

Chapter 17

Multiagents System Applied on a Cyberbullying Model for a Social Network

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ABSTRACT

The contribution of this chapter is to present a novel approach to explain the performance of a novel Cyberbullying model applied on a Social Network using Multiagents to improve the understanding of this social behavior. This approach will be useful to answer diverse queries after gathering general information about abusive behavior. These mistreated people will be characterized by following each one of their tracks on the Web and simulated with agents to obtain information to make decisions to improve their life's and reduce their vulnerability in different locations on a social network and to prevent its retort in others.

INTRODUCTION

Cyberbullying refers to repeated intimidation, over time, of a physical, verbal or psychological (including indirect and relational bullying) nature of a less powerful person by a more powerful per-

son or group of persons through information and communication technologies, mediums such as mobile phone text messages, emails, phone calls, Internet chat rooms, instant messaging – and the latest trend – social networking websites such as Orkut, MySpace, Hi5, Facebook and video sharing

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sites like YouTube. Cyberbullying is a fast growing trend that experts believe is more harmful than typical schoolyard bullying. Nearly all of us can be contacted via the Internet or our mobile phones. Victims can be reached anytime and anywhere. For many children, home is no longer a refuge from the bullies. "Children can escape threats and abuse in the classroom, only to find text messages and emails from the same tormentors when they arrive home" (Cyberbullying, 2010).

This chapter focuses on the social and cultural implications of cyber technologies. Identity, bullying and inappropriate use of communication are major issues that need to be addressed in relation to communication technologies for the security in the Web use. We present some concepts and tools of Artificial Intelligence that will be used to analyze information to know when someone can be victim of this type of crime, like Text Mining and Multiagent Systems.

First, in section 1 of this chapter, we explain the way to generate a specific behavior with this cyber bullying model on a Social Network, later we discuss social Blockade, Harassment, and Motivational Factors. In next sections, we show the Issues, Problems, and Trends of Cyberbullying (section 2), we approach different concepts related with Artificial Societies and Social Simulation using Multiagent Systems to analyze and model the necessary information to support the correct decisions for the proposed model (section 3) Social Manipulation and Coercion (section 4), and Social exclusion and intimidation (section 5). In section 6 we apply this Model in a social network over the Internet: Orkut (a popular social network in Brazil) and try to explain innovative perspectives of this Model. In section 7 we analyze a case of study: Social Blockade in a Social Networking based on Memory Alpha with 1000 societies represented by agents to demonstrate the concept of cyber bullying. In Section 8, we present a summary of the best practices to avoid cyber bullying by performing automatic text mining over top related Web sites.

Finally, in section 9 we provide our conclusions and our future research on this novel topic.

SOCIAL BLOCKADE AND HARASSMENT

There are different mechanisms of bullying a classmate. Bill Belsey, former president of www.bullying.org and www.cyberbullying.ca, considers next types of cyberbullying: by means of e-mail, cellular phone using text or multimedia messages: by means of instant messages, defamatory web blogs and personal Webs. According to Fante (2005) young people use web blogs, social networks and systems of instantaneous mail to intimidate their classmates, being the diffusion of altered photographs to ridicule to victims one of the preferred methods. These are distributed massively and sometimes indicating the identity of who is put under the humiliation to increase the impact. In the case of the virtual communities, many of them need an invitation to be able to enter to be member of a group, the harassment at school is based on isolating the victims of the humiliations.

Cyberbullying is a form of scholar harassment produced by means of virtual platforms and technological tools, like chats, blogs, fotologs, text messages of cellular phones, e-mail, forums, servers storing videos or photographs, telephone and other electronic media (Alcantara, 2007).

The Cyberbullying being an indirect and non actual form of harassment, the aggressor does not have contact with the victim, does not see his/her face, eyes, pain, suffering, consequently hardly the aggressor will be able to empathize or to wake up compassion on the other. The cyber aggressor obtains satisfaction in the elaboration of the violent act and in the imagination of the damage caused in the other, since is not possible to live it in situ (Hernandez, 2007).

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