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ADAPTED CARS FOR PEOPLE WITH MOTOR DISABILITIES: NETNOGRAPHY OF THE MOTIVATIONS AND TRANSFORMATIONS IN THE LIVES OF CONSUMERS

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THE PURCHASE OF ADAPTED CARS FOR PEOPLE WITH MOTOR DISABILITIES: NETNOGRAPHY OF THE MOTIVATIONS AND TRANSFORMATIONS IN THE LIVES OF CONSUMERS

Marina Dias de Faria

ABSTRACT

The purchase of a car involves various aspects, with some related to the functional aspects of the product and others to the symbolism embedded in the purchase and ownership of a car in Western society. In the case of people with motor disabilities, the purchase of a car adapted to their needs incorporates still other meanings because the autonomy it can bestow on these consumers is of a different nature than the autonomy granted by the purchase of a vehicle to people who do not have motor disabilities. The aim of the present study is to investigate the consumption of cars by people with motor disabilities through an examination of their motivations, difficulties and the way an adapted car can change their lives. The study sought to achieve this objective through an empirical study using netnographic technique in which data collection was performed by accompanying three email discussion groups and the texts and comments posted in three blogs. The results showed that people with motor disabilities are seeking autonomy when they decide to purchase an adapted car and that this purchase is related to the attempt to make their disability invisible. The study also highlights the difficulties faced by disabled consumers when purchasing a car and also during its daily use.

Keywords: people with disabilities, adapted cars, netnography

RESUMO

A compra de um automóvel envolve aspectos diversos, alguns dos quais relativos aos aspectos funcionais do bem, e outros relacionados ao simbolismo embutido na aquisição e na posse de um veículo automotivo na sociedade ocidental. Em se tratando de pessoas com deficiência motora, a compra de um automóvel adaptado às suas necessidades incorpora ainda outros significados, pois a autonomia que o carro pode proporcionar a tais consumidores atinge níveis diversos daqueles geralmente associados à autonomia conquistada por pessoas sem deficiências motoras quando adquirem um veículo. O objetivo da presente pesquisa é investigar o consumo de automóveis por pessoas com deficiência motora por meio de suas motivações, das dificuldades e das mudanças que um carro adaptado pode trazer para a vida desses consumidores. Para se buscar atingir tal objetivo, empreendeu-se um estudo empírico com suporte de netnografia, em que a coleta de dados foi realizada por meio de três grupos de discussões por email, e de textos e comentários postados em três blogs. Os resultados indicam que as pessoas com deficiência motora buscam autonomia quando decidem adquirir um carro adaptado, e que essa compra está relacionada à tentativa de tornar invisível a deficiência. A pesquisa também destaca as dificuldades enfrentadas por consumidores com deficiências no momento da compra do veículo automotivo e durante a utilização cotidiana do automóvel.

Palavras-chave: pessoas com deficiência, carros adaptados, netnografia

1 – INTRODUCTION

The decision to purchase a car involves various aspects, with some related to the product's functionality and others related to the symbolism embedded in the purchase and ownership of a car (EARL, 2011). In the case of people with motor disabilities, the purchase of a car adapted to their needs encompasses even wider meanings, given that the vehicle may be perceived as a consumer product that is an essential tool in their quest for independence by making it possible for them to come and go just as easily as people who do not have significant mobility difficulties (RESENDE, CAVALCANTI and ANDRADE, 2012).

Henriksson and Peters (2004) affirm that people with motor disabilities use their cars mainly to drive small distances, thus demonstrating that these individuals need a car for their daily mobility. The lack of accessibility in collective transport (BEARSE *et al.*, 2004) and in urban spaces (WATERMEYR, 2006) seems to be decisive factor in people with

motor disabilities' decision to purchase a car (MERCADO, PÁEZ and NEWBOLD, 2010). Urban mobility becomes a central question here. According to Barnes (2011), if it is possible to observe evident failures in attempts to implement regulation capable of preventing the production of inaccessible urban spaces even in countries in Europe and Oceania then, unfortunately, in developing countries like Brazil these failures can be considered endemic.

Studies of cars and people with motor disabilities usually focus on technical aspects related to adaptions that have to be made so that they can be driven by these individuals (BOURHIS *et al*., 2002; PRASAD, HUNTER and HANLEY, 2006), rarely dealing with issues related to purchase motivations or which seek to understand what the purchase of a car means for disabled people MONECELLI et al., 2009; SCHMÖCKER et al., 2008). Thus, the aim of the present study is to investigate the consumption of automobiles by people with motor disabilities through the examination of their motivations, difficulties and the changes that an adapted car can bring about in these consumers' lives. An adapted car is defined as an automobile which undergoes changes to its functioning structure – usually to the brake pedals, the accelerator and the clutch – according to the needs of a disabled person, so that the latter can drive safely and comfortably (MONACELLI et al., 2009).

It is important to point out that the research is not restricted to the quest for solutions to a problem that affects industrial sectors that may take advantage of a market opportunity that has not yet been fully exploited and also to finding elements that can underpin the formulation of public policies oriented towards the needs of disabled people. This study's aim is not only to generate important information for organizations that wish to serve disabled consumers, but is rather to understand how to provide benefits and welfare for people with motor disabilities through cars. Therefore, the present study is aligned with the proposal of transformative research expounded by Mertens (2007). Transformative research arose from a questioning of the way the dominant paradigms of scientific research deal with themes related to socially disfavored and/or excluded individuals (MERTENS, 2009). For Mick (2006), the adoption of the transformative paradigm in marketing represents the first step for consumer research to begin to focus on benefits for the welfare of human beings and not just for firms.

In order to achieve the study's aims, it was decided to undertake an empirical study based on the netnographic method. Several foreign studies have already used netnography – or online ethnography, as some authors prefer to call it, in consumption studies (e.g.: KOZINETS, 1998, 2002; PENTINA & AMOS, 2011; XUN and REYNOLDS, 2010). In Brazil, studies can also be found which support the use of netnography in marketing, using, for example, social networks and blogs as their data source (ABDALLA & BRAVO, 2011; AMARAL, 2010; MONTARDO and PASSERINO, 2006). As regards studies

of disabled people, netnography seems to constitute a sound methodological approach, given that these individuals tend to make intense use of the online environment in order to communicate and interact with other people (SAMBHANTHAN and GOOD, 2012).

Research in the marketing field that focus on processes of car purchase and use by disabled people seem to be important for advancing our knowledge regarding not only the specific context of the market for cars but also these individuals' consumption of other products and services. After all, in the case of a disabled person's consumption experience, it is impossible to ignore three aspects of the purchase process whose banality is usually taken for granted in the case of consumers without disabilities: the trip to the store where the purchase will take place, entering the store and circulating in the store's physical environment (CROSIER and HANDFORD, 2012). Studies involving cars and disabled people should therefore also include considerations related to this consumer's trip to the environment where the purchase and consumption of many goods and services will take place.

2 – LITERATURE REVIEW

2.1 The car choice process

Even though the decision to purchase a car takes up a great deal of time and is considered to be a complex one by consumers, as it is a purchase that involves a high perceived risk (KOPPEL *et al*., 2008), few consumers make this choice using a rational decision process, weighing its pros and cons (EARL, 2011).

According to Ponchio, Aranha Filho and Samartini (2003), friends are the source of information most taken into consideration by consumers when purchasing a car. Bacha and Strehlau (2005) used semiotics to try to understand the influence of advertising in the car purchase decision process and found that consumers like to see these commercials but that when choosing a vehicle advertising messages do not seem to influence the final choice, which depends basically on price and safety factors. For Resende and Scarpel (2009), on the other hand, brand is the determining factor in this choice. Earl (2011) underscores that that it is difficult to define what element weighs most in the decision to buy a car, as, for many consumers, its utilitarian function is not the most important: for them, the car is a sign of status and even a sex symbol. Hiscock et al. (20,) highlight that many people seek autonomy, protection and prestige when choosing a car and that, for some men, the vehicle reflects the owner's masculinity.

As regards the role of family members in the purchase of cars, Bacha and Strehlau (2005) affirm that men tend to have the greatest influence, whereas Darley, Luethge and Thatte (2008) show that women are more influenced by the suggestions of salespersons. Kennedy, Ferrell and Leclair (2001) highlight that the more the consumer knows about cars, the more important it is for salespersons to be well-trained to transmit trust and ensure that their opinions are taken into consideration.

Molesworth and Suortti (2001) show that it is increasingly common for consumers to have access to a huge amount of information through the internet on available car models before visiting car dealers. The authors point out that, even though accessing the internet to find information, most consumers need direct contact with the car they plan to buy before making their decision. However, Jin (2011) reveals that, due to the advance of technological resources that provide a three-dimensional view of cars, thus enabling consumers to interact virtually with the vehicle, online research is increasingly common and decisive in the car purchase decision process.

Another change in the current car market is the increasing pressure to seek more sustainable transportation alternatives. This has led to an increasing concern with the development and commercialization of vehicles that use, for example, less polluting fuel (MAU et al., 2008). However, it should be emphasized that few people are currently ready to pay more for a car with such characteristics (RESENDE and SCARPEL, 2009). Many people affirm that they are ecologically aware and value sustainable cars but do not necessarily buy these cars (RIJNSOEVER, FARLA and DIJST, 2009).

2.2 People with mobility disabilities: the role of the car

People with motor disabilities face many difficulties to circulate in urban centers due to the lack of adequate means of transport (BEARSE *et al*., 2004) and the poor conservation of pavements (WATERMEYER et al., 2006). Mercado, Páez and Newbold (2010) highlight that, whether using their own cars, public transport or even going on foot, these individuals have to face many barriers that very often prevent them from circulating in the urban environment. Mobility difficulties in cities make it impossible for people to study, work and play their social roles to the full (DELBOSC and CURRIE, 2011).

Monacelli *et al*. (2009) defend the viewpoint that the implementation of technological advances which provide better locomotion conditions for disabled people should constitute a priority in public policy planning and should also be incorporated into private company guidelines. Although, public authority representatives are ultimately responsible for formulating transportation policies, professional such as bus drivers, for example, bear a great responsibility for creating or eliminating barriers to the movement of

disabled people. (CROOKS, DORN and WILTON, 2008). Audirac (2008) indicates the urban bus transportation system of the city of Curitiba in Brazil as an example of an accessible transit system and recalls that a study funded by the World Bank elected the assistive technology used in that city's mass transit systems as a best practice to be implemented at a global level. However, it should be mentioned that Curitiba's example is not followed by other Brazilian cities.

As a consequence of the difficulty of using collective transport, most people with motor and visual difficulties are obliged to use taxis as a means of transport, which is extremely expensive (KIRBY, BOWLBY and SWANN, 1983; SCHMÖCKER et al., 2008). As well as the cost associated with using this means of transport, it is common for disabled people to complain about the way taxi drivers treat them, mainly due to their lack of patience related to waiting for them to get in and out of cars without injuring themselves(COULSON, NAPIER and MATSEBE, 2006).

Given this situation, the purchase of a car by a disabled person may represent a radical change of life-style (SHAND and SIVEWRIGHT, 1994). For Monacelli et al.(2009), having a car is essential for people with motor disabilities to achieve their autonomy. Schmöcker *et al*. (2008) also affirm that purchasing a car may be a first step in enabling these individuals not to depend wholly on their relatives. However, one should highlight that not all disabled people can drive: some types of disability prevent people from driving even an adopted car (CARMIEN et al., 2005).

In order to purchase a car, the disabled consumer goes through a complicated decision process. Besides the difficulties related with the high price and low supply of adapted cars (MONACELLI et al., 2009), people with motor disabilities are subjected to a rigorous assessment by government regulatory bodies in order to define what kind of adaptation need to be made to vehicles so that they can drive them (SHAND and SIVEWRIGHT, 1994).

Branowski *et al*. (2011) recall that, when designing a car for an individual with a motor disability it is indispensable to take into considerations matters related to the comfort of the person who is going to drive the car, and not only practical issues of functioning and mechanical adaptations. One also needs to ensure that disabled motorists will familiarize themselves with the adaptations, given that the lack of disabled drivers' knowledge of all aspects of the functioning of their adapted cars is one of the main causes of accidents involving these vehicles (HENRIKSSON and PETERS, 2004).

3 – METHODOLOGICAL PROCEDURES

In order to fulfill the objective of the study, the research used netnographic procedures, indicated by Kozinets (2002) as appropriate for identifying and understanding the tastes, desires and decision-making processes of particular groups of consumers. Beaulieu (2004) sustains that the ethnographic method can be satisfactorily adapted for use in internet studies, especially give the dynamism of online communities. Similarly, Garcia et al. (2009) believe that when applied in the context of virtual communities, ethnography my produce satisfactory results, provided the researcher does not focus solely on members individually, but also on the relations between them.

Netnography has a body of procedures organized by Kozinets (2002) a follows: (1) *entrée*, the entry into the community or establishing a closer relation with the subjects; (2) data collection; (3) data interpretation and analysis; (4) ethics and research; e (5) member checks. In the empirical study undertaken for the present research, every effort was made to follow these procedures.

In the *entrée,* the first step of a netnography, after defining the research problem, the researcher should identify the online communities that are appropriate for providing the information that served the study's objectives. These communities should demonstrate a significant level of participation on the part of the people that belong to the group focused on by the study and should deal with subjects related to the study's objectives (KOZINETS, 2002). The online communities chosen as information sources for the present study were three discussion groups in which the members exchanged messages by email, and three blogs written by disabled people. One of the email groups discussed mainly issues related to people with motor disabilities, while the other two did not focus on any kind of disability: one of them dealt with the theme of the parental overprotection of disabled individuals and the other debated mainly issues of accessibility. The names of the groups and blogs as well as those of the people who gave their testimony, were concealed in order to preserve the privacy of research participants. (cf. CARTER, 2005; GARCIA *et al.*, 2009).

Kozinets (1998) indicates that data collection in netnography can be undertaken in various ways, with the researcher preferably using more than one way of obtaining information in the same empirical study. Following this recommendation, data collection was conducted in three stages.

The researcher did not participate actively in the first stage of data collection: information was gathered directly from email messages sent between members of discussion groups without any intervention. This stage lasted three years, but during the

first two and a half years the researcher selected and accompanying topics of debate generated spontaneously by the subjects in order to seek to understand the relations between group members. This period spent monitoring the messages exchanged between the subjects was crucial as it enabled the researcher to get to know the members of the discussion group and become familiar with issues involving accessibility, consumption and disabled people. Kozinets (2002) asserts that it is important for the researcher to become acquainted with the characteristics of online communities and their members before beginning data collection focused on the research problem at hand. For Garcia *et al*. (2009) and Sandlin (2007), it is fundamental to become acquainted with the relations between individuals and understand group norms. After this period, during the last six months of data collection, the focus turned to the debates regarding mobility, giving more attention to discussions that touch on issues related to automobiles or other forms of transport. During the second stage of data collection the researcher began to participate actively, sending email messages to discussion groups with the aim of directing the debate towards the focus of the study. These messages contained no information about the research, but merely raised broad questions related to the theme, or how urban mobility can influence consumption practices.

In the third and final stage of data collection, the research selected three blogs written by disabled people. An analysis was then performed of the bloggers' posts, as well as readers' comments, in order to enrich the research's results.

The material obtained from the discussion group e-mails and blog posts were then submitted to content analysis (BARDIN, 2011; BAUER, 2002; SAMPIERI, COLLADO and LUCIO, 2006), following three main procedures: (1) critical reading; (2) examination and assessment of the content of selected passages; and (3) classification of terms and ideas (HUNTER, 2002). Kozinets (2002) asserts that content analysis is a useful way of analyzing data in netnographies and highlights the importance of an analytical process focused on interpretation, affording less attention to meticulous codification and classification.

Given the lack of academic literature on the central theme of this research, it was decided to use an open model to define the categories of analysis, thus enabling the categories to take shape during the course of the analysis itself (BARDIN, 2011).

One of the criticisms commonly directed at netnographic research is that the dividing line between the public and private spheres is tenuous and this may raise issues of an ethical kind. (KOZINETS, 2002). In order to try to minimize this problem, the analyses were sent to the email group members for their comments. No members raised objections to what was written in the document sent to them and all comments praised the results of the research. This checking with members of the groups researched could also be useful to

try to diminish the negative effects of the lack of personal contact between researchers and researched in the netnography, which places a great weight on the researcher's skills in interpreting written information (GARCIA et al., 2009).

4 – PRESENTATION AND DISCUSSION OF RESULTS

4.1 Lack of structure and respect in collective transport

The literature reviewed had already shown that the lack of accessibility in collective transport is responsible for motivating most people with motor disabilities to want to buy a car (BEARSE *et al.*, 2004; MERCADO, PÁEZ and NEWBOLD, 2010). From the email discussion groups, it was possible to perceive that the difficulties faced by such people when trying to use collective transport led to various comments, in which adjectives like "appalling", "awful" and "disgraceful" were used to characterize collective transport in large Brazilian cities.

> - Everything is awful. Who feels safe with those bus elevators that nearly fall when a disabled person is placed on them?
>
> - Many buses have a sticker saying they are accessible but few really have a ramp, and when they do hardly any of them work.
>
> - Public transport is appalling. We don't even think of the bus elevator. With it the disabled person becomes yet another hindrance. We want those buses that can lower.

This last testimony shows that even buses with elevators that let people in wheelchairs enter the vehicle – the model currently adopted in Brazil – is far from ideal to meet the needs of these people: "the elevator takes a long time to function and drivers often don't know how to operate them or can't be bothered to". The importance of drivers for accessibility in means of transport is even clearer from the testimonies of people who say that, even with structural problems, collective transport could be accessible if bus drivers were adequately trained and sensitive to the difficulties faced by disabled people. Such testimonies corroborate Crooks, Dorn and Wilton's (2008) view regarding the importance of specialized staff for accessibility in collective transport.

> - The ideal would be to make create greater awareness among drivers so that they could understand our demands.

- I don't feel safe getting off the bus. It's horrible, the driver is always in a hurry. Training would improve accessibility 100%.

Given the difficulties involved using collective transport, the research subjects affirmed that they depended on taxis, at considerable monetary expense. This dependence and resulting expenditures had already been highlighted by the literature (SCHMÖCKER et al., 2008).

- There are even some adapted taxis that are very good, but you have to book … (the service) and demand is very high. And using taxis all the time is very expensive. A disabled person's cost of living is very high, largely because of the lack of accessibility in collective transport.

- Since 2010, I only go out with my son, who uses a wheelchair, with the same taxi driver who has an adapted taxi. Just having the car isn't enough. The driver has to be helpful and care about person using a wheelchair's welfare.

Also as regards the use of collective means of transport by disabled people it was possible to perceive that the drivers of these vehicles and members of society as a whole need to change their attitudes in order to make it easier for disabled people to access means of transport. Two main complaints are presented by subjects of the research (1) "not getting up from seats reserved for disabled people when someone wants to use them"; and (2) "complaining and becoming impatient at the time it takes for a disabled person to board a bus".

4.2 The hope of a better future with a car

Resende, Cavalcanti and Andrade (2012) argue that the purchase of a car by a disabled person is motivated mainly by a desire for autonomy. Confirming this, the present study found that it is the quest for independence that makes disabled people begin to think of buying a car as the solution for many of their problems. Their testimonies also show that these individuals do not like to depend on their relatives and that they often feel bad about making excessive demands on their siblings and parents. For people with motor disabilities, the car represents a future with independence.

- I didn't want to depend on my brother anymore for everything. So I thought: "I need a car…then I'll be independent".

- Once I needed to the church for a meeting of a group I was taking part in. I was at home with my parents and my younger brother....When I was going down the steps to the door, they all started to talk and even argue about who was going to take me: "I can't go, I have to study", said my brother..."Ah, I'm not going because the TV news is going to start", said my father...You know, I swear that I felt like an object that no-one wants to hold....After lots of quarreling, I said I wasn't going anymore. It takes about 5 or 7 seven minutes by car from my parents' house to the nearest church. That day I began to look for a car on the internet.

- I also don't like to arrive late at places because it is some relative's fault. I hate having to fit in with their schedules! But unfortunately I have to because when I fix a time to do my things, they say that when I want to do something it has to be straightaway, I can't wait and that I'm being selfish. If were able to drive, I would certainly buy a car.

This last testimony was posted in a blog by a person with visual impairment and shows that people who have other kinds of disability besides motor ones, see the car as a way of achieving independence, even though they are aware their disability does not allow them to have a license to drive automobiles.

In the words of the subjects, the quest for autonomy through the ownership of an adapted car appears to be associated mainly with the desire not to be "imprisoned at home", "to be able to work like anybody else, "to be able to study to be somebody" and to be able to choose their favorite places when they want to go out.

- I decided to buy a car when I couldn't stand staying at home anymore. The life of a disabled person without a car is very boring. I hate having to stay at home.

- I can't get a good job without a car. I need one to get to work. I want to work like any normal person.

- Today, at least where I live (in the city of Rio de Janeiro), a person in a wheelchair can't go to university if he or she doesn't have a car. To study and be someone, you have to have the autonomy to get to the university. If I went by bus I'd be late every day.

- I'm going to start a semi in-situ course, I don't know how I'll manage, I have a motorized wheelchair, but the university is far. It's difficult to get there and I think a car would solve the problem.

- Not having a car, I have to follow my parents. When I have a car I'll be able to go to the cinema when I want, to the beach when it suits me.

The certainty that a car would be able to improve their lives means that disabled people are ready to pay a significant amount for the car and the necessary adaptations. Various testimonies contain stories of people who took out loans to buy adapted cars and say they didn't regret it.

4.3 Scarcity of information at the moment of purchase

The process involving disabled people's search for information about cars seems to be different in some aspects from that experienced by people without disabilities. As regards the sources that are taken into consideration by the average consumer, the literature shows that friends are very influential in the choice of cars (PONCHIO, ARANHA FILHO and SAMARTINI, 2003), whereas the results of the present research show that, for disabled people, friends' opinions are not so important, because they are deemed to be individuals who do not understand the specific needs of disabled motorists. Salespersons, mentioned in the literature as sources of information for people who are choosing a car (KENNEDY, FERRELL and LECLAIR, 2001), also do not seem to influence the choice of disabled people. Some subjects complain that they cannot trust salespersons because these professionals are "very poorly trained" or "do not have the patience to explain things".

The review of the literature showed that the internet is an important source of information for the purchase of automobiles (JIN, 2011), and this is even more so in the case of people with motor disabilities. Even on the internet the most important opinions for these consumers when choosing an adapted car are not those of friends in social networks but rather those who are judged to "more informed", such as bloggers and informal leaders of email groups.

The opinion of bloggers was shown to be very important in the choice of a car. Posts were found that talked specifically about some car brand. In these posts the bloggers gave their opinions regarding a certain vehicle, discussing specifically the pros and cons of car models for disabled people. It was noted that these topics are often accessed by blog readers who add their comments and seem to be very influenced by other opinions.

In the email discussion groups it was also possible to perceive that some people acted as opinion formers. In an email message one of these leaders described his positive experience with the test drive of a vehicle and various people then wrote saying that they had also done it. This discussion ended up motivating the sending of an email from a

consumer, recounting that she had not been able to decide for a long time and ended up choosing the car because of the opinion of the group member who performed the test:

> - Thanks a lot. I was lost, but if you said it was good, then I believe you. I'm going to buy this model.

In one of the blogs analyzed by the research, the participants commented the lack of commercials relating to adapted cars for people with motor disabilities. In their opinion, this means that many people do not even know that it is possible to adapt automobiles for people with motor disabilities.

Besides this lack information about the models and adaptations available, people also do not seem to know where to look for information about which modifications should be made to the vehicle to enable the person to drive it. Both in the blogs and email groups, several questions appeared asking: "What adaptations have to be made to a car in the case of a person with a serious motor disability in the lower limbs?"; "How can I find out whether I can drive?"; or "Where can I obtain information about modifications I need to do to be able to drive?".

This lack of information has two main negative consequences. The first is the purchase of vehicles and/or adaptations that do not fit the needs of the disabled motorist. The other problem is that people create expectations, spend money and when they finally manage to obtain more accurate information discover that their level of disability prevents them from driving. Some Brazilian states have simulators which enable people with motor disabilities to test their ability to drive so that official appraisers can determine whether that person is apt to drive a car, or what adaptations would have to be made. However, not all states have these simulators and even where they available, few consumers are aware that this tool exists. On the other hand they seem to be well assessed by the subjects of the research:

> - I was very impressed by the service. The day I went there it was quite empty but I also think that people don't know it exists. The simulator enables a disabled person to test what it would be like to drive a real car. Perfect! I got all the information I needed in the same place.

4.4 Purchasing and maintenance difficulties

The purchase of a car involves a high perceived risk for most people (KOPPEL et al., 2008). As regards consumers with motor disabilities, the declarations of subjects confirmed this perception of risk and said that the physical risk was the most significant.

The fear of buying a car that was not perfectly adapted to their needs led many disabled consumers to believe that the purchase of a vehicle represents a great physical danger. In some cases this fear constitutes an insurmountable barrier.

> - I want to buy a car a lot, but I'm very afraid, I'm very afraid of mechanical problems. I don't really believe in the adaptations, I end up not buying.

The high perception of risk together with the lack of information, cited above, seem to account for the considerable amount of time people with motor disabilities report spending on the adapted car purchase decision process. The purchase process was described in many accounts as being tantamount to a "soap opera". The main reasons for this lengthy process seem to be associated with lack of knowledge on the part of the bodies responsible for the adaptations necessary in each case and the difficulties faced by consumers to obtain the mandatory tax deductions.

> - My latest soap opera to purchase an adapted car began at the end of 2010 and lasted for more than five months
>
> - The DETRAN [Transit Department] is a problem. They don't know how to assess what adaptations are positive or not.
>
> - I began the "soap opera" to buy my long dreamed of vehicle. A lack of judgment and common sense sometimes hampers the process.
>
> - The bureaucracy to buy a brand new car with IPI (Industrial Product Tax) and ICMS (Goods and Services Circulation Tax) deductions is very complicated and this ends up discouraging us..

During the purchase process, unlike what happens in the purchase of cars by people without disabilities (BACHA and STREHALAU, 2005; DARLEY, LUETHGE and THATTE, 2008), other family members play only a small part. The disabled motorist is usually the only one to give an opinion, even if the rest of the family will also use the car, thus appearing to increase the perceived risk of this purchase.

The maintenance of the adapted vehicle is also a source of problems. After going through the complicated process of buying the car, many people said that they were forced to sell the car soon afterwards because they could not afford the maintenance costs.

> - I sold my car because I couldn't afford maintenance and bought a motorized wheelchair.

- After the difficult purchase process, after two months I saw that wouldn't be able to afford maintenance ...and it is very dangerous not to take good care of the adaptations. So I sold it.

However, many of these consumers assured that, if their financial situation improved a little, they would buy another car, as they missed their former vehicles very much. These people referred to the time they had a car as a "happy period that will not return".

4.5 Difficulties parking

Academic studies like those performed by Resende, Cavalcanti and Andrade (2012), who affirm that, with a car, people with motor disabilities are free to come and go at will like any other individual, as well as some testimonies of consumers previously presented in the present article, in which disabled people place their hopes, with the purchase of a an adapted vehicle, of being able to move around with greater ease may be responsible for the false impression that, with a car, all mobility problems of disabled motorists will be resolved. One of the aspects of the issue discussed in the present study – and which shows that locomotion problems continue to exist even with the purchase of a car – is the lack of parking spaces reserved for disabled people. The subjects highlighted that in various car parks, despite being mandatory, there are no spaces for the disabled and when they do in fact exist they are often occupied by people who are not disabled.

One of the blogs contained a testimony of a disabled person, who when asking a person without a disability why he had parked in a reserved space, received the following reply: "Ah ....there are never any disabled people in this mall.". The discussion continued with the disabled person asking this person whether it had never crossed his mind that it was exactly because the mall was inaccessible that these people did not go there. The offender went away without removing his car from the forbidden area. Various comments were made in the blog on this story, all very angry and affirming that this type of situation is very common.

Given this lack of respect and the difficulty that disabled people say they face to obtain the document authorizing then to park in exclusive spaces, many of these citizens end up giving up fighting for their right to have a place to park. With time, these individuals are even discouraged from desiring a car, as leaving home by car and not being able to park annuls the advantages of mobility that could, in theory, be provided by the car.

- It is common for parking lots not to reserve spaces for wheelchair motorists. After all, why obey the law?

- Another "soap opera" is to park, it's unbelievable that there are people that don't respect this park in these spaces. The problem is a cultural one: it's linked to awareness and sensitivity, accepting the idea that these people need to enjoy their rights to be included in society. Ah, something else, dispense with the authorization to park in spaces reserved for disabled people.

- I gave up, I just don't look for special spaces anymore. In fact my new car doesn't even have the sticker to park in disabled peoples spaces.

Another problem involves the places that have spaces reserved for disabled people but which do not meet their needs. This discrepancy usually occurs because the size or the surface of the space is inadequate.

- Even in places that have spaces for disabled people, their size in most cases is not big enough to allow the person to get out of the chair or take the chair out of the car.

- They created (in a restaurant) two places for disabled drivers in the main car park, which at the entrance and are well signposted. However, they have a gravel surface making it difficult for the disabled person to propel the wheelchair. It is necessary for another person to push the chair in order to prevent the chair from getting stuck in the stones.

4.6 Meanings and feelings associated with cars

After facing and overcoming all kinds of difficulties to purchase a vehicle, to maintain it and even to use it, disabled consumers affirm that they feel victorious and say that owning a car gives them a "feeling of triumph". In many testimonies it was possible to perceive that this triumph is associated with the fact that people with motor disabilities believe that with a car "the disability vanishes".

- I have a car to feel I have autonomy, that I am not different from other people. Even with adaptations in the car, I am equal to/the same as other people.

- When I am driving my car in traffic and a guy follows me and makes a pass, I let him. I even take his number. I don't say, and it wouldn't even be the place to say, that I can't walk.

- Once I was stopped in a police roadblock and a policeman told me to get out of the car. I said: I'm not getting out. The guy shouted: get out of the car!!!. So I took the keys out of the ignition, gave them to him and said: get my wheelchair from the boot. He was very embarrassed. I hate getting out of the car. At least when I'm in the car no-one looks at me with an expression of pity.

- When I'm in my car it's as if I were not disabled. But I always hear things like "you drive much better than normal people". I thank them, what else can I do?

The testimonies in the email groups and blogs of people who already have cars seem to indicate that the expectations of those who haven't yet bought a vehicle will in a certain way be confirmed despite the many difficulties that these people will continue to face to move around. The owners of adapted cars declare that that they are much more independent than when they did not have a car.

- Before my brother was my driver, but I couldn't depend on him for everything...so I bought a car. Nowadays I'm independent.

- With a car we achieved autonomy not just of locomotion...we were now able to choose what we wanted to buy, what clothes we would wear, go to the cinema when we wanted to.

The research also showed that the car seemed to awaken feelings even in people who could not drive owing to their kind of disability, such as people with very serious motor difficulties. These individuals dream of the day when they will be able to drive, even though this may be impossible or an extremely remote possibility.

- I would really like to drive. My disability doesn't let me, but I feel good just dreaming of the day I will have a car. I will have autonomy.

- I know that it is distant but I'm doing physiotherapy to increase the strength of my arm so that I can drive one day. It's what I most want and, God willing, I am going to succeed.

Although the focus of the research is on people with motor disabilities, many visually impaired people said that they would love to drive. A public declaration from Google regarding the development by its engineers of technology to construct a car that would not need a driver has renewed these people's hopes.

- Google's new car that does not need a driver may mean a radical change for visually impaired people. We will be able to "drive" this car and have autonomy.

- This new car promises to give us back the unforgettable sensation of driving.

For those consumers who one day drove cars and nowadays, owing to a disability, can no longer drive, the car's meaning seems to be tied to a happy period, which can no longer be brought back. These people attribute nostalgic feelings to cars.

- It was a day during the carnival. I drove home, put the car in the garage, went to sleep and woke up the following day blind. I miss many things, I have never been able to drive again, this feels very bad. I would have liked to have known that it was the last time I was going to drive, it was so good.

- When I remember the time I didn't have any disability, I remember my car. You know, I still have my car even though I can't drive anymore.

This fondness for their cars that consumers had before becoming disabled was verified in many testimonies. For those that keep the vehicle, it seems to be a bridge between present-day reality and a nostalgic past. Many keep the vehicle even though they cannot use it. For those who can drive, adapting the car they had before their disability can help maintain this identity. According to some people this adaptation constitutes the "representation that not everything has changed" and that despite the "limitations of disability", they continue to be the "same person as before".

- Many people ask if it's worthwhile adapting a car with manual gears , especially if the guy "becomes" a disabled person, like me, due to a spinal injury. Even more so if the person already has the car and develops a feeling for it. Of course it is, it's very difficult but it's worth it. After all if you really want to adapt your old car, go ahead I'm sure it will like it and pay you back in full.

- My car is my link with the person I was before I had an accident and became disabled.

5 – FINAL CONCLUSIONS

The aim of the present study was to investigate the consumption of automobiles by people with motor disabilities by examining their motivations, difficulties and changes that

adapted cars can make in the lives of these consumers. The results suggest that the quest for autonomy is the main reason why disabled people desire a car. It should be emphasized that this quest for autonomy is even greater due to the lack of respect and structure that these people face in Brazil.

Owners of adapted vehicles confirm that their much sought after independence can be achieved with a car despite the difficulties faced to purchase, maintain and use the vehicle. A car can lead to a great change in the way disabled people relate to the world, including their performance as consumers. The research showed that adapted car owners declare that they feel more complete persons when they are behind the steering wheels of their cars". This feeling is not linked only to the functional benefit provided by the car but also the sensation mentioned by many subjects that disability becomes invisible to others when they are driving.

The hope that a vehicle will grant autonomy appears in testimonies as being closely related to the fact that people with motor disabilities are very dependent on other individuals to transit in urban spaces, mainly due to problems of accessibility in collective means of transport and pavements. Thus, the purchase of a car by people with motor disabilities appears to be merely one of the facets of regarding the lack of urban mobility in Brazilian cities. Bromley, Matthews and Thomas (2007)point out that cities that are not concerned with mobility in the sense of providing the conditions necessary so that people can circulate without problems, opt for social exclusion. In order to try to diminish this exclusion people with motor disabilities, when they are able to do so physically and financially, seek an individual solution and buy a car.

It should be highlighted that in the cases of both the use of collective transport and adapted vehicles, the difficulties faced by people with motor disabilities to circulate in the urban environment cannot be attributed exclusively to infrastructure problems. The lack of training and good will on the part of bus and taxi drivers is a hindrance but a lack of citizenship solidarity and common sense can be found in the general population. This can be seen in a reluctance to help disabled people and even breaking the law as in the case of the spaces reserved for disabled drivers in car parks.

This lack of care on the part of other people can also be seen when disabled people are buying a car. Examples were reported of salespersons that have neither the patience not the training to cater to disabled people. This stance seems to be tied to the fact, previously mentioned in the literature (FARIA, SILVA and FERREIRA, 2012), that these people are not seen as potential consumers by owners of commercial establishments and consequently also by their staff.

Many possibilities for future research can be considered based on the results of this exploratory study. The testimonies indicated that the lack of urban mobility – evidenced for example in the difficulties encountered to reach places of consumption and those faced in car parks of malls without specially reserved areas – is closely related to the inhibition of various social roles such as those of student, worker and consumer that should be exercised by disabled people. Thus, this may be a promising way for students of marketing to make an effort to seek to understand the impacts of the lack of urban mobility on the consumption of disabled people. In the areas of people and organizational management one may study this impact on the way these people interact with the company as workers.

Another avenue of research would be to observe the role of bloggers and informal leaders in email groups as sources of information for disabled people in car purchase processes. New research, perhaps also using netnography, can investigate the influence of these opinion formers in the purchase of other products and services by disabled consumers.

In the midst of recent trends towards using more sustainable means of transport (MAU *et al.*, 2008), found no indication of a concern in this area on the part of disabled people. Thus, another study could explore this issue in more depth, seeking to understand if there is trend for disabled people to value more sustainable cars.

Finally, it should be observed that much research aligned with the transformative research perspective can be undertaken focusing on issues related to improvements in transportation systems to meet the needs of the disabled athletes and tourists who will come to Brazil the football World Cup in 2014 and the Olympic Games in 2016.

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