

Environmental Communication: Personal Media Communication and Waste Management

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Conceptual Paper

Volume 2 Issue 1

Received Date: January 17, 2019

Published Date: January 31, 2019

DOI: 10.23880/oajwx-16000115

Abstract

Waste is a subjective notion and creates one of the major challenges to public health, environment, and social justice. It seems crucial in this perspective to understand the importance of social capital as a necessary condition for sustainable community and can play a critical role in local community development initiatives. Collaboration for sustainable community development means that increasingly local community organizations, leaders and governments must form partnerships with other levels of government, with the private sector, and with civil society organizations is not an option but a necessity.

Keywords: Waste Management; Communication; Social Networks; Social Capital; Cooperation

Introduction

Waste Management as Communication Process

Waste management is generally conditioned by the applied governance models, or rather by de-structured forms of government with respect to a central authority, articulating itself in a plurality of vertical and horizontal paths, which involve different levels of government: local, regional, national and international. Waste creates one of the major challenge to public health and land-and sea-based ecosystems, sustainable access to rare materials, political stability, global and social justice [1]. The political and administrative choices cover the solid and special waste generated in urban areas reveal to determine efficiency, sustainability, and the degree of criminal penetration. Governance models are also affected by the morphological characteristics of social networks, that is, of the type of social capital generated by processes of social interaction. As a matter of a fact waste management governance is inherently difficult since both the natural environment and human societies are

characterized by uncertainties, complex dynamics, natural variations and scale dependencies [2]. That is from how the bundle of social relations animates the social body generated an institutional framework, in a broad sense, consistent with the correct management needs of the waste. This can be a key to understand the enormous heterogeneity of the systems of management, ranging, even within the same regional or provincial territory, between highly efficient situations to others completely inefficient.

Waste represents the perfect metaphor of the regulatory processes in the management of services. These services take forms and contents that change according to the different contexts, in which they fall, and therefore allow using the cognitive tools of the social network analysis [3]. The fundamental characteristic that distinguishes the analysis of the network with respect to the search methods more traditional, such as surveys, is the shifting the lens from explanations atomistic in terms of attributes of independent cases, to the explanation of

the phenomena in terms of relationships between systems of interdependent actors.

The perspective of social networks allows to watch social actors as part and form of the communities not just through the usual relationships institutionalized, both economical and politics, and consist of informal and personal relations of belonging to certain cliques, informal associations, Valuing and promoting to the maximum that relational capital and social capital that makes it difference in public service management models, including that of waste. Relationships are strengthened and evolved with practice, so it is in these dynamics and social configurations that they can observe the preceding symptom of more or less efficient [4,5]. Social interaction is “the basic process in the formation both of human nature and of the social order”, and a cohesive society is said to hang together, in part, through social interaction [6,7]. Without social interaction, people living in a given area can only be described as a group of individuals living separate lives, with little sense of community or sense of identity or place attachment [8]. Social networks, a very old and pervasive mechanism for mediating distal interactions among people, have become prevalent in the Web era. With interfaces that allow people to follow the lives of friends, acquaintances and families, the number of people on social networks has grown exponentially since the turn of this century. Facebook, LinkedIn and Instagram, to give a few examples, contain millions of members who use these networks for keeping track of each other, find experts and engage in commercial transactions when needed and for propagating recommendations through people with similar interests [9].

The social media importance is on the interaction between people and in the facilitation of asynchronous, immediate, interactive, and low-cost communications [10]. These features are said to facilitate reciprocal actions and spontaneous cooperation, and without this a sustainable waste management could not work efficiently because it would not take into consideration the concept of social equity that has its foundations in social justice, distributive justice or “fairness in the apportionment of resources”, and equality of condition [11,12]. Besides, the power of social media as an influencer is very high, so much so that maintaining a social media communication is a necessity in today’s corporate environment. In this perspective the Internet-based connection ties e-people to offline people to produce new forms of community and creates new forms of social capital, including new forms of social responsibility [13]. From this point of view waste management can get some advantages from these

connections. Most of the so-called Waste Management Plan promote toward a future improvement as regards to the collection, reduction, reuse and recycling of waste, following the waste hierarchy¹. To achieve these objectives it is essential to adopt the following proposals: (a) Paying attention to new technologies, which are constantly evolving and developing, toward economically sustainable waste management at minimum costs for the citizens; (b) Take into account waste collection and material recovery methodologies, trying to undertake the best management. The single collection systems (door to door) are those more promoted, because they are the best to encourage the correct differentiation; (c) Investing in environmental communication and public participation, including new media channels, toward an agreement between who benefits and who offers the service; (d) promote environmental education for both young people and adults, to increase environmental awareness; (e) development of the pricing systems of services to punctual type of users, which constitute an incentive for users who see their commitment to the adoption of virtuous behaviour; (f) Reduction of packaging, food waste, disposable; (g) Only for products that could not be reused or recycled, it will be possible to follow the path of recovery energy and landfill, which should represent a residual solutions. But this waste hierarchy could be brood through cooperation toward the metabolism of the waste chain action on the reduction of waste quantity, and of its economic exploitation as e.g. on food waste reduction chain [14].

Social Practices, Communication Roles

An efficient system in the organization of waste management involves the conscious and active use of communication tools, both in terms of education and training of the citizen, and in terms of citizen participation in reducing inefficiencies or environmental spills [15]. At the same time it is crucial to observe how the communication processes specifically related to the realities that are faced here and how it will be useful to understand problems and to give indications for their solution, which include the need on every stakeholder to take an active role in communication and processes to use

¹The supply chain in waste management consists of a series of phases that can be like this summarized as follows: a) Collection, which consists in the collection, sorting and grouping of the waste for transport to disposal and recovery centres. Collection it can be undifferentiated or differentiated. b) Treatment and selection, which include waste processing operations so that it can alternatively be destined for landfill or recycling and recovery activities. c) Recycling and recovery, or realization of production processes intended to give life to the so-called “second raw materials”, now widely used in various industrial processes, such as paper, panels, of glass or steel. d) Disposal, which typically occurs in controlled landfills.

the appropriate tools. The sociological analysis could be useful to adjust the governance action in order to take decisions more contextualized for the environment and shared by the social actors with benefits of social capital. Further steps could be taken in this field, as we tend often to address the issue of waste from the point of technical view only, considering the relevance too superficially of the problem: a territorialised waste management can, in fact, avoid conflicts, always present where there is need to locate polluting plants, and can contribute to research not only technical-organizational solutions that minimize environmental impact, but also to the creation of jobs, and why not to find out opportunities for solidarity or social cohesion. However, today we tend to consider waste as something to be disposed of in more and more rapidly, as the inhabitants of the city of Leonia from the Italo Calvino novel *Invisible Cities* [16].

Nevertheless, active participation of social actors could transform their roles thanks to media technologies that offer a series of solutions that might work in parallel with the Internet of Things and embedded systems, providing new opportunities [17]. Media Internet technologies are at the crossroads of digital multimedia content and Internet technologies, which encompasses media being delivered through Internet networking technologies, and media being generated, consumed, shared and experienced on the web. Technologies, such as content and context fusion, immersive multi-sensory environments, location-based content dependent on user location and context, augmented reality applications, open and federated platforms for content storage and distribution, provide the ground for new e-services within the innovation ecosystems of urban spaces. Cooperation and participation are at the heart of this bottom-up approach: waste service and information platform convergence by the use of information, from collection to recycle, that engage citizens and users in the process of discovering the potential of circular economics and the possible sustainable scenarios that can be built upon [18]. A waste management needs a smart neighbourhood where media-based social interaction occurs; a smart street where new mobility behaviours develop; a smart square (e-Agora) where participatory civic decisions are taken; a smart collecting of the door-to-door of the waste where the service could meet the demand with the responsibility of the citizens.

Conclusion

In this paper I explored the concept of a “waste management” system within environments of open and user driven innovation for experimenting and validating

Internet-enabled services. Social actors are enabled by advanced ICT infrastructure contributed to by current web research and experimentation. The social technologies available today are transformative in general and with regard to the waste management building social capital as well. Though there are challenges and barriers to implementation, the specific applications discussed in this paper demonstrate that it is possible to overcome these challenges through a combination of political will, social will, and technology. ICTs can in fact create an atmosphere of openness that identifies and stems responsible and active behaviour.

Initiatives to improve waste management services and the overall sustainability environmental policy chosen by municipalities require active participation of all involved parties; in order to be successful, all actions have to be credible, transparent, socially sustainable and, as far as possible convenient and practical to participants. Therefore, public relations strategies need to be adapted to specific target environments and offer the target groups real opportunities to act. The benefit of these approaches spill beyond the people immediately involved inside civic networks and can be used to reduce waste toward a zero waste system. Further developments along these lines are essential for the development of “waste management” that enhances socially beneficial, cooperative behaviour based in part on social norms. It is possible that past policy initiatives to encourage collective action that were based primarily on externally changing payoff structures for rational egoists may have been misdirected-and perhaps even crowded out the formation of social norms that might have enhanced cooperative behaviour in their own way [19]. Increasing the authority of individuals to devise their own rules may well result in processes that allow social norms to evolve and thereby increase the probability of individuals better solving problems.

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