

Online Barter Trade of Goods in Digital Communities

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Abstract—This study aims to explore the terms of trade in a virtual environment to identify opportunities for the actors involved. The methodology used in this research was the development of mental maps by human and nonhuman entities. In order to understand this phenomenon, this study explored the current online barter scenarios, the collaborative consumption in Brazil and the analysis of the Facebook Barter Group, detailed here. In addition to this, it explores how social networks have been taking part in this initiative. Conclusions point to structural and behavioral aspects, identifying the need to build an application tool to provide a better consumer experience.

Keywords-Smart Cities; Online Barter; Sustainability; Collaborative Consumption.

I. INTRODUCTION

Nowadays, the discussion about a society that provides sustainable solutions is growing due to the quick and easy access to information. This way, services of collaborative consumption have emerged with the goal to dematerialize products by proposing their uses beyond the consumption. The term "collaborative" means two or more people who collaborate on a product exchange system, such as sharing, trading, renting or lending objects [1].

"Consumption can be understood as a set of sociocultural processes that permeate the appropriation and the uses of goods beyond the likes of exercises, whims and thoughtless purchases, according to moral judgments or individual attitudes as often exploited by research market"[2].

Services involved in a collaborative consumption system are divided into three systems: product service systems (paying to use the product without owning it), redistribution markets (goods are redistributed - modified) and collaborative lifestyles (people with similar interests gather together to share and exchange less tangible assets such as time, space, skills, etc.) [3].

In Brazil, some solutions promote collaborative consumption. Among the existing solutions, this paper will approach the online product exchange through Facebook. Product exchange is a trend of sustainable consumption, and social networks help spread this practice. Some Facebook groups stimulate the exchange and, without it, these people would probably not have the chance to meet each other.

This project is the analysis of existent solutions, validating their impact and seeking to identify new opportunities that can improve the exchange of products in a practical and efficient way. Section 2 deals with the concepts of collaborative consumption and the problems that may occur during the exchange process of online products. Section 3 presents some existing solutions and a quick analysis of them. In Section 4, proposals are presented and then Section 5 concludes the paper and presents future research and its development.

II. COLLABORATIVE CONSUMPTION

Collaborative consumption as an exchange of products is a complex system influenced by several factors, such as economic, political, sustainable trends, human behavior, and the culture of a society.

"Collaborative consumption is a sustainable practice that requires a non-individual action, as in sustainability itself, but the cooperation between two or more consumers. Exchange of products and/or services between consumers who stop buying from a supplier and start to work together, feeding their consumption needs" [4].

It was necessary to systematically analyze the factors involved in the service to study the online barter and then propose solutions. So, it was possible to *"have the micro view, but also the macro view of all processes involving a problem, see how they interrelate and what are the inputs and outputs of their subsystems and the system as a whole"*[1].

The Actor-Network Theory (ANT), also known as Sociology of Translation [5], is a contestation of traditional sociology, which does not consider the concept of society and understands the social dimension as a collection of human and non-human entities, such as people, animals, things and institutions, supported by an agency through the association in networks. It represents interconnections where actors are involved, and networks can take them to any side or direction and establish connections with actors who show some similarity or relationship [6].

First, linking humans and entities involved in the process, as shown in Figure 1, has created a mental map. After making all the connections between the actors, it was possible to ask questions and investigate the potential problems for the exchange of products in online services.

Figure 1. Mental map with human and non-human actors.

III. ANALYSIS OF EXISTING SOLUTIONS

In order to understand the online trading system, the websites 'Permuta Digital', 'Zaznu', 'Impact Hub', 'Skoob', 'Caronetas', 'Tem Açúcar?', 'Troca Jogo', 'Joaninha' and 'Samba' were visited, as well as Facebook groups. Those are websites used to share common goods, such as games, books, toys, bikes, and carpools. Most of the observed websites do not stimulate the sense of social interaction and the product exchange happens in a complex way. Some of them demand currency that users can buy, and with that, users can evaluate and offer to exchange for other products; that makes the system not fully based on trades. Some difficulties of communication between users were observed. Among this group of websites, the Facebook Group 'Escambo' was chosen for a detailed analysis, because other solutions still allow the exchange of goods using cache. The mentioned Facebook Group only allows users to exchange objects for another object them, it does not allow any kind of operation involving money.

In the Group, there is also a close review of the collaborative consumption concepts, something that was not observed in other tools that promote online barter. 'Escambo' has the main features of collaborative consumption, such as sharing an offer within a community, news, and recommendations of products widely transmitted by the social network [7].

A. Analysis of the Facebook Group – 'Escambo'

The Group has over 20,000 registered users. There are constant exchanges of products among people and many of them believe in the exchange process as a way to practice a sustainable consumption. 'Escambo' has social guidelines that emphasize the exchange experiences, and forbids buying and selling products.

The dynamics of trades are simple: any user can post a picture of what they want to pass on, describing the object,

and also they would like to receive for it, or if it is possible to simply leave it open [8]. Then, through the additional comments, people interested in the product start offering their own items in exchange for the announced good. The owner of the advertised object decides who will get the product through the exchange transaction. New exchange negotiations may appear from comments in any publication, since many people report what they have available so they can attract the interest of others.

Factors that boost the trade or not:

- From the moment that people start to exchange things, negotiations become more complex;
- Individualistic and critical sense among people;
- Many conflicts among participants, there is usually someone willing to take advantage of the transaction;
- Some participants do not have the collaborative spirit about the advantages of trading goods;
- No care about appearance, cleanliness, or organization of the offered product, based on the available pictures.

IV. PROPOSALS

From the previous observations about the interactions in the Group, some proposals to solve the above-mentioned problems are listed below:

- Develop Facebook application tools to register people and organize product information as photos, reviews and negotiations;
- Create actions to inform and educate people about the principles of sharing and consumer awareness to demonstrate that the exchange experience is better than having a financial gain - It has been noticed that there are some people who are individualistic and more worried with financial benefits instead of thinking about the community and the goal of collaborative consumption;
- Stimulate the collective and social thinking inside the group, because it has been noticed that there are some conflicts and insults between the participants of the group.

V. CONCLUSION

In this paper, an alternative to improve collaborative consumption through exchange of products was proposed by using Facebook Groups tools. Encouraging interaction between different people and the exchange of common interests are part of this experience. The goal of being able to identify problems in the exchange of products on the Internet was also achieved. The analysis of the main difficulties of a collaborative service provided ideas and solutions that improve the relationship between individuals. As future works, the authors are prototyping the proposed

solution in order to validate with users how the project will affect communities.

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