the government enters the discussion to provide an answer. For example, in a blog post someone called Anton P[…] asks a question about a decision made by the city council regarding a fund for the local shop-holder organisation. The communications department responds by providing the council-meeting minutes with the argumentation for the decision. Anton P[…] says he is grateful for the information.

From the postings we studied, citizens do not seem to care that the government uses a functional profile, instead of civil servants' profiles with real names, when responding to their questions or suggestions. Since the functional profile page has the municipality's logo as its profile picture, it is always clear to users that a representative of the government is speaking in their professional role. We found no negative responses in this respect to the use of a 'pseudonymous' government profile.

The fact that government officials separate their roles in this way – using the functional municipality profile when speaking on behalf of the government and personal profiles when speaking in a personal capacity – may not be sufficient, however. As we were scanning the discussions on this platform, we came across a blog post by a man named 'Paul' who works for the communications department of the municipality, and who, in this role, had responded to many citizen suggestions, comments and questions using the municipality's function profile. He had, however, also used a personal profile to participate in DWJM to communicate his personal interests and opinions. In this blog post, Paul writes that he will end his personal account on DWJM:

recently, I increasingly note that I cannot say something on DWJM as a person. There are individuals who always interpret my opinions as those of the communications department of the municipality, the organisation that initiated this site. And this happens especially whenever I criticise the dominant point of view in discussions. This makes me vulnerable. Too vulnerable I'm afraid. This saddens me deeply: after all, DWJM was kind of my baby. But children grow up and find their own way. This is the natural course of things. [authors' translation]

This blog post reveals that for the public, it is apparently difficult to separate the two roles of a civil servant on this platform, despite the fact that this user has a separate personal profile page and a professional profile page (i.e., the 'Gemeente Smallingerland' profile). It seems that citizens tend to ascribe an official status also to statements by civil servants who participate in a government 2.0 platform with a personal account.

We need to add, however, that two weeks after this blog post, this same user created a new profile on the platform, under the name of Paul L[…], blogging why he was back:

It's simple: I don't want to be silenced. It just happens that I have an opinion about all kinds of things and can hardly keep that to myself. So I will again participate in discussions with some frequency. Just to be clear: my contributions to this Website are personal. They are the opinions, ideas, misconceptions, big talk and silly jokes of the person Paul L[…]. The official Paul L[…] will respond on this Website from the account 'communication' [i.e., the municipality's account].

Although the confusion of roles may therefore not have been as dramatic as Paul's leaving the platform initially suggested, it still provides an interesting illustration of the difficulty of separating roles for public officials.

3 DISCUSSION

Before we discuss our findings about identity information and interaction, we can make a general observation about government 2.0. In our research, we looked at almost a third of over 600 initiatives listed on the eParticipation Dashboard, a Website that says it provides 'a current overview of all eParticipation initiatives in the Netherlands. eParticipation denotes the use of ICT to involve citizens more in the improvement of public service, public administration, and social cohesion.'[13] Many of these initiatives, however, are not (inter)active. Almost three quarters of our sample of 197 initiatives was one-way traffic (e.g., a municipality's or ministry's YouTube channel, or a Website

requesting citizens to send in ideas but without displaying the contributions), was a still-born initiative with no activity, or had been used only for a brief, often pilot, period but was no longer active. Government 2.0 is not necessarily booming, at least in the sense of Web 2.0 applications that effectively enhance the interaction – which implies bidirectional exchanges – among government and citizens. This underlines the necessity of researching what makes government 2.0 initiatives a success or a failure. Is identity information or role confusion perhaps an inhibiting factor for government 2.0 to have successful interaction?

3.1 Identity Information

We started our research with a twofold hypothesis on the relationship between identity information and interaction on government 2.0 applications. One the one hand, having more identity knowledge of counter-parties will enhance people's participation in government 2.0, but on the other, having to provide identity knowledge to counter-parties risks diminishing people's participation in a context where risks to privacy arise.

The indicative results of our survey are in line with this hypothesis, in the sense that a majority of Web 2.0 users say they think it important to know the (real) name of discussion participants. People who say they find it important to know who other Web 2.0 participants are, are also more willing to provide personal information about themselves. This also applies the other way around: people who do not attach importance to knowing the identity of others, are also more hesitant to provide information about themselves. This could suggest that rather than an identity paradox (providing identity information on Web 2.0 is a two-edged sword), there are two types of Web 2.0 users: there is a group who find identity information important (both to know and to provide), and a group who find identity information unimportant (to know and to provide).

When we look at our empirical results, it is hard to find evidence of the link between identity information and the level of interaction on government 2.0 initiatives that we hypothesised. We conducted five interrelated studies to answer the research question, three quantitative and two qualitative. In four of these five studies, we found no correlation between the amount of identity information of users and the level of interaction. Platforms asking users to fill in much identity information do not have more or less profiles than platforms asking users only to provide their name; nor is there a difference in the number of discussions taking place on these platforms. This suggests that having to provide much identity information about oneself is not an inhibiting factor to participating in government 2.0.

A posting does not receive more or less reactions depending on whether the person initiating the discussion uses a last name or only a first name or a nickname, nor whether she uses a clear face picture or a fake picture. We found only a weak correlation (significant at a level of $p < .1$) between the degree of personal information and the number of reactions, with people providing much personal information receiving somewhat more reactions. In terms of the quality of interaction (i.e., does a contribution to the discussion make sense in itself, does it address the topic of discussion, and does it argue on the basis of content arguments instead of ad hominem arguments?) we could not find a difference in the Wageningen or Drachten discussions in terms of whether citizens provide much or little identity information. Representatives from the government seem to respond in a similar manner to citizens using pseudonyms or first names as they do to citizens using their full name.

In contrast to these results, however, the profile pages on Drachtenwiljemeemaken do show a very strong correlation between the level of identity information users provide in their profile and the number of connections they have as well as the number of reactions they get on their profile page.

How should we explain the difference in these partial findings? If we look closely at what we measured in each study, we conclude that the DWJM case concerned *profile pages* whereas the other studies looked at discussions taking place at *discussion platforms*. These are different functions of government 2.0 applications. The DWJM profile pages function like a social-networking site such as Facebook, allowing people to make online friends and to chat on each others' pages, thus strengthening the cohesion among the online community. This differs from discussions taking place on a platform 'in public', which is the case with the Hyves discussion groups and the Wageningen blog. Indeed, on the parts of DWJM where the citizens and municipality interact, we did not find substantial differences in the way that people responded to contributions.

Therefore, we conclude that overall our empirical research showed no correlation between identity information and interaction level in government 2.0 discussions. How should we interpret this finding, in light of our hypothesis and our survey's suggestion that a majority of people find it important to know other participants' identities? One explanation could be that we studied small communities, in which people often also interact offline. The people most active on the Wageningen and Drachten sites are rather likely to know each other offline, and hence, only a small amount of identity information – even only a first name – could be sufficient to identify people and establish sufficient trust to interact online. However, in our quickscan of 54 initiatives and in our study of discussions on 20 initiatives, many platforms were not local communities but topic-based communities at a national level. On such platforms, it is unlikely that little identity information is sufficient for other users to establish someone's offline identity, and hence users can only go by the identity information provided online to know 'who someone is'. Given that 48% of discussion initiators, in our study of 502 discussion lines, used little or no identity information, and yet

received overall not significantly fewer reactions than people providing average or much identity information (at least not at a significance level of $p<.05$), we do not think that small communities having offline interactions as well as online ones can entirely explain the fact that we found no overall correlation between identity and interaction.

Taking into account the variety of sources we studied and the fact that both our quantitative and our qualitative analysis revealed no significant correlation between identity information and interaction levels on discussion forums (hence leaving aside the social networking taking place on profile pages) in government 2.0 initiatives, the conclusion is warranted that we have to reject our hypothesis. *Knowing more identity information about other participants does not lead to more interaction in government 2.0, nor is the provision of identity information of oneself an inhibiting factor to participate in government 2.0*. Apparently, people care less for identity information in government 2.0 than the literature suggests, at least in terms of willingness to participate in online interactions.

3.2 Role Information

The second part of our research interest was role information in government 2.0. How important is it for civil servants to make explicit in which role – as an official or as a private person – they make specific contributions in government 2.0 discussions? Does confusion about roles impact negatively on the interaction in government 2.0? While our survey was small-scale and not representative, the outcome is very strong, with 54% totally agreeing and 38% agreeing that civil servants' role should be explicitated. Hence, we feel safe to conclude that both citizens and civil servants participating in government 2.0 discussions consider it important that civil servants clarify whether they speak in a personal or in an official capacity.

It was difficult to test empirically the influence of (a lack of) role explicitation on the interaction level in government 2.0 initiatives. On most sites we studied, it was hard to recognise government representatives among the participants in discussions; either they hardly participated in discussions, or they did not participate visibly in an official capacity. On some Websites, such as the Wageningen blog, it was very clear who were the officials, as the council members blogged in their capacity as a council member. Sometimes, their contributions seemed to have a more personal rather than an official touch, although most often the discussions were professional in nature. They never used signposts as to whether they voiced private, political, or party positions, and we found no indication that this confused citizens or inhibited the level of interaction. The Drachten case was an interesting illustration of a clear role specification, as civil servants speaking in an official capacity used a functional profile of the municipality, while they used personal profiles when speaking in a private capacity. Perhaps surprisingly, there was still confusion, since a civil servant felt he was unjustly being seen by citizens as voicing official statements when he used his personal profile, leading him to – temporarily – withdraw his personal profile from the community. This could suggest that more role explicitation is needed than simply using two different profiles, perhaps by interspersing personal opinions, particularly when they concern controversial subjects, with clear signposts ("this is my personal opinion") in each contribution. However, we encountered hardly any such signposts anywhere in our research, while we also did not find any other suggestion that lack of role specification led to confusion or inhibited the interaction between government and citizens.

We therefore conclude that role specification, although it is perceived as a very important element of government 2.0, does not seem to be a real issue (yet) in practice. Perhaps this is because it is by and large clear to participants from the context whether or not someone is speaking in an official capacity.

4 IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

Our study was one of the first to research empirically the role of identity information in government 2.0 initiatives. Follow-up research could refine our quantitative study by looking at more dimensions than just the number of discussions or reactions to a posting. It would also be interesting to compare our findings with studies of government 2.0 in other countries. What could also be expanded in further research is which types of identity information are most important to ask from users; our survey suggests that first name, last name, employer, profession and perhaps a photo are the most relevant types. It would be interesting to research whether differences exist in desirable types of identity information for different user groups, in different countries, or in different types of government 2.0 platforms. Finally, the importance of role specification by government representatives participating in government 2.0 discussions is an urgent topic. While government 2.0 users seem to find it highly important that roles are explicitated, we did not see many examples of role demarcations in practice, nor of a possible confusion or a worse interaction because of the lack of role demarcation in contributions. This begs for further research to be conducted on how important role specification actually is in government 2.0, and what this implies for the way that government representatives could contribute to what many see as an important contribution of Web 2.0 to governance: increasing the interaction of government and citizens by using the new tools that social media are bringing us.

5 CONCLUSION

In this paper, we studied the relationship between identity information and interaction in government 2.0, hypothesising that people will want to have sufficient identity information of other users in order to participate, while they will be hesitant to provide much identity information of themselves in contexts – including government 2.0 platforms – where risks to privacy arise. This aligns with Marx's conception of circles of identity information, ranging from individual to truly identifying information. Based on our quantitative and qualitative empirical studies we reject this hypothesis. Knowing more identity information about other participants does not lead to more interaction in government 2.0, nor is having to provide identity information of oneself an inhibiting factor to participate in government 2.0.

What does this finding imply for the design of government 2.0 initiatives? We suggest that developers of government 2.0 platforms should not make it mandatory for participants to provide much identity information – just a name, and allowing the option of using a pseudonym – could suffice to trigger discussions. Such systems would rely on Marx's outermost circle of individual information to provide a minimum basis for numerical identity in the user group. At the same time, since many users are willing to provide information about themselves – understandable in light of individuals' striving for narrative identity – and such information is appreciated by others, developers would do well to include an optional possibility for users to provide more identity information than just their name, such as their employer, profession, and a photo, adopting Marx's middle circles of identity information. If discussion platforms in government 2.0 are combined with a social, community-building function – which will often be the case in mul-

tifunctional initiatives such as local government platforms – incorporating information-rich user profiles – still on a voluntary basis – seems a good idea, as the success of Drachtenwiljemeemaken suggests. Having an option for users to provide a wider range of identity information (closer to the inner circles of identity information, allowing users to express their narrative identities), while also allowing users to participate anonymously or on a first-name basis only, is a good way to cater for the two distinct groups that we encountered in our survey: those who find identity information important (both to know and to provide), and those who find identity information unimportant (to know and to provide).

ACKNOWLEDGMENT

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KEY TERMS AND DEFINITIONS

Government 2.0: Government 2.0 can be seen as the use of Web 2.0 by governments to facilitate government-citizen interactions.

Identity Information: Identity information allows users to express their narrative identities while also allowing users to participate anonymously or on a first-name basis only.

Privacy: Privacy includes considerations as to the amount of personal data disclosed and processed under Data Protection Laws, including which should be kept to the minimum of what is necessary for the purpose at hand.

Social Media: Social media is where the traditional social contexts blur, as individuals always play roles in social life (e.g., husband, employee, fire brigade volunteer, clarinet player, etc.) thus presenting themselves to their audiences in different ways.

Web 2.0: Web 2.0 can be used to facilitate and improve government-citizen interactions.

ENDNOTES

1. http://eparticipatiemonitor.bendeburgers.nl/ (last accessed 2 May 2014).

2. A similar result was found for civil servants who frequently use Web 2.0 to discuss public policy or services with citizens, but since 2 cells had an expected count less than 5, no valid conclusions can be drawn about this.

3. Currently available at http://eparticipatiemonitor.bendeburgers.nl/ (last accessed 2 May 2014). At the time of research (2011), the eParticipation Dashboard was located at http://eparticipatiedashboard. burgerlink.nl/.

4. Some initiatives were related to more sectors.

5. There is some overlap between these categories, as some people combine a real-looking first name with a nickname, e.g., "Ron fruitcake."

6. 172 people provided both 'false' information and 'real' information, e.g. a nickname and a personal picture.

7. 1 cell had an expected count less than 5, so no valid conclusions can be drawn on the basis of this result.

8. http://www.drachtenwiljemeemaken.nl (llast accessed 2 May 2014).

9. http://nl.wikipedia.org/wiki/Drachten (last accessed 2 May 2014).

10. http://Weblog.wageningen.nl/ (last accessed 2 May 2014).

11. We present our findings mentioning the names of citizens as used on the blog, but abbreviated their last names for privacy reasons. The postings are in Dutch, which have been translated by us.

12. http://www.drachtenwiljemeemaken.nl (last accessed 2 May 2014).

13. http://tinyurl.com/oosyhy3 (our translation) (last accessed 2 May 2014).