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TO BE OR NOT TO BE ON THE INTERNET: A MULTIDIMENSIONAL TOOL FOR STUDYING ONLINE ANONYMITIES

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Introduction

Anonymity on the internet has become a contentious issue; it protects freedom of speech on one hand yet hampers accountability of for example crime or harassment on the other. Traditionally anonymity has been construed as a dichotomy, you are anonymous or you are not; this is too limiting a definition online. Researchers have thus called for new ways of understanding anonymity on the internet (Kennedy 2006; Nissenbaum 1999). As to our knowledge, the literature within and across fields presents no coherent view of anonymity online and this conceptual vagueness limits progress in the research field. We argue that online anonymity is a complex process that exists in various forms, regulated and defined by various actors. In this study we 1) draw on the multidisciplinary literature concerning online anonymity 2) derive at a multi-layered conceptual model for studying online anonymity that follows closely on previous research on what people actually do online, and 3) explore the complexity as different facets of anonymity interact and interlink by drawing on two empirical examples, online auction sites and massive multiplayer gaming.

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Method

We engage with work on anonymity from the authors' home fields of sociology, economics, and computer and system sciences and draw on Swedberg's (2012) theorizing methodology for creating new theory in the social sciences. We start with empirical facts and (1) observe, (2) name, (3) build, and (4) complete a model (see table 1). Our conceptual model is a taxonomy guiding future researchers' work when studying online anonymity.

Table 1: Illustration of methodological structure, inspired by Swedberg (2012)

Theorizing steps	Research tasks	Techniques
Look	Reading Finding inspiration	Literature review Abduction
Name	Discussing Reading Note taking	Striving for saturation
Build	Outlining structure Identifying patterns Organising notes	Creating visual/textual representation of model
Complete	Exemplifying Writing	Analysing empirical examples Finishing article

Results

We suggest that anonymity on the internet needs to be investigated in plural—*anonymities*. Our results point to three structures and three main facets of anonymity that together make up online anonymity. The elements are not mutually exclusive, nor dichotomous. The functional form, i.e. the relationship between the facets can differ depending on context studied.

Structures

- State legal, commercial regulations and code include rules and regulations guiding behaviour in connection to revealing personal information on the internet both on a state/intra-state level as well as corporate level (e.g. EULAs). Regulations works on a macro level shaping structures affecting anonymity among individuals by creating laws, and legal/normative frames within which various online platforms are designed and managed.

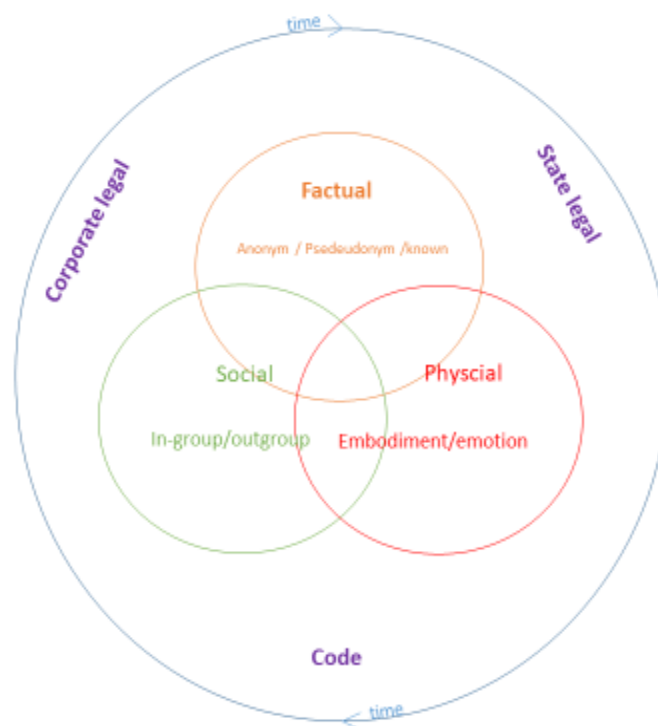
Facets

- Factual anonymity pertains to information about individual persons. This can take the form of actively or non-actively withholding or revealing identifiers e.g. name, social security number, or IP-address; or quasi-identifiers that together can indicate a single

person. Factual anonymity can take three main forms: being unknown (traditional notion of anonymity), pseudonymity (having at least a semi-stable pseudonym that can be followed across one or multiple platforms), and nonymity (being completely known).

- Social anonymity relates to how individuals interact with each other based on group membership and expectations thereof. In-group or out-group membership affect interaction. Among in-group members we see trends towards affirmative interaction and between out-group members in worst case scenario discrimination and harassment.
- Physical anonymity pertains to how digital interaction is embodied, but so in various complex ways that, sometimes, affect the information transferred between individuals and resulting emotional reactions.

Illustration 1: visual representation of the online anonymities model showing relationship and interactions between structures (exterior) and facets (centre)



Empirical examples

An individual can thus perceive themselves as more or less anonymous on the levels of factual, social, and physical anonymity; and these levels are shaped by the three structures. We will show, by the empirical examples below, that online anonymities work on different levels, and that various anonymities are at stake depending on social and platform context.

Example 1: Reputation on online auction sites

A person creates an account on an online auction site legally controlled by regulations concerning selling and buying. Many auction site designs and user terms favour nonymity between auction site and seller in order to keep individuals accountable and minimize fraud. Users agree to these terms when registering on the site. In the buy/sell interface users are known via self-chosen pseudonyms kept constant in part due to a reputation system. Buyers might treat a seller differently depending on signals of social group memberships. Sellers might have a username, have information in sales description, or have a picture that indicate the seller's social identity (e.g. selling used women's clothes described as not fitting the seller anymore or have a picture wearing the clothes); which shape buyer actions due to in-group or out-group behaviour. The physical anonymity makes trust harder in this situation so reputation systems etc. are established as e.g. handshakes are not possible. However, after completed auctions, but before payment, buyer and seller's factual identities are revealed to each other and these will contain more or less information about social groups. This can affect how users give feedback in the reputation system, which in turn has economic consequences, such as lower sales future prices.

Example 2: Social interaction in online gaming

An online player registers a credit card to play an online game and agrees upon the user terms. While no legal regulations control anonymity while playing the company is obligated by national law to keep this personal information safe and takes appropriate precautions. The player relinquishes factual anonymity to the company, indeed it is a prerequisite to play. The same player might not care to tell other players their offline name but are playing under a pseudonym known from other online games (they are factually pseudonymous to other players). The player ends up in a guild of likeminded individuals, people who talk the same language and who are of a similar age. From interactions, other players puzzle together the image of a white, male westerner, and thus treat the player accordingly. Yet the player might have experienced the game as homophobic and is hiding a queer sexuality. The player is thus partly social anonymous. The player has put significant effort into constructing an avatar that represents his embodied presence in the game. This avatar 'feels' like himself and it shapes his experiences in the game-world. In the guild players use a voice chat system and during play emotions run high, transferred via emotional cues. These emotions affect individual instance of interaction and play differently than text-based interaction.

Conclusions

The traditional way of defining anonymity as being nameless is not enough when talking about anonymity online. Anonymities can be seen as processes guided by regulations on a state legal and commercial scale as well as code level, which relies heavily on our own perception of being anonymous along factual, social, and physical lines. We argue that we should talk about *anonymities* instead of anonymity.

References

Kennedy, H. 2006. Beyond Anonymity, or Future Directions for Internet Identity Research. *New Media & Society* 8(6):859–76. doi:10.1177/1461444806069641.

Marx, G.T. 1999. What's in a Name? Some Reflections on the Sociology of Anonymity. *The Information Society* 15(2):99–112. doi:10.1080/019722499128565.

Nissenbaum, H. 1999. The Meaning of Anonymity in an Information Age. *The Information Society* 15(2):141–44. doi:10.1080/019722499128592.

Swedberg, R. 2011. Theorizing in Sociology and Social Science: Turning to the Context of Discovery. *Theory and Society* 41(1):1–40. doi:10.1007/s11186-011-9161-5.