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CONSUMER PROTECTION, ACCIDENTS RESULTING FROM CONSUMER PRODUCTS and THE DESIGNER'S LIABILITY

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INTRODUCTION

We are all consumers. We are 'consuming' or with a better term 'using' thousands of products which surround us in our daily life ranging from the ones for our most temporary pleasures to the ones for our most vital needs. The usage process involves scenarios which end up with satisfactions or disappointments as opposed to our expectations. Scenarios which end up with accidents, product failures, low performance, or difficulty in use are experienced by users quite often. However, in our country it is not very often in such cases that the user can claim his/her right from the producer or seller of the product.

It is our most legitimate right to expect the product we use to be safe. In our country, accidents resulting from product design defects are experienced very often, however laws which protect the consumer from such products do not exist yet. The concept 'product safety' is narrowly viewed both in the formation of related laws and by the mass media.

Standards and laws which protect the consumer, in their most advanced examples aim to enforce or stimulate the producer to maintain the highest quality that a consumer would expect from a product, at each step of the process which starts from the design of a product to the time it is used by its consumer. Maintaining the safety of a product necessitates an effort which starts at the very beginning of this process which is design. In the recent years, while policies of the European Union (EU) and customs union are being established, common laws, directives and standards which are accepted by the member states are bringing control mechanisms to the producers which indeed, start from the design process.

The Council Directive on general product safety⁽¹⁾ which was formed in the European Union in 1992 aims to maintain that only safe products should take part in the European market. The Council Directive on liability for defective products⁽²⁾ in 1985 aims to maintain that producers of the member states shall be liable from a defective design. Besides these, "Quality Assurance Standards"⁽³⁾ of ISO (International Standards Organisation) which obliges producers of the EU and customs union members to be licensed by the organisation, is targeting to bring such producers to a certain level at which they can produce non-defective products.

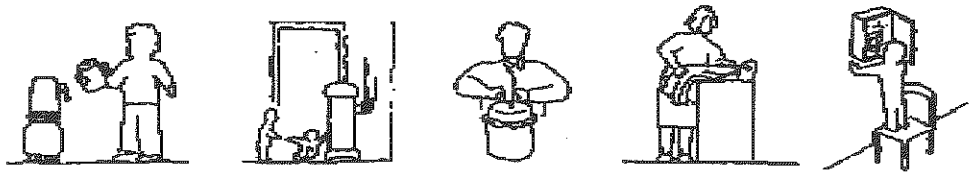
On getting prepared to be a member of customs union in 1995, our industry will have difficulties to export goods to the member states unless it can integrate such laws and standards into its production policies. In our country, the Turkish Standards Institute (TSE)⁽⁴⁾ is now authorised to educate and licence manufacturers on quality assurance standards. Apart from this, the Consumer Protection law⁽⁵⁾ in Turkey which is still in draft form, will be giving consumers

the rights that they have never owned. However it involves limitations in its formation since it does not include the terms which renders the producer liable from design defects of a product.

In this paper, the concepts 'product safety', 'product liability' and 'design defect' will be discussed, consumer products which often cause accidents in the homes in Turkey will be exemplified, laws and standards for consumer protection in Turkey and in the EU will be consulted.

ACCIDENTS RESULTING FROM CONSUMER PRODUCTS

In our country, contrary to occupational accidents, accidents resulting from consumer products are not given very much emphasis by researchers. In relation to the studies on consumer protection, when needed sometimes the results of foreign investigations were used. However, results of the research on home accidents in Turkish urban life which was conducted as a part of the author's master's degree study in 1988⁽⁶⁾ showed that such accidents were unique to the Turkish style of living and did not have any similarity in their causes and types to the foreign examples. The analysis of its data revealed the fact that design defects of certain products contributed significantly to a high proportion of recorded accidents. The research involved 300 accident cases which were recorded by interviewing the occupants of the houses at three different socio-economic-status district of Ankara that were classified as low, middle and high income. It also involved a pilot study including interviews with the patients of a state hospital. The most typical accident scenarios⁽⁷⁾ in which such defective products were involved will be described below. Later, in the light of the definitions of the concepts of 'product liability' and 'design defect' in law, why such products are regarded to be defective will be explained.



Turkish teapot and portable bottled gas: Turkish teapot was the most frequently accident causing object within all recorded accidents. The scenario for the majority of such accidents was the same. In a squatting type house (which belongs to the lower socio-economic-status group) the mother makes tea with a Turkish type teapot on a portable bottled gas unit. However while the child is playing around he/she knocks the teapot and tips it over. The combination of Turkish teapot and portable bottled gas unit causes the accident. These features occupy a place in the main room all day long by being only occasionally supervised by the mother. Turkish tea requires a long process to be made, is drunk continuously at any time of the day, and bring warmth and a soft humidity to the room. It is therefore an integral part of the environment and culture and is an unchangeable element of life in those houses. The main room is the most commonly used room by everybody in the house obviously by being the most favourite play-room for the children.

In the burns and scalds surgery department of the hospital which was visited during the pilot study nearly 80% of the patients were 2 to 6 year old children who had experienced above described scenario. In the results of the actual research, Turkish teapot was involved in 11.6% and portable bottled gas units were involved in 4.3% of all reported accidents.

Stove: Similarly, stove is also an unchangeable element of above described environment. In the houses which do not have a central heating system, the stove is usually the central element of the house. There is usually only one stove in the house which is placed in the main room where nearly all the activities have to take place in the winter time including eating and sleeping. The stove being a central element for people to gather around, in order to get warmth, and its inherent danger which require it to be kept apart from the main activity areas create a conflict in the environment and cause it to be placed inappropriately in the house. As a result, the first factor of warming people is given the highest priority in deciding how it will be positioned. Stoves cause more accidents by having too much prominence in the room while successfully performing its warming function.

The victims of stove are usually children who learn that it is dangerous after their first experience of touching it. The result is usually a minor injury which is often ignored by the parents. The stove was the second most frequent accident causing object in the home and was involved in 10.6% of all the accidents reported.

Pressure cooker: The type of accident in which pressure cookers were involved was obviously an explosion. In the majority of this type of accidents, the accident happened when the victim was using the product for the first time. The victim did not know that the pressure cooker should not be opened before the inside pressure was released. This is mostly because warnings about the usage of the product were written in an instruction booklet which was not read by the user, sometimes because it was already lost when the second user was using it for the first time. Pressure cookers were involved in 6.6 percent of all the accidents reported.

Roller type washing machine: The most common scenario for the accidents in which roller type washing machines were involved was the event that the user's hand gets caught between their rollers. No matter how experienced the user is, a momentary loss of attention may cause such an accident. This type of washing machine is a typical hazardous product which is mainly used by the middle socio-economic status group. Since this type of product constitutes a lower price range in the Turkish market, upper socio-economic-status group prefer to use automatic and spinning type washing machines, whereas the lower socio-economic-status group never own any type of washing machine. Roller type washing machine was involved in 5.6 percent of the accidents reported.

Medicine packages: The most typical scenario for the accidents which were caused by medicine packages was that 2 to 4 year old children were opening them and swallowing the pills inside when they were not carefully supervised by their parents. Medicine packages were involved in 3.3 % of all reported accidents.

CONCEPTS OF 'PRODUCT LIABILITY' AND 'DESIGN DEFECT' IN LAW

One of the most common approaches which is used in accident analysis is known as the epidemiological approach which considers accidents as a system resulting from the interaction of people with their environment. According to this approach accidents are formed by a set of causes stemming from the characteristics of both elements of this interaction. The relevant characteristics the person are usually his/her age, sex, physical or psychological state; and that of the environment are its physical and social state. Products are elements of our environment. A design defect the product involves is one of those characteristics which may cause accidents.

In the analysis of an accident, causative factors coming from the characteristics of both person and the environment are usually weighed. According to the nature of the accident, either personal or environmental factors may appear to be dominant. According to the Council Directives of the EU design of a 'safe product' or a 'non-defective product' requires a broad consideration of all the factors coming from both the person and the environment.

Council Directives of the EU aim to maintain consistency in the quality of the products which take place in the markets of the member states. The directive of 1985 on 'the liability for defective products' aims to impose the member states to enforce their producers manufacture 'non-defective products'. According to the article 1 of this directive "The producer shall be liable for damage caused by a defect in his product". In article 6 the term 'defect' is defined as:

"A product is defective when it does not provide the safety which a person is entitled to expect, taking all circumstances into account including:

- a. the presentation of the product;
- b. the use to which it could reasonably be expected that the product would be put;
- c. the time when the product was put into circulation."

Such a broad definition of defect requires a product to be designed to accommodate the broadest range of circumstances of use.

The directive of 1992 on 'general product safety' aims to maintain that only safe products should take part in the market. In article 2.a the term 'safe product' is defined as:

"*Safe product* shall mean any product which under normal or reasonably foreseeable conditions of use including duration, does not present any risk or only the minimum risks compatible with the product's use, considered as acceptable and consistent with a high level of protection for the safety and health of persons, taking into account the following points in particular:

- The characteristics of the product including its composition, packaging instructions for assembly and maintenance.
- the effect on other products where it is reasonably foreseeable that it will be used with other products.
- the categories of consumers at serious risk when using the product in particular children."

Therefore in the design of a safe product, a designer must consider the characteristics of both the *product* including its physical environment, and its

users including any person who may have any type of contact with the product, even if in some conditions personal factors appear to be more dominant to cause an accident.

The draft law of consumer protection in our country does not include 'product liability' in the sense that is described above. The law in its aim does indeed include the protection of health and safety of the consumer. In its 18th paragraph the safety of a product is maintained according to the following definition:

"In the case that the goods or services supplied to the use of the consumer are harmful or hazardous to the health of the person or to the environment, in order to use such goods safely they should contain warnings on themselves or in their instruction manuals."

A similar term to 'defective product' (*ayıplı mal*) is defined as:

"The goods or services which are qualitatively or quantitatively inconsistent with the descriptions in their package, label or instruction manual; or which involve financial, legal or economic deficiencies that eliminate or decrease their usage value or the benefits that a consumer would expect from them are regarded as defective."

If the consumer can detect the defect then he/she can claim his/her money back from the seller within 15 days after the purchase of the good. If the seller deliberately hides the defect then the user can claim his/her right any time after the purchase. If the defect was indicated on the package, label or in the presentation of the good then the seller is not regarded as liable.

According to this law a harmful product can be sold legitimately if its harmfulness is indicated in its presentation and the user cannot claim any right from the seller. This means if a product is inherently hazardous as long as it is indicated on it can be sold. Apart from this, it is the seller, the law mainly renders liable from protecting the consumer's rights. Such an approach does not enforce the producers to make better designs and eliminate the hazards of the products. Whereas in the Council directives of the EU mainly the producer is liable from a defective product. The producer is not exempt from liability just by providing warnings to the consumer about the defect of a product.

The draft law also includes paragraphs about selling on an instalment plan (*taksitli satış*), selling with a campaign (*kampanyalı satış*), labeling, instruction manuals, maintaining or repairing services, commercial adverts etc. which are mainly related to the marketing and retailing stage of a product. Design and production which are the previous stages are not included.

'The act of obligations' (*borçlar kanunu*) in our country, which is in fact complemented by the draft consumer protection law, involves parts which protects the consumer's rights by contract (*akid*) and tort (*baksız fiil*).

In an ordinary sale in the case of a damage the consumer can claim his/her right from the seller with whom he/she has a contract. The seller can then claim his own right from the wholesalers. The producer being the last person in the contract chain can rarely be rendered liable since the procedure in the courts takes a very long time until reaching him. The consumer can claim his/her right directly from the producer in tort where he/she has to prove the producer was

negligent. Since an ordinary consumer may not have the technical knowledge to prove the negligence of the producer, tort is not an effective way the consumer can protect his/her rights. Whereas the Council Directive on liability for defective products maintains that any buyer or user can claim compensation for damage or injury caused by a 'defective product', without having to prove that the producer or designer were negligent. Claimants only need to prove that the defect was present when the product was bought.

In the case of an imported product, the Council Directive of liability for defective products renders the importer liable instead of the producer. This brings out the fact that any country which would like to export goods to the member states in the future has to take into account the obligations these directives impose.

QUALITY STANDARDS

Quality Assurance standards of ISO⁽³⁾ aim to impose principles to the manufacturers which will bring them to a certain level that they will produce very high quality products. Such standards are being approved by the EU and the customs union. The concept of 'high quality product' includes safety, healthiness, durability, ease of use, environmental friendliness, ease of transport etc. The ideal of quality assurance is to work with 'no defect, no tolerance, and no stock'. In such a system instead of repairing the defects, eliminating them from their source is followed as a principle. Working with such a principle requires a study which starts from the design process. In order to maintain this, companies are required to document every decision step in their design process.

Jointly working with ISO, TSE is now licensing Turkish companies on quality standards within an educational programme. When Turkey enters the customs union only the companies which have TSE-ISO quality licence will be allowed to export their goods to the member states.

CONCLUSIONS

Back to the accident scenarios described above, which are believed to be common to the majority of people who have similar life styles in Turkey, there are number of measures which can be taken by the government to eliminate or reduce them. Majority of such accidents happen because of badly designed products, since there are no measures that force producers to make better designs. Below, each of those typical scenarios will be reviewed and the role of badly designed products in them will be identified.

Viewing most of the accidents where Turkish teapot and portable bottled gas unit were involved, these products can be regarded as being defective in design, since their frequent combined use was never considered as a design problem. The teapot is already dangerous by its nature since it contains two hot containers on top of each other and in most of the cases having a slim and unstable form with a narrow base. When it is placed on another hot and unstable container, such as the bottled gas unit one should not be surprised to have a high incidence of accidents.

Child accidents from touching stove are never considered seriously by parents and perhaps by producers too, since the result is usually a minor injury which is often considered as part of child's process of learning the dangers in his/her

environment. However sometimes the consequences are not that simple. The existing design of stoves are defective since in their design, the children were not considered as a 'category of consumers at serious risk'.

The high incidence of accidents from roller type washing machines brings out the fact that they are inherently hazardous. Even if the product contains warnings and the user is informed about the hazard, such accidents do still happen very frequently due to a momentary loss of attention by the user. Since safer systems of removing water from clothes do exist, the production of roller type machines should be abandoned as already it has been in many countries.

The victims of the accidents caused by pressure cookers are usually inexperienced users. Warning the user about the hazard might be sufficient as long as the warning is permanent on the product. However the best solution to this problem would be to alter its design. By its design those pressure cookers allowed the user to open their lid when there was pressure inside. One possible solution to better those cookers is to design them in a way that it would not be possible to open their lids when there is pressure inside.

Medicine packages which do not involve a childproof lock can be regarded as to be defective, since in their design children as high risk category users were not considered.

The measures that should be taken by the government to enforce the producers and designers to make more responsible designs and therefore to reduce the incidence of such accidents can be listed as follows:

1. A product liability law should either be formed or product liability as a concept should be integrated in the coming consumer protection law.
2. Obligatory standards for inherently hazardous products should be formed or revised in the areas where the safety problem is not solved.
3. The producers and designers should be trained to be more conscious and responsible about the safety factor in the design of a product.
4. Consumers and users should be educated to be more conscious about the ways they can claim their rights from producers and sellers.

REFERENCES

1. **The European Community**, 1992. Council Directive 92/59/EEC of 29 June 1992 on general product safety, *Official Journal of the European Communities*, v: L 228 n: 24.
2. **The European Community**, 1985. Council Directive of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products, *Official Journal of the European Communities*, v: L 210 n: 29.
3. **ISO 9001**, 1987. *Quality Systems -Model for Quality Assurance in Design/Development, Production, Installation and Servicing*, ISO.
4. **Ünlü, İ.**, 1994. *Türk Standardları Enstitüsü ve Faaliyetleri*, unpublished document, TSE, Ankara.

5. **Ministry of Industry and Commerce**, 1992. *Tüketicinin Korunması Hakkındaki Yasa Tasarısı*, Ministry of Industry and Commerce, Ankara.
6. **HASDOĞAN, G.** (1988) *Interaction of Causes in Home Accidents: A Search for Safer Design Products*, Unpublished MSc Thesis, METU, Ankara.
7. **HASDOĞAN, G.** (1993) *Product Induced Home Accidents: A Search for Safer Designs*, *METU Journal of Faculty of Architecture* (to be published)

TÜKETİCİNİN KORUNMASI, TÜKETİCİ ÜRÜNLERİNDEN KAYNAKLANAN KAZALAR ve TASARIMCIYA DÜŞEN SORUMLULUKLAR

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ÖZET

Kullandığımız ürünün güvenli olması, başka bir deyişle kazalara yol açmaması ondan bekleyebileceğimiz niteliklerin belki de en başında gelir. Buna rağmen ülkemizde tüketici ürünlerindeki tasarım kusurlarından kaynaklanan kazalar sıklıkla yaşanmakta ve bunlardan tüketiciyi koruyan mekanizmalar bulunmamaktadır. Ürün güvenliği kavramı ülkemizde gerek konuyla ilgili kanunların oluşmasında, gerekse kamu kesimine hitap eden organlarca dar bir çerçevede ele alınmakta, tüketicinin korunması kapsamı içinde nadiren anılmaktadır.

Tüketicinin korunmasını sağlayan mekanizmalar, en gelişkin örneklerinde, üreticiyi bir ürünün tasarımından, kullanıcısının eline geçmesine kadarki sürecin tüm aşamalarında tüketicinin üründen bekleyebileceği en yüksek kaliteyi sağlamaya zorlar veya özendirirler. Bir ürünün güvenliğini sağlama ise bu sürecin en başında yani tasarım aşamasında başlayan bir çalışma ile gerçekleştirilebilir. Nitekim, gümrük birliğinin ve ortak pazarın politikalarının oluşturulduğu son yıllarda, Avrupa Birliği pazarlarında sadece kusursuz ürünlere yer verme hedeflenmiş, ve böylece birlik üyesi ülkelerce benimsenen ortak standart, kanun veya direktiflerle, üreticiye tasarım sürecinden başlayan kontrol mekanizmaları getirilmiştir.

Avrupa Birliği'nce 1992'de oluşturulan 'ürün güvenliği'ne (*product safety*) ilişkin 'Konsey Direktifi' (*Council Directive*) pazarlarda sadece güvenli ürünlerin yer almasını sağlamayı amaçlamakta, 1985'de çıkarılan 'ürün sorumluluğu'na (*product liability*) ilişkin Konsey Direktifi ise 'tasarım kusurları' (*design defects*) içeren ürünlerin üreticilerine büyük sorumluluklar yüklemektedir. 'Milletlerarası Standartlaştırma Teşkilatı' ISO tarafından geliştirilen ve gümrük birliğine ortak üyelere uygulama zorunluluğu olan 'Kalite Güvencesi Standartları' (*Quality Assurance Standards*) da işletmeleri kusursuz üretim yapabilecek seviyeye getirebilmeyi hedeflemektedir.

1995'de gümrük birliğine geçmeye hazırlanmakta olan ülkemiz endüstrisi ise bu kanun ve standartları üretim politikalarına entegre edemediği sürece bu ülkelere dışsım yapmakta zorluklarla karşılaşacaktır. Kalite Güvencesi Standardı belgesi ülkemizde Türk Standartları Enstitüsü'nce çeşitli endüstri kuruluşlarına eğitim programları dahilinde verilmektedir. Ülkemizde henüz tasarı halinde olan tüketiciyi koruma kanunu ise tüketiciye bugüne kadar hiç sahip olamadığı haklar getirmesine rağmen, bir ürünün oluşma sürecinin en başını, yani tasarım sürecini kapsamadığı için eksiklikler içermektedir.

Yazarın 1988 yılında yüksek lisans tezi çerçevesinde evlerde ve hastanelerde yaptığı ev kazaları araştırmasının sonuçları tüketici ürünlerinden kaynaklanan kazaların pek çoğunun niteliklerinin ülkemizdeki yaşam biçimlerine özgü olduğunu ortaya çıkarmıştı. Bu araştırmanın sonucunda yapılan analiz ise kaza nedenlerinde kazanın içinde yer alan ürünlerde saptanan tasarım kusurlarının büyük ölçüde rol oynadığını göstermişti. Bu ürünlerden en tipikleri ise çaydanlık, piknik tüpü, soba, merdaneli çamaşır makinesi, düdüklü tencere ve ilaç kutularıydı.

Bu bildiriye 'ürün güvenliği', 'ürün sorumluluğu', ve 'tasarım kusuru' kavramları tartışılmış, kazalara en sıklıkla sebep olan tüketici ürünlerine örnekler verilmiş, ülkemizde ve Avrupa Birliği'ndeki tüketiciyi koruma mekanizmaları üzerinde durulmuştur.