Cyber-Social Networks in Preventing Terrorism: Topological Scope

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Abstract : It is well known that world and national societies are exposed to diverse threats: anthropogenic, technological, and natural. Anthropogenic ones are of greater risks and, thus, attract special interest to researchers within wide spectrum of disciplines in efforts to lower the pertinent risks. Some researchers showed by means of multilayered, complex network models how media promotes the prevention of disease spread. To go further, not only are mass-media sources included in scope the paper suggests but also personificated social bots (socbots) linked according to reflexive theory. The novel scope considers information spread over conscious and unconscious agents while counteracting both natural and man-made threats, i.e., infections and terrorist hazards. Contrary to numerous publications on misinformation disseminated by 'bad' bots within social networks, this study focuses on 'good' bots, which should be mobilized to counter the former ones. These social bots deployed mixture with real social actors that are engaged in concerted actions at spreading, receiving and analyzing information. All the contemporary complex network platforms (multiplexes, interdependent networks, combined stem networks et al.) are comprised to describe and test socbots activities within competing information sharing tools, namely mass-media hubs, social networks, messengers, and e-mail at all phases of disasters. The scope and concomitant techniques present evidence that embedding such socbots into information sharing process crucially change the network topology of actor interactions. The change might improve or impair robustness of social network environment: it depends on who and how controls the socbots. It is demonstrated that the topological approach elucidates techno-social processes within the field and outline the roadmap to a safer world.