A TYPOLOGY OF DIGITAL ASTROTURFING

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On August 18, 2015, Lyudmila Savchuk won a lawsuit against her former employer, the St. Petersburg based "Internet Research Agency". Formally, Ms. Savchuk filed the lawsuit against her former employer because of irregularities concerning the employment contract and the payment of wages. Such a dispute between an employee and their employer is a rather mundane affair, but Ms. Savchuk's case was quite remarkable for another reason. The Internet Research Agency is an organization that, according to different sources – Ms. Savchuk, who is an investigative journalist, being one of them – , specialized in a specific form of propaganda on behalf of the Russian government under president Vladimir Putin: The Internet Research Agency's employees would create a number of fake online personæ, sometimes referred to metaphorically as sock puppets, and spread messages supportive of the Russian government across different channels, such as the comment sections of news websites (Chen, 2015).

Dishonest and manipulative online activities are not limited to (former) Communist countries such as Russia and China (e.g. 50 cent party). A prominent Western example of such activities has been the United States Central Command's attempt at creating an "online persona management service", i.e., a system for creating and deploying sock puppets in online communication flows (Fielding & Cobain, 2011). It is not always governments that engage in such activities; other actors do so as well, and possibly on less of a grand scale. For example, in 2014 it came to light that a number of Austrian companies and political parties hired a marketing agency to create user comments on news websites that cast them in a positive light (Apfl & Kleiner, 2014).

The cases mentioned above are quite different from each other: Different political actors in different countries do different things with, presumably, different goals. However, all of the cases mentioned above also have something in common: They are all examples

of a type of political communication on the Internet that hides its true nature and that is intended to give the impression of being the honest opinion of individual online users when it is, in fact, not. We call this type of political online communication digital astroturfing. The term "astroturfing" is usually used to describe "fake grassroots" campaigns and organizations backed by businesses or political actors (Lyon & Maxwell, 2004). With the concept of digital astroturfing, we aim to offer an understanding of the general principle of astroturfing for the specific domain of Internet-based activities. The goal of the present paper is twofold. First, we define digital astroturfing in a generalized, universally applicable manner. Second, we propose a typology of different forms of digital astroturfing, based on the type of actor and the type of goal that is pursued by the digital astroturfing effort.

A generalized definition of digital astroturfing

In a first step we propose a generalized definition of digital astroturfing in order to describe its core principles:

Digital astroturfing is a form of manufactured, deceptive and strategic top-down activity on the Internet initiated by political actors that mimics bottom-up activity by autonomous individuals.

Our definition of digital astroturfing takes a more general approach than the few existing definitions in the literature of digital (e.g.: Zhang, Carpenter & Ko 2013) and regular astroturfing (e.g.: Mackie 2009; Boulay 2012).

A typology of digital astroturfing

Based on this generalized definition of astroturfing we propose a typology of digital astroturfing. We opt for a theoretico-deductive typology of digital astroturfing: It is not possible to inductively gather information on all instances of digital astroturfing because of its clandestine nature, but it is possible to define a set of dimensions that will plausibly exhaust the possible types of digital astroturfing. We identify three dimensions that encompass the different possible types of digital astroturfing: Initiating political actor, target and goal.

Table 1: Typology of digital astroturfing.

Target	Initiating political actor	Goal: Support for or opposition to:	
		policy	political actors
The public	Government	1	2
	Political party	3	4
	Individual politician	5	6
	Interest group	7	8
Political actors	Government	9	10
	Political party	11	12
	Individual politician	13	14
	Interest group	15	16

Each number represents one digital astroturfing scenario as a combination of three dimensions. Those three dimensions are the target of digital astroturfing, the initiating actor and the goal of the digital astroturfing effort. Reading example: The digital astroturfing type with the number 7 describes a digital astroturfing scenario in which an interest group has the goal of influencing the public opinion on some policy issue.

We believe that the sixteen different types of digital astroturfing, as reported in Table 1, provide a useful framework for analyzing individual cases of digital astroturfing as well as for guiding expectations about digital astroturfing efforts in general. Digital astroturfing can occur, as we argue in the introduction, in very different political contexts, and as a consequence, it can be challenging to analyze separate cases. With our typology, we provide, in essence, a useful heuristic – a way to think about digital astroturfing.

Digital astroturfing repertoires

The in our typology described different scenarios do not automatically imply what specific measures the political actors take in order to carry out their digital astroturfing efforts. These specific efforts consist of three elements: The specific digital astroturfing tools used, the specific venues where these tools are applied, and the specific actions that are taken with those tools in those venues.

In social movement research, the concept of protest repertoires is used to describe which tools social movements use in which contexts (Tarrow, 2011). It is useful to use an analogous concept for digital astroturfing: The concept of digital astroturfing repertoires. Digital astroturfing repertoires cannot be defined universally, because the tools and venues available for digital astroturfing are very much bound by time and space and are likely to change – just like the protest repertoires of social movements are bound by time and space and likely to change over time (Biggs, 2013).

Table 2: Tools, venues and actions of digital astroturfing repertoires.

Tools	Venues	Actions
sock puppets	social media	creating content
click farms	websites	signalling (dis-)approval
sympathizers	comment sections	
paid supporters	direct messages	

A digital astroturfing repertoire may consist of any combination of tools, venues and actions from Table 2. For example, the combination of sock puppets with comment sections (of news websites) and creating content is the digital astroturfing repertoire used by the Russian Internet Research Agency described in the introduction.

Conclusion: Is research on digital astroturfing feasible?

After all, digital astroturfing is a clandestine activity, and if it is carried out successfully, we do not know that it has taken place. This makes any kind of research inherently challenging. For example, research designs that are routinely used in the study of other forms of political communication can be impossible to implement in the study of digital astroturfing, since very basic facts such as who is doing what in the pursuit of which strategic goals is, by definition, absent in digital astroturfing. Even though it undoubtedly poses unique challenges, the empirical study of digital astroturfing is not futile.

A first step in the study of digital astroturfing is the establishment of a plausible conceptual framework of digital astroturfing. The very goal of our paper is to contribute to this first step. In order to conduct empirical research, we first need a sound understanding of how to think about our object of study. In this sense, we do not think that research on digital astroturfing should be exploratory in nature, as is sometimes suggested for research on regular astroturfing (Boulay, 2013).

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