How Manufacturers Haste and Consumers Taste Turn into Environmental Waste: a Waste Analysis of Picnickers in Eskişehir, Turkey

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Abstract

Since the modern life in the urban areas is fast and exhausting, people who are tired of the routine city life tend to involve in the recreational activities provided by the local governors in their neighborhood. One of these facilities is having a picnic in the picnic areas in the countryside. However, the expansion of these services produces great amount of rubbish and lacks of proper environmental management, too. This study presents an analysis of the waste generated by the visitors in the picnic areas of Eskisehir in Turkey. Based on observations in various different picnic areas, this study highlights the unsatisfactory aspects of the present situation in terms of the amount and the composition of the picnic waste scattered around. There is also a concern over the expansion of picnic activities in the area that would result in more waste being generated. The characteristics of domestic waste and people's environmental awareness were studied by observing picnickers and analyzing over lefts they left in the picnic areas. The results showed that the wastes analyzed get accumulated in such categories like chicken packages, bottles, plastic bags, wet towels, diapers and cigarette butts. The motives that drive visitors to be ignorant about their wastes were laziness, carelessness, being accidental and unconsciousness. Therefore, both manufacturers and consumers need to be responsible for this environmental pollution in the picnic areas. Besides educating people about the issue in alternative ways, it is further suggested that governors must make manufacturers feel the need to touch a raw nerve by redesigning their products, and organizing social responsibility facilities and taxing products which are the most frequently found as waste in the recreational areas.

1- Introduction

The very first waste of the living creatures on the earth was manure, which was the most vital food for the soil and plantation, indicating that all organic waste of human beings', animals' and plants are directly recycled in the nature leaving no single item behind. This is how recycling in the nature works. As the human being's physical needs defined in the pyramid of Maslow's hierarchy of needs if have been satisfied, they tend to divert their direction to self-actualization which triggered the industry of revolution. The Industrial Revolution was a period when new sources of energy were used to power newly invented machines which are designed to reduce human labor use in production. This mass production needed huge markets and fast consumption creating a great deal of waste of production, taste of consumption and without letting the new system recycle what it left behind unlike the nature's production, consumption and recycling process and principles. This is because the new production lane and market produces and consumes faster than it is able to recycle the leftovers. This speedy consumerist life style has led to urbanization, which is a population shift from rural to urban areas or the gradual increase in the proportion of people living in urban areas. The appealing city life turns into a mechanical, routine and robotic life style for those who constitute the work force in the urban areas. Therefore, this rural area originated people look for recreational facilities away from their city life in their close countryside. These activities are generally in the form of picnics at the weekends in the greenest areas near the city centers. These visitors leave great deal of waste scattered around in

these picnic areas after they go back to their urban lives as their new urbanist life style's reflection on their consumerist and hedonic cultures. This study was designed to analyze the wastes left behind in the picnic areas of Eskişehir to have deeper understanding of these nature ignorant hedonic behaviors and the motives behind these inconsiderate polluting attitudes. The wastes were classified into categories to profile the visitors and their consuming habits to achieve this. Following up this categorization, visitors were interviewed about their wastes and motives leading them to what they leave behind. After specifying the profiles and motives, some suggestions are made for food and drink manufacturers, consumers and local and national authorities to manage the wastes and raise consciousness.

2. Literature Review

2.1 The (waste management) Recycle in the Nature

It is indicated that most animals have a balanced life in the nature, which is the vital key to survive. They only take what they need and try to keep the amount of waste at the minimum level. The waste is reduced, reused and recycled by some others, which is a naturally structured golden solution for what human beings leave behind. These animals are the recyclers of the nature (Indiagetgreenblog, 2016). This balance is considered as a paradigm called "balance of nature" which explains how nature is organized. Average people can spot this balance and human beings have tendency to upset this balance. This paradigm tries to highlight the significance of this balance by making sense of the universe and the world which is its part. This way humankind can prioritize their needs accurately (Krichner, 2009). According to an eighteenth-century Ukrainian philosopher Gregory Skovoroda, we must be grateful to God that He created the world in such a way that everything simple is true and everything complicated is untrue (Ehrenfeld, 2009). Depending on the fact that there is a need of reframing human needs and considering everything is simple, it may be useful to review the most popular human needs approach known as "Maslow Hierarchy of Needs" which has been used to determine modern people's needs for various aspect such as psychology, education, economics, marketing, management, sociology, political science, and others.

2.2 Human Needs (Maslow's Hierarchy of needs)

The son of a Ukrainian immigrant in the USA developed "Maslow's hierarchy of needs" in 1950. This pyramid model is used in the wake of Western hegemony and academic expansion of studies worldwide even though it served very much for capitalist ideology. Its universal validity and popularity is the greatest obstacle to criticize its possible weaknesses (Bouzenita and Boulanouar, 2016). Considering the needs in the agrarian societies who cultivate the soil are concerned about the mercy of weather which means that intervention of higher power can affect the cultivation process. Therefore, religious values play a key role for their lives. However, in industrial societies plough is replaced by conveyor belt leading central planning to take on God's role. Industrialization makes religion values become more secular transforming them into knowledge societies such as Western Europe, North America and Japan (Hossli, 2007). The micro cosmos formed by the replacement of roles in the universe generates wastes which need to be managed by central planning—like the God does in nature. The motives behind the capitalism and Maslow's human needs draw the boarders of this waste generation and management by making people believe that happiness is directly related to material possessions since this commodification system is constructed on demand and supply cycle which generally fails in recycling the wastes in this process (Bouzenita and Boulanouar, 2016).

2.3 Industrial Revolution

Traditional societies are self-sufficient in most of their needs because their foods and clothes could be made from land or animals to a great extent (Ateş 2008). Therefore, they need to respect their main source of nature. However, in the modern society's pollutant industrial production and globalizing forces cause environmental and social deterioration since the inception of industrial revolution. The new industrial plants suck natural resources dry generating tons of waste dumped into rivers, lakes and seas for the sake of economic activities

2.4 Mass Production

These economic activities consisted of a complex industrial system of the manufacturing World produce everything used in our homes, garages, offices such as potato chip from potato, seat cover from cowhide, and plastic pen from petroleum. This transformed the world into a center of mass production making most of us unaware of actual making of these everyday

items and tend to take their existence for granted so, people tend not to think of the farmer or farm worker in the field who grows, picks and sorts our fresh foods because consumers are oblivious to the story line behind almost everything used in their daily lives (Cloer and Cloer, 2013).

2.5 Urbanization

This industrialization produced the mechanization of agriculture, and farmers migrated towards urban settings giving rise to the industrial city which were larger, more densely populated, and more diverse with poor living conditions. Urbanization is increasing all over the World with its unpleasant municipal solid waste byproducts of urban living. Cities are centers of garbage production, and the amount of garbage they create is increasing even faster than their populations, according to a recent report from the World Bank. For many cities in many developing countries, it's rapidly becoming an environmental and economic fatality in many ways. It is found that the urban residents in the world are producing significantly more waste compared to the rates 10 years ago (Berg, 2012).

2.6 Consumption

This huge amount of waste generation is closely related to financial and intellectual income level because the higher people's income level is and the rate of urbanization is, the greater the amount of produced solid waste is. OECD countries produce almost half of the wastes produced in the world, whereas Africa and South Asia regions produce the least waste (Urban Development Series, 2016). Waste is mostly considered to be an urban-related issue. In rural, the rate of packaged foods consumed is less and rural people generate less food waste and manufacture less. People living in the cities produce twice as much waste as people living in the rural areas. Since the urban citizens are usually richer, they generate four times as much (Hoornweg, Bhada-Tata and Kennedy, 2013). Issues regarding global consumption and waste are complex, contentious and timely. Researchers are developing approaches to these issues presenting a real opportunity to make a substantial positive impact on the pathway to a more sustainable future

2.7 Waste Production

To figure out the waste production of the industrial societies in the urban areas, it can be essential to examine the following pie-chart which indicates that high-income countries produce the most waste per capita, while low income countries produce the least solid waste per capita (Urban Development Series, 2016).

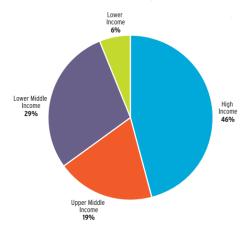


Figure 1: Waste Generation by Income in the World

2.8 Waste management

Economic contexts require production and management. Managing wastes generally considered as a local issue, however, if it is accepted as a national priority, it makes the problem politically and socially visible. This vision can only operate effectively by means of coordinating the national markets. National governors have the power to overcome the difficulties

and opportunities of waste management if coordinated well. Major concepts referring to a waste management priority are life-cycle of a product and considering waste as a resource. After this, goal setting is a vital step to realize the new policy. Thus, economic and informational regulation tools get ready to start operating and good decisions can be made when dealing with the waste, governments need to know how complicated the process is and what the inside and outside interrelationships are because it is a cooperative process of local, regional and national governments, private sector, community and the non-governmental organizations. Realizing the existence of these challenging various relationships will help governors to understand the issue effectively because governor's waste management approach is to be on a dynamic perspective (United Nations Environment Program 2013).

2.9 Significance of the Study

The findings of this study will be beneficial for the society considering that waste generation and its effective management play an important role in the protection of the environment. The greater demand for environmentally friendly picnickers in the neighborhood and the World justifies the need of such life changing analysis and their implications. Thus, local governors that apply the recommended approach derived from the results of this study will be able to train the citizens and handle the waste problem in the recreational areas. Moreover, the national authorities and decision makers can reformat the way they approach the waste management and develop educational environment protection trainings to deal with the issues. For the researchers the study will help them to uncover the critical areas and profile the consumer behaviors in the waste generation process. Therefore, a new view to waste generation and management in the recreational areas may be arrived at.

3. Methodology

Coalter (1999) suggested qualitative methods to collect data in empirical sciences which requires fragmentation, quantification and categorisation of the collected data. He was also interested in the idea of collecting the qualitative data through individual interviews using the real context. The focus of this study is three picnic areas nearby Eskişehir province. As the meaning is the main focus of this study, qualitative methods are suggested. The aim of this study is to reveal the feelings of picnickers in Eskişehir regarding waste generation and waste management in the picnic areas which have been densely polluted in the focused area of this study. Preliminary informal investigations were conducted by the researchers regarding the waste generation habits in the picnic areas subject to this study. The last visits and investigations were done in the relevant regions in May 2016. During these visits, the researchers raised awareness regarding the waste generation and waste management in the relevant regions. This awareness raised new questions in the researchers' minds which the researcher looked for answers through in-depth interviews with the picnickers in the investigated areas. Active interviews were conducted with the picnickers in the subject picnic areas. Active interviewing technique is a technique benefitting from the advantage of interviewee's life experience by accepting him/her as an authority on the investigated subject. The researchers are expected at this point to keep the conversation focused on the investigated subjects. However, they are also supposed to be ready to make necessary changes in the interview questions considering the newly emerging ideas from the interviews. The interviews mainly dealt with the following subjects;

The socioeconomic characteristics of the picnickers.

The present environmental pollution and current situation of the management, collection, transfer, treatment, and disposal of domestic waste.

Picnickers' knowledge about domestic waste pollution, as well as hazardous and recyclable domestic waste.

Picnickers' mode of domestic waste collection and treatment.

Picnickers' willingness to participate in domestic waste management.

As these subjects were investigated through the active interviews, data collection procedure expanded with the new emerging topics. Through the questions mentioned above, it was aimed that the waste generation and waste management will be investigated in detail through the interviews with picnickers. As new ideas emerged, the addition of new sampling through new interviews continued. The picnickers interviewed were selected through theoretical sampling method. Theoretical sampling method is a strategy in which data collection continues till the investigated topic has been saturated (Glaser and Strauss, 1967). Therefore, the interview process went on with the picnickers till the topic of interest has been

saturated with enough information. The number of total interviews was 84 in total when all visits were considered through two months. Demographic information of the respondents was disregarded in the study as they are out of concern in the study. All the interviewees were type-recorded after receiving the approval of the interviewees, and then they were all transcribed by the researchers. Additional data were also collected through informal chats and observations during the field work.

All the data collected through the field work were analysed based on a grounded theory framework (Glaser and Strauss, 1967). According to this theory, collected data are continuously analysed through the whole research process. This analysis requires the steps of open coding, focused coding, categorising and theory building (Charmaz, 2002). These codes help the researchers to compare the data from one respondent to the next. At the beginning of the data analysis, open codes were used to highlight the content of the data by reducing record contents to single words. When all the interviews were analysed, open codes were studied with great care, and the ones most frequently repeated in the transcriptions were chosen to build larger data. This is also called as focused coding. The focused codes are obtained from the constant comparison of the conducted interviews, and they represent themes in the data more explicitly than open codes. In this study, focused codes were categorized. In the end, theory is developed by the researchers to build connections between the final categories.

Qualitative studies are considered to be reliable when the data collection is done by the same individual (Kirk and Miller, 1986). Therefore, the interviews were conducted by only one researcher in this study to make it reliable. However, all the coding procedures were done together with all the researchers. Validity in active interviews is obtained through the conversational approach for data collection in field researches (Platt, 2002). Differently from survey interviews, it is possible for those involved in the interaction to clarify the meaning in active interviews. Validity of this study is also increased by extending the data collection into two months. The fact that the researchers are familiar with these picnic areas through their former visits in the past also increases the validity of the study.

As the second step of the study, all of the domestic wastes discharged over days by the picnickers in the 3 targeted picnic areas were collected in garbage bags. The mixed waste in each plastic bag was then categorized. The sorted components were counted, and the composition of domestic waste in each area was calculated. Finally, total 1334 pieces of domestic waste was sampled as the proportion of the Eskişehir's total picnic area representation. The distribution of waste types is tested for each category to identify the picnickers' consumption habits and profiles in the city.

4. Analysis

The analysis of the collected data was done through manual methods. The conducted interviews were transcribed by the researchers very carefully, and then they were all manually analysed. All the transcriptions were read carefully to find what was common in them. The pieces of information in each transcription were put under a relevant category. New categories were created when needed and relevant pieces of information were placed into the relevant category. When the categorisation of all the transcription procedures was done, the obtained categories were re-evaluated by the researchers to see if there were any overlapping ones. If there was, they were either combined or deleted. Some categories were combined to reduce the number of categories for the interpretational purposes of the final categories. The final categories obtained in the study are "lack of education", "taking others as a model", "creating jobs for others", and "fast life style". These four categories were found to be the final categories reduced from many subcategories obtained from the analysis of the data. The final categories are justified as follows depending on the findings in the study

5. Results

Interview results indicated that the motives of the picnickers leaving wastes behind in the picnic areas vary in 4 categories. These categories are justified through examples as follows;

"Lack of Education"

The findings of the study from the analysis of the interviews suggest that picnickers think that people are not educated about the waste generation and its negative consequences in the nature. Waste generation and waste management should be a part of the school curriculums. They stated that they have never been educated at any stage of their education life

about waste generation, waste management and how wastes are recycled in the nature. The following extract from respondent 23 is a good example for this.

"I like going on picnics whenever I have an opportunity. I have observed the pollution in the picnic areas, and I have to confess that I am also one of those who are not careful about pollution in the picnic areas and wastes left behind. Now I am trying to find out the reason why I am not careful about waste generation is that I have never been made conscious about waste and waste management in nature. I am a graduate of high school and I do not remember any focus on waste management and waste recycling in my education life. It should be a part of school curriculum."

As can be seen from the extracts above, waste management is suggested to be a national problem rather than being a local problem. Picnickers state that they have not received any formal education through their education life focusing on waste and waste management, what happens to waste when left back in the nature depending on waste types.

"Taking Others as a Model"

Another category regarding the waste management obtained through the interviews from picnickers is that people believe their personal care to waste generation will not be enough single handedly as waste management is an issue which should be equally handled by every individual in the society. Some respondents state that they somehow know that they are aware of waste generation and waste recycling in picnic areas. However, as they see thousands of people being careless about their wastes in the nature, they personally believe that how much care they pay to this issue will be useless in protecting the picnic areas. They state that there is a need for social unity regarding waste generation and environmental care in picnic areas. The following extract from respondent 5 is a good example supporting this point;

"I had been very careful about waste generation not only in picnic areas but also in every stage of my life. I used to train my family about being careful in waste generation and waste management not only in picnic areas but also in every phase of my life. However, as my family, especially my kinds observe others in picnic areas exhibit careless behaviors regarding the protection of their environments, I started to feel that my efforts regarding the protection of the environment was useless because my kids started to take others in picnic areas as models. We should be very careful about waste generation and waste management in the nature."

"Creating jobs for others"

Another category is related to creating jobs for others (who are legally responsible for cleaning the picnic areas). There are some respondents, whose number is very significant, who state that they are careful with their tax payments and they have the right to expect cleaning services from the relevant authorities (municipalities in this case). Some respondents believe that the picnic areas where they have picnic are under the responsibility of local municipality. They are responsible for keeping these areas clean. They believe that employees of local municipalities should do their jobs and clean the local picnic areas as they are paid by the central government for this. They also mention about the limited number of garbage containers around, which support their ideas claiming that local municipalities fail in fulfilling their cleaning tasks. The extract from the respondent 45 is a good example for this;

"I do not have much free time to spend with my family and friends. When I have free time, usually one day a week when weather is clean, we come to these recreational areas for picnic. It is true that picnic areas are not clean and they are not cleaned regularly. Who is responsible for that? The local municipality is responsible for that, but they do fulfil their tasks adequately and we have to have a picnic in such messy areas. If they cleaned such areas as they are supposed to do, it would be easier for us to keep them clean. Local authorities should be more careful about this. Have a look around. Can you see any garbage container for the picnickers' use?"

As can be seen from the extracts above, some respondents consider local municipality more responsible than the picnickers blaming them for not fulfilling their task of cleaning the picnic areas.

"Fast Life Style"

Another category summing up the picnickers' ideas regarding waste generation and waste management is fast life style. Respondents believe that life is too hectic for everybody. Therefore, picnickers have very limited time to have picnic and they do not have any spare time to allocate to being more careful about waste generation and waste management in the

picnic areas. Respondents state that life in modern time makes people hectic. Therefore, people cannot spare any time or can spare very limited time to environmental issues, such as waste generation and waste management in picnic areas. The following extract from respondent 64 is a good example for this;

"We do not have much time. Picnic times are the times when we have the only free times. Therefore, people spend that limited time for fun, rather than being busy with waste management and waste generation in picnic areas. Picnickers should have more time to care about waste management and waste generation. We are here to have fun. If we have more time in the future, we will be more careful about pollution levels of picnic areas."

As can be seen from the example above, picnickers tend to rationalize the pollution in the picnic areas with having very limited time to have fun.

5.1 Waste Analysis

From 3 picnic areas 1334 pieces of waste were picked up and analyzed. Analysis of the wastes resulted in 6 main categories.

Chicken packaging:	(298 pieces)	%22.3	
Bottle (of water and alcohol):	(290 pieces)	%21.7	
Plastic bag:	(303 pieces)	% 22.7	
Wet towel:	(268 pieces)		%20
Diaper:	(82 pieces)	%6.1	
Cigarette butt:	(93 pieces)		%7.2

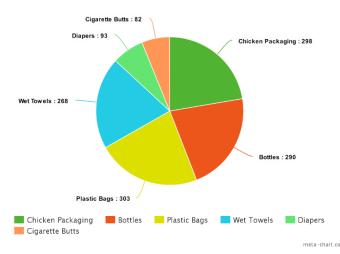


Figure 2: Waste categories in the 3 picnic areas of Eskişehir

Examining the categorization, each category indicates a certain group of consumers and producers. The highest percentage is the plastic bags which are generally given by the supermarkets. It can be concluded from this that picnickers generally bring their foods and beverages from super markets. This brings a responsibility for the super markets to involve in the waste management facilities that would be organized by the policy makers. The following category is chicken packaging. This may mean that either picnickers eat more chicken than meat or the packaging of the chicken is generating more waste than the meat packaging. Since the chicken is cheaper that meat, it may be popular among the picnickers indicating a middle class picnicker profile, which would assist while designing educational facilities. If the packaging is the

issue, then policy makers are to be in charge to take necessary precautions coordinating and cooperating with the producer and retailers.

After chicken packaging plastic and glass bottles come most. This indicates that picnickers consume great deal of alcoholic and non-alcoholic liquid when they are having a picnic. Considering this fact, the glasses must be deposited by the manufacturers and stores which would lead picnickers not to consider them as wastes but coins. The most interesting category is the wet towels because they are new to our culture but the amount is quite a lot, almost as much as the most popular ones which are plastic bags, the bottles and chicken packaging. This indicates that regardless of the economic growth of the society, the egocentrism is getting bigger and bigger within the fast living "selfie society" because wet towels are very useful and practical for personal hygiene but they threat the environmental hygiene dramatically. Therefore, raise of consciousness for consumers and some limitations and taxations for producers have to put into practice by national and local decision makers. Diapers indicate a similar case. They are quite new to the middle class. However, the users are not aware of the fact that they are a great threat to the society. Producers should take actions to illuminate their customers how to handle the diapers as they sell the product.

The least amount but quite an important category is cigarette butts. It is a worldwide known fact that smokers are a potential threat to the family budget and their personal health. The findings of this study figured out that the careless smokers' cigarette butts are a great treat to the environment by not only scattering them around polluting the forest but also causing forest fires.

6. Discussion and Conclusion

As the World Bank reports suggest, the higher the income of an individual is, the more waste s/he produces. Therefore, if the welfare of the community increases in the society, the waste generation needs a special care. If the welfare and consumption are not accompanied by an effective waste management system, the sustainability of the natural resources may be in danger. The sustainability of these resources heavily relies on the producers and consumers' sustainable behaviors which include moral values that care about the environment in which they all operate. This regulation can be adjusted by the governors and civil foundations. National governors should set up programs of ultimate waste generation analysis and management systems while the country is passing through an economic welfare program. The national governors can coordinate with local governors to lead this progress without harming the environment. Otherwise economically advanced society who has not got the intellectual and educational background for their consumption style will generate great deal of waste but fail to manage what they have generated. These nationwide programs must contain illuminating approaches for local governors, educational institutions, producers and consumers. This study can be an inspiration to design such programs since it reveals the motivation of consumers why they scatter their waste in the recreational areas. These findings will be precious in designing educational programs for the consuming society. The categories of the wastes also highlighted what consumption habits the picnickers have. Thus, these producers will learn about their responsibility in waste generation and will be expected to reform their products by the governors in both ways that their products contain less waste and their customers will know more about how to dispose the waste generated by using the product.

Suggestions

This study can be carried out in the recreational areas of each city in the country and the whole countries consuming habits of picnickers can be determined to constitute and operate a nationwide waste management program in recreational areas. Furthermore, the brands of the mostly generated wastes can be spotted and mutual negotiations can be held between them and the governors to sort out this environmental problem.

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