Chapter 11
Opinion Aggregation and Conflict Resolution in E-Government Platforms:
Contrasting Social Media Information through Argumentation

Carlos Ivan Chesnevar
Universidad Nacional del Sur, Argentina

María Paula González
Universidad Nacional del Sur, Argentina

Ana Gabriela Maguitman
Universidad Nacional del Sur, Argentina

Elsa Estevez
United Nations University, Japan

ABSTRACT

This chapter presents an account of recent advances in the development of a novel e-participation frame-work which integrates social networks, intelligent information retrieval and argumentation techniques. We discuss a novel conceptualization for Electronic Empowerment Participation (E2P), a radically new perspective on e-Participation, where collective thinking patterns can be identified under the generic form of "arguments", being contrasted automatically and enhancing thus the abilities of the different stakeholders to engage in creative participatory processes. The underlying machinery that makes E2P possible is given by agreement technologies, a new metaphor that integrates several aspects from data-base theory, artificial intelligence, multi-agent systems and social infrastructures. A core component in this conceptualization is an underlying argument-based approach, which allows to mine opinions from text-based information items based on incrementally generated topics.

INTRODUCTION AND MOTIVATION

At the dawn of the United Nations (UN) Agenda for Post 2015 (UN General Assembly, 2014), governments around the world have already recognized that the current development paths are unsustainable and that new governance mechanisms need to be envisioned to promote sustainable development - sustained

and inclusive economic growth, social development and environmental protection. In particular, one of the major governance goals for achieving sustainable development is to develop more fair, equitable and inclusive societies, where the voice and needs of all stakeholders are heard and considered. For this reason, stakeholder engagement is at the core of most government initiatives in the post-2015 age.

The voice and needs of government stakeholders are usually contradictory, since they usually represent opposed interest from different groups - e.g. on the one hand, businesses are interested in pursuing economic development, while on the other hand, environmentalists are concerned with protecting natural resources against blind economic interests. Developing new governance mechanisms contributing to bridge differences among stakeholders' needs post various types of challenges - technical, political, organizational, etc.; that governments need to overcome. At the same time, Information and Communication Technologies (ICTs) offer new and innovative solutions that governments can adopt to resolve some of such technical and governance-related challenges.

Within the scenario described above, a fundamental need for policy makers and government decision makers is to back their decisions and agreements on arguments and opinions provided by citizens. They might even argue with other policy makers about why making a particular decision is advisable (e.g. "according to the last poll, 80% of the people are against the health system reform; therefore, the reform should not be carried out"). From this perspective, new ITCs used by citizens in their daily lives, like Facebook and Twitter provide a unique opportunity for governments to leverage on technologies already infused and adopted by the society, providing a knowledge base from which information could be collected and analyzed in order to provide inputs and partially automatize government decision making processes. In particular, tweets have a rich structure, providing a number of record fields which allow to detect provenance of the tweet (author), number of re-tweets, followers, etc.

Aware about the need for citizen participation, governments at different levels - national, regional and local, in most countries are seeking their participation through the use of ICTs (Electronic Participation or e-Participation). Most e-Participation initiatives nowadays take place within ad-hoc platforms which provide suitable channels for efficient electronic communication and coordination connecting the involved stakeholders (e.g. government-citizens, government-business, citizens-citizens, partner-business, etc.). Nevertheless, such platforms do not provide suitable and generic components to model and process emerging *collective thinking patterns* in communities; although understanding such patterns is a mainstream trend nowadays in daily life, particularly through the widespread use of social media and their support by mobile technologies. Collective thinking patterns could correspond to ideas, proposals, criticisms or viewpoints, which decision makers can identify and confront based on atomic, individual inputs from citizens and users, such as tweets, Facebook posts, web-based product reviews, etc. Such patterns can take place in different policy contexts associated with social innovation and change, e.g. crowdfunding initiatives, citizen journalism, cyberactivism, etc.

Government 2.0 refers to government's adoption of Web 2.0 technologies to socialize government services, processes, and data, improving relationships between government and the governed. Enabling new communication channels - such as social media, wikis, blogs, and others; and two-way communication - enabling to push and pull information to and from citizens; Government 2.0 provides new mechanisms for government agencies to: 1) increase transparency –bringing public sector agenda and government activities closer to citizens; 2) facilitate participation –engaging citizens in government decision- and policy-making processes; and 3) enhance service delivery –pushing service-related information and gathering citizens' opinions about service delivery to design customer-oriented public services that better serve their needs.

Related Content

Gender Representations in Cartoons: Niloya and Biz Ikimiz
Arzu Karasaç Gezen (2020). *Gender and Diversity Representation in Mass Media (pp. 90-120).*
www.irma-international.org/chapter/gender-representations-in-cartoons/233789

The Image in Print Advertising and Comments to Val Larsen's Research Program
Bent Sørensen, Torkild Thellefsenand Martin Thellefsen (2017). *International Journal of Semiotics and Visual Rhetoric (pp. 13-28).*
www.irma-international.org/article/the-image-in-print-advertising-and-comments-to-val-larsens-research-program/191269

Trauma and the Indexicality of the Missing Sign: Redaction of the Oral Mishnah as a Sign of Trauma
Joel West (2021). *International Journal of Semiotics and Visual Rhetoric (pp. 72-82).*
www.irma-international.org/article/trauma-and-the-indexicality-of-the-missing-sign/272970

The Reincarnation of the Aura: Challenging Originality with Authenticity in Plaster Casts of Lost Sculptures
Victoria Bigliardi (2017). *International Journal of Semiotics and Visual Rhetoric (pp. 72-80).*
www.irma-international.org/article/the-reincarnation-of-the-aura/183642

Conflict Resolution Problem Solving with Bio-Inspired Metaheuristics: A Perspective
P. B. de Moura Oliveiraand E. J. Solteiro Pires (2016). *Interdisciplinary Perspectives on Contemporary Conflict Resolution (pp. 168-182).*
www.irma-international.org/chapter/conflict-resolution-problem-solving-with-bio-inspired-metaheuristics/150045