BOGLE V MCDONALD'S, (2002) EWHC 490 (QB)

IN THE HIGH COURT OF JUSTICE
QUEENS BENCH DIVISION

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 25 March 2002

Before :

THE HONOURABLE MR JUSTICE FIELD

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Between :

Sam Bogle and others	**Claimants**
- and -	
McDonald's Restaurants Limited	**Defendant**

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Mr. Tim Horlock Q.C and Mr. Christopher Kennedy (instructed by Slater Heelis Collier Littler) for the Claimants.
Miss Kate Thirlwall Q.C. and Mr. Simon King (instructed by Vizards Wyeth) for the Defendant.

Hearing dates : 4, 5, 6 & 8 March 2002.

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Approved Judgment

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

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Mr Justice Field

Mr Justice Field:

Introduction

1. This is the trial of a set of preliminary issues ordered to be determined by Master Turner, with the approval of the Lord Chief Justice. The issues are generic issues arising from the pleaded cases of a group of claimants suing for personal injuries caused by the spillage of hot drinks (in two cases hot water) served by the defendant ("McDonald's"). The claims are all separate and distinct, but they share a number of common features and allegations. They were therefore made the subject of a Group Litigation Order on 21 February 2001. There are presently 36 claimants in the group. The majority are children; at least 16 were aged 4 or under at the time the injury was sustained.

2. The period during which most of the injuries were suffered is 1996 to 1998; one claim dates from 1986, another from 1994 and a third from 1991. In all of the cases the hot drink had been purchased by an adult and in all except one it is alleged that a lidded cup containing a hot drink fell over either on or from a tray, or on or from a table, the lid came off and part at least of the hot contents poured over the claimant. A fairly typical set of alleged facts is afforded by the case of Lamar Bartley who, aged almost 10 months, was taken by his mother, Gail McDonald, to a McDonald's restaurant in Nottingham. Ms. McDonald had her four other children with her as well as Lamar and was in the company of four other adults with seven other children. Ms. McDonald bought three hot drinks and five cold drinks and carried them to a table. It is alleged that another customer put his tray on the same table and in so doing pushed Ms. McDonald's tray off the table spilling hot coffee onto Lamar who suffered serious scalding injuries requiring a skin graft under general anaesthetic.

3. The exceptional case is that of Sam Bogle who, aged 15 months, was taken by his child minder to the McDonald's at Hinkley Town Centre. It is alleged that Sam went to a drink a cup of hot coffee which had been left on a table with its lid removed, and in doing so spilled the contents onto himself, sustaining scalding injuries to his face, neck, chest, shoulders and back.

The generic issues.

4. The generic issues ordered to be tried on a preliminary basis (with a few grammatical amendments) are:

   (1) Whether the Defendant was negligent in dispensing and serving hot drinks at the temperature at which in fact it did in these cases.

   (2) Whether it was necessary for the Defendant in order properly to discharge any duty of care owed towards the Claimants, to dispense and serve the hot drinks at some lower temperature than in fact it did, and, if so, at what

maximum temperature.

(3) Whether the cups used by the Defendant were of such unsound and/or inadequate construction as to render the Defendant's use of them for the service of hot drinks to its customers, negligent.

(4) Whether the lids used by the Defendant for such purposes were of such poor fit or otherwise so inappropriate as to render the Defendant's use of them for the service of hot drinks to its customers, negligent.

(5) Whether there was a duty upon the defendant to warn its customers as to the risk of scalding from hot drinks.

(6) If there was such a duty, whether the defendant was in breach of it.

(7) As regards the hot drinks which it produced for sale to customers, whether the Defendant was in breach of the Consumer Protection Act 1987 because those hot drinks were "defective".

The background facts

5. McDonald's restaurants sell meals and drinks to eat in or take away at over 1200 locations across the U.K. Most of the restaurants are owned and operated by McDonald's but some are operated by franchisees. For the purpose of these proceedings McDonald's accepts responsibility for the operation of all McDonald's restaurants. In 1999, the average number of transactions carried out by McDonald's each day in the U.K. was in excess of 1.1 million, involving 2.5 visitors. The restaurants are family restaurants: children constitute a significant proportion of the total number of visitors. Amongst the products sold are hot coffee and tea. At the material time these were served in polystyrene cups, known as foam hot cups. From 1995 coffee was served in cups of two sizes, an 8 oz regular and a 12 oz large. Tea was only served in regular sized cups. Once filled with black coffee or hot water and a tea bag the cups had a plastic lid fitted on them and were then presented to the customer on a plastic tray if the drink was to consumed on the premises; if the purchase was made in a drive thru outlet, the cup was placed in preformed inserts in a fibre tray. Neither milk (creamer) nor sugar was added prior to the lid being fitted. If the customer wanted either or both of these additions he had to remove the lid; they were available in pre-packed form. If tea was purchased the tea bag had a string which passed under the lid. If a tea customer wished to remove the tea bag the lid first had to be taken off.

6. The lids had a small vent hole to prevent pressure building up. Prior to 1996 the lids had a tear-off tab to allow the drink to be consumed without removing the lid. After 1996, the tab was tear-back rather than tear-off. However, whether tear-off or tear-back, the tab did not allow milk and/or sugar to be added or a tea bag to be removed with the lid

still on. If there were to be additions to the drink or a tea bag removed, the lid had to be taken off.

7. In September 2001 McDonald's changed the way they brewed and served coffee. This followed a review conducted towards the end of 1999. The cups now used are manufactured from fibroboard and the lids do not have a tear-off or tear-back tab but have instead a slot through which the drink can be consumed without the lid having to be removed. These changes occurred after the period relevant to the claims in this case. There is no evidence that the changes were brought about because of a concern within McDonald's that the previous cups and lids were unsafe.

8. During the relevant period, McDonald's used two different types of machine to produce the hot water for the coffee and tea served to the group claimants. In the early years of the period Blickman machines were used and from 1993 Bloomfield machines were introduced. Blickmans have now been more or less phased out. The Blickman has a single water jacket which sits around two coffee urns. The water in the jacket is heated by three electric elements. There is a hopper which can be orientated to serve either urn. Ground coffee is placed in the hopper and when the brew button is pressed hot water from the jacket pours into the hopper, over the coffee grounds and into the urn selected. The brewed coffee is then held in the urn until it is served. Prior to 1996 the coffee was held for up to an hour but since then it has been held for 30 minutes. Each urn has a tap to allow the brewed coffee to be served. There is also a third tap serving the water jacket which provides the water for the production of tea.

9. The Bloomfield resembles a domestic coffee filter machine. There are two types. In the first there is a single reservoir in which the water is heated. This has a tap for hot water to be used to make tea. In the second, there are two reservoirs, one for heating water for coffee, the other for heating water for tea; each reservoir has its own heating element and a tap. Coffee grounds are placed in a hopper at the front of the machine. When a button is pressed hot water passes over the grounds and into a jug which rests on a hot plate keeping the brewed coffee at the desired temperature. Since 1993, the coffee has been held in the jug for up to 30 minutes. There are three hot plates allowing more than one jug of coffee to be in use at the same time.

10. The Claimants adduced evidence concerning the effects of scalding injuries. This consisted of a report from Mr. David Ward, a consultant plastic surgeon at Leicester Royal Infirmary who has been a Fellow of the Royal College of Surgeons of England since 1980 and has 17 years experience in plastic surgery. Mr. Ward's report was not contested by McDonald's. He was therefore not required to give live evidence.

11. The following matters mentioned in Mr. Ward's report are relevant. Burns are no longer classified as first, second or third degree burns. The standard classification is now twofold: partial thickness and full thickness, with partial thickness being subdivided into superficial and deep dermal.

12. Scalding liquids are the commonest cause of burns in children in the U.K. Scalding causes immediate damage to the superficial layer of the skin (the epidermis) and damage occurs in the deeper layers of the skin (the dermis) as the high temperature is absorbed by these deeper layers. The extent of the burn depends on the temperature of the liquid and the length of time it is in contact with the skin. Clothing commonly aggravates the injury, since it tends to soak up the hot liquid and thus prolong the contact.

13. There has been no research performed on human skin to study the relative effects of temperature and duration of contact. However, pigs have skin very similar to human skin and there has been research using pigs. The classic paper in this field is Moritz and Henriques: "The relative importance of time and surface temperature in the causation of cutaneous burns" published in (1947) 23 American Journal of Pathology 695-720. This research shows that the minimum temperature at which skin burns is 44 degrees Celsius. At 50 C the duration of exposure required for a full thickness burn is 257 seconds. At 55 C the duration for such a burn is 11 seconds. At 65 C the duration required is just 2 seconds. The relationship between the surface temperature of the skin and the exposure time required for a full thickness burn is exponential.

14. The standard management of scalds involves dressings usually over a period of about two weeks. Children with burns of 10% or over always require intravenous fluid resuscitation for at least 48 hours. Pain relief is required in superficial burns which are typically very painful and sometimes stronger (narcotic) painkillers such as Morphine or Pethidine are needed. In very superficial partial thickness burns there will be no residual scarring but in slightly deeper partial thickness burns there may be minor pigmentary changes. When the burn is deep partial thickness (deep dermal) the deep layers of the dermis are damaged and some degree of permanent scarring is usual; sometimes skin grafting is required. Full thickness burns have great difficulty in healing spontaneously and unless very small require skin grafting. Healing is a very slow process and leaves extensive scarring. As the percentage of burn increases above 10% the risk of complications increases. The two main complications are septicaemia and kidney failure.

15. At all material times, McDonald's were aware that there was a risk that a visitor might be badly scalded and suffer a deep thickness burn by a hot drink that is spilled or knocked over after it has been served.

16. The claimants contend that McDonald's are liable in negligence, and/or under the Occupiers Liability Act and/or under the Consumer Protection Act 1987 ("the CPA").

<u>The witnesses called by the parties</u>

17. The claimants called six factual witnesses and an expert witness, Mr. Donald Ives. All of the factual witnesses were adults. Five (Mrs. Williamson, Ms. McDonald, Mrs. Smith and Mrs. Bryan) had been present in a McDonald's restaurant when a child in

their care had been scalded by a hot drink and they gave evidence as to what had happened. In respect of these five cases I was provided with photographs of the injuries. The sixth witness (Miss Marsh) gave evidence about an incident in which she herself was the victim of a spilled hot drink. In her case there were no photographs of the injuries.

18. It was no part of the function of the court to decide these individual cases. McDonald's accepted for the purpose of the hearing only that each of the six claimants was scalded by a hot drink purchased at one of its restaurants. The witnesses were therefore not strenuously cross examined and I regard their evidence as being relevant only to the general background.

19. The claimants' principal witness was therefore Mr. Ives who is a mechanical engineer with experience in the food and allied processing industries. He is a Fellow of the Institution of Mechanical Engineers and of the Institution of Food Science and Technology. He now runs a consultancy called D C Ives International Consultants. Broadly speaking, Mr. Ives's report consists of the following:

(1) An analysis of 29 of the claims showing such things as the type of injury, the age of the claimant and the alleged reason for the accident.

(2) A section on how tea and coffee ought generally to be prepared.

(3) A description based on disclosed documents, defendant's witness statements and a visit by his son to 4 McDonald's outlets of how McDonald's prepares and serves tea and coffee, including a description of the cups and lids and a detailing of the brewing and holding temperatures and the temperature once a table has been found.

(4) A temperature test plotting the temperatures inside and on the external surface of a foam cup containing a hot drink over about 23 minutes.

(5) A description and evaluation of temperature tests carried out by McDonald's in Mr. Ives's presence.

(6) Mr. Ives's opinion as to the temperature at which hot drinks ought to be served in McDonald's restaurants.

(7) An assessment of the construction of the cups and lids.

(8) Comments on the serving trays.

(9) A description and evaluation of the warnings appearing on McDonald's cups and

lids.

(10) Mr. Ives's conclusions including the identification of 5 steps which in his opinion McDonald's should have taken to reduce the risk of scalding injuries to their consumers.

20. (1) & (3) involved factual and not expert evidence and in producing (3) Mr. Ives omitted to refer to relevant information on the UK McDonald's procedure for making tea and on temperature settings and referred to the temperature settings of a coffee machine, the Bunn-O-Matic which he must have known was not relevant to any of the claims. He also relied in part on visits by his son to 4 outlets at a time when, as he knew, McDonald's had changed the way they served tea and coffee from the way they operated during the relevant time period.

21. Section (2) arguably involved expert evidence, but Mr. Ives is an engineer and not a restaurateur. Sections (4) and (5) did involve expert evidence up to a point, but the temperature at which McDonald's brewed and served hot drinks was not really in dispute and Mr. Ives's evidence that the polystyrene cup kept the drink hot over a considerable period of time was not much of a revelation.

22. In sections (6) & (10) Mr. Ives' gave his view on the temperature at which McDonald's should have served their hot drinks having regard to consumer preferences. However, the temperature at which consumers prefer to drink hot drinks is not something which is within his expertise. He based his view on a paper published in Food Quality and Preference 10 (1999) 117-121 which recorded tests done with 250 undergraduates from two large public universities located in the Midwest and Southeast of the US respectively. The students were served coffee at temperatures ranging from 90.6 C to 57.2 C. The paper claimed that the results indicated that coffee is ideally consumed when it is around 66.5 C but concluded: "Although the recommended holding temperatures [ie those recommended by the hospitality industry] are perceived to be too hot for consumption, it would be inappropriate to recommend that holding temperatures be reduced to a *specific* temperature at this time, but it is reasonable none-the–less to call for a reduction in standard holding temperatures." Mr. Ives also noted that due primarily to bacteriological considerations, the Automatic Vending Association recommend a temperature for hot drinks of <u>not less</u> than 70 C and that an English catering textbook advises that coffee be served at 82 C. In my opinion these sources are an extremely flimsy foundation for Mr. Ives's opinion that McDonald's should have served their hot drinks at a lower temperature than they did.

23. Section (7) is appropriate for expert evidence, but, although Mr. Ives has experience in the packaging industry generally, he has no experience in the manufacture, supply or retail use of cups and lids for hot drinks served in restaurants. He was therefore unable to say that a test which he called "a drop test" was standard in the production of cups and lids for use in restaurants. Surprisingly, he had not performed a drop test on the cups and lids used by McDonald's during the relevant period; the only test he carried was a test to establish the angle at which a full cup toppled over. Instead of adopting a direct

approach based on tests for defects, he adopted an indirect approach of considering the specification of the cups and lids and the way they were manufactured. Also, he criticised the tear-off and tear-back tabs but there was nothing in any of the claims to suggest that this feature had contributed in any way to the spillage of the drinks. This criticism was therefore of no real relevance.

24. Section (8) was irrelevant to the generic issues under consideration and Mr. Ives has no expertise relevant to section (9).

25. Thus, a good part of Mr. Ives's report was no more than a collation of factual material and even that was in some important respects incomplete or irrelevant. Those matters on which he did give an expert opinion were in large measure outside his particular expertise and his opinion was based not on direct testing by him of the cups and lids for defects, but on an indirect analysis focussing on McDonald's specification and the method of the manufacture. He also criticised a feature of the lids (tear-back and tear-off tabs) which was irrelevant. For these reasons, I am bound to say that I did not find Mr. Ives an impressive witness.

26. McDonald's called no expert evidence. They served a report by a Mr. Rennie but decided not to call him. Their factual witnesses were Mr. Mark Hathaway, their Health and Safety Manager, and Mr. Christopher Brazier, the Quality Assurance Manager of the company used by McDonald's to coordinate the purchase of the cups and lids, Perseco Europe ("Perseco"). I found both Mr. Hathaway and Mr. Brazier to be truthful and reliable witnesses.

<u>Generic Issues (1) and (2)</u>

(1) Whether the Defendant was negligent in dispensing and serving hot drinks at the temperature which in fact they did in these cases.

(2) Whether it was necessary for the Defendant in order properly to discharge any duty of care owed towards the Claimants, to dispense and serve the hot drinks at some lower temperature than in fact they did, and, if so, at what maximum temperature.

27. The parties proceeded on the basis that, save for issue 7, the generic issues stood to be considered in pairs. I agree. I accordingly proceed to consider issues (1) and (2) together.

28. I accept Mr. Hathaway's evidence that the temperature settings for the Blickman and Bloomfield coffee machines were pre-set by the manufacturers and were as follows:

Blickman

Brewing temperature	86.66 C to 90 C (188 F to 194 F)
Holding temperature	86.66 C to 90 C (188 F to 194 F)

Bloomfield (up to September 2001)

Brewing temperature	78.88 C to 83.33 C (174 F to 182 F)
Holding temperature	75 C to 78.88 C (167 F to 174 F)

29. These were the temperatures which McDonald's staff were instructed to maintain, as evidenced by: (a) the Daily Product Safety Checklists in the Weekly Product Safety Worksheets; (b) the Weekly Calibration Checklists; and the Quality Reference Guides. I readily find that these instructions were implemented as they were intended to be and therefore conclude that if a Blickman was used during the relevant period the temperature at which coffee and tea was served was between 86.6 C and 90 C. If a Bloomfield was used the serving temperatures of coffee and tea were between 75 C and 78.88 C and and 78.88 C and 83.33 C respectively.

30. The claimants submit that the hot drinks were served at between 75 C and 97.4C. They take 97.4 C as the higher figure because there is in the evidence a calibration checklist for one of McDonald's Bloomfield machines which shows a brewing temperature about 6 C above the specified maximum and because during the field survey tests done by Mr. Ives's son there were three occasions when the temperature of tea exceeded 90 C and on one of these occasions the temperature was 97.4 C. I reject this approach. Issues (1) and (2) can only be answered by having regard to what happened generally. The fact that on one occasion during the relevant period the maximum temperature of one machine was 6 C above the prescribed maximum cannot affect the general position. Nor can the field test temperatures: these tests were done outside the relevant period and after McDonald's had changed their brew temperature to 90 C.; they were also done with a mercury thermometer which can be inaccurate + or ¬ 3 C..

31. It is inevitable that there will be occasions when hot drinks are spilled notwithstanding that they have been served in a lidded foam cup. A hot drink served at temperatures between 78.88 C and 90 C would cause a deep thickness burn if it spilled onto a visitor and was in contact with his skin for little more than a second. McDonald's knew that there was a risk of injury of this sort if a hot drink was spilled. It follows, submits Mr. Horlock Q.C. for the claimants, that McDonald's were negligent in serving hot drinks at the temperatures they did.

32. If this submission be right, McDonald's should not have served drinks at any

temperature which would have caused a bad scalding injury. The evidence is that tea or coffee served at a temperature of 65 C will cause a deep thickness burn if it is in contact with the skin for just two seconds. Thus, if McDonald's were going to avoid the risk of injury by a deep thickness burn they would have had to have served tea and coffee at between 55 C and 60 C. But tea ought to be brewed with boiling water if it is to give its best flavour and coffee ought to be brewed at between 85 C and 95 C. Further, people generally like to allow a hot drink to cool to the temperature they prefer. Accordingly, I have no doubt that tea and coffee served at between 55 C and 60 C would not have been acceptable to McDonald's customers. Indeed, on the evidence, I find that the public want to be able to buy tea and coffee served hot, that is to say at a temperature of at least 65 C, even though they know (as I think they must be taken to do for the purposes of answering issues (1) and (2)) that there is a risk of a scalding injury if the drink is spilled.

33. Is it right that the law of negligence and occupier's liability should be responsible for denying to the public a facility they want notwithstanding the known risk? In my opinion, the answer is plainly no. Although McDonald's owe a duty of care to those who visit their restaurants to guard against injury, that duty is not such that they should have refrained from serving hot drinks at all.

34. Mr. Horlock argued that McDonald's should have served tea and coffee at 70 C and thereby reduced rather than avoided the risk of injury. There are two difficulties with this. First, as I have said, a spilled drink at a temperature of 65 C will cause a deep thickness burn after two seconds of contact with the skin. Serving the drinks at 70 C would therefore not have avoided or reduced the risk of a deep thickness burn. Mr. Horlock attempted to answer this point by: (a) relying on Mr. Ives's oral evidence that the risk would be reduced if the serving temperature were 70 C; (b) relying on the exponential curve referred to by Mr. Ward when describing the relationship between temperature and duration of contact; and (c) contending that the issue of causation is a matter of evidence in the individual cases.

35. I am unpersuaded by any of these answers. Mr. Ives, as he himself recognised, is not a medical man. His view that the risks would be reduced can therefore count for no more than does the opinion of Mr. Ward on which he (Mr. Ives) was relying. As for Mr.Ward's opinion, he says nothing about whether a deep thickness burn resulting from an exposure of 2 seconds at 65 C would be worse if the duration were the same but the temperature greater. Mr. Ward's report was served before the consolidated Particulars of Claim. The claimants have been aware of McDonald's argument that the risk would not have been avoided by serving at temperatures below the actual temperature but above 65 C since the Defence was served on 13 October 2000 (see paragraph 14). However, no supplementary report from Mr. Ward has been served and in my view it is not to be inferred that because the relationship between time and temperature is exponential a deep thickness burn after 2 seconds at 65 C will be worse if the time is the same but the temperature is higher. Nor is it an answer to say that the issue of causation is for the individual cases. The generic issues were ordered to be tried as a step towards resolving the individual cases. The issue of whether risk of injury from a deep thickness burn would be reduced if the serving temperature had been lower than they actually

were but above 65 C is plainly raised by generic issues (1) and (2). That issue therefore falls to be decided in the trial before me and not in the individual cases. Moreover, I can foresee the greatest difficulty in the individual cases in separating out the damage that would have been done if the serving temperature had been 70 C from the damage caused by the actual temperature.

36. It follows that on the evidence before me, I conclude that the risk of injury would not have been avoided or reduced if the serving temperature had been 70 C.

37. The second difficulty with Mr. Horlock's submission that tea and coffee should have been served at 70 C is the absence of any cogent evidence that customers would have found this to be acceptable. Mr. Ives has no expertise in the field of selling hot drinks for consumption in restaurants. His view that the drinks should have been served at this temperature is therefore not supported by any relevant expertise on his part. As I have said above, he based his view on a paper published in Food Quality and Preference 10 (1999) 117-121 which reported the coffee drinking temperature preferences of 250 US students. The paper's conclusion was: "Although the recommended holding temperatures [ie those recommended by the hospitality industry] are perceived to be too hot for consumption, it would be inappropriate to recommend that holding temperatures be reduced to a *specific* temperature at this time, but it is reasonable none-the–less to call for a reduction in standard holding temperatures."

38. Mr. Ives also appears to have based his view on the Automatic Vending Association codes of practice that state: "Drink temperatures to be not less than 70 C for hot drinks and not higher than 10 C for cold drinks." However, as Mr. Ives himself notes, this is not out of a concern about scalding injuries but is due to bacteriological control It is also significant that the specified temperature is a minimum, not a maximum temperature.

39. In my judgement the paper published in Food Quality and Preference 10 (1999) 117-121 and the Automatic Vending Association codes of practice are a most insubstantial basis for Mr. Ives's conclusion and fall far short of providing a sound foundation for holding that McDonald's should have served tea and coffee at 70 C.

40. On the basis of Mr. Hathaway's evidence I find that McDonald's serving temperatures were based on what the rest of the catering industry was doing in terms of hot drinks and I infer that what the rest of the industry was doing was endeavouring to meet customers' requirements. Perhaps unsurprisingly there was no evidence that McDonald's serving temperature was unusually hot compared with the serving temperatures adopted by other similar restaurants and outlets. On the material before me therefore I reject the criticisms the claimants have made about McDonald's serving temperatures and for the reasons I have given I propose to answer generic issues (1) and (2) "No".

Generic issues (3) & (4)

(3) Whether the cups used by the Defendant were of such unsound and/or

inadequate construction as to render the Defendant's use of them for the service of hot drinks to its customers, negligent.

(4) Whether the lids used by the Defendant for such purposes were of such poor fit or otherwise so inappropriate as to render the Defendant's use of them for the service of hot drinks to its customers, negligent.

41. The evidence concerning the specification, manufacture and testing of the cups and lids was given by Mr. Brazier. Where he had been able to obtain documents he exhibited them but there was a number of tests he said had been carried out where there were no supporting documents. In these instances he was relying on what he had been told by individuals employed by the manufacturers and fellow Perseco employees. To this extent his evidence is hearsay but I have no reason to doubt the accuracy of what he was told notwithstanding the lack of supporting documentation. I accordingly accept the entirety of Mr. Brazier's evidence which was to the following effect.

42. Between 1984 and 2001 McDonald's foam hot cups were made and supplied by Fibracan. The original (US) Specification called for :

> "A foam steamchest cup for single use with McDonald's hot beverages. The cup must not leak, must not have any off odours or impart any off flavors to McDonald's hot beverages and must meet rigidity standards for operational use. The cups must be free of any defects that would detract from their appearance or affect their performance. Cups and lids must be interchangeable with those from other suppliers."

43. The Perseco specifications for the regular and large hot cups both stipulated that the cup must resist leaking or tipping and that the cup must be rigid enough for use without a lid. The regular hot cups had a density at least 50% (about 28 grams per litre) above the industry standard, making them considerably stronger than the cups used by many of McDonald's competitors.

44. Fibracan carried out the following tests to satisfy Perseco that the cups met the specification:

(1) A Lab rigidity test which showed that the cups had a side wall rigidity of at least 300 grams.

(2) A vacuum test carried out during production on every cup to ensure it did not leak.

(3) A "weep test" done at least twice a shift in which a selection of sample cups was filled with coffee or a coloured liquid and left to stand for 15 minutes to

see if there was any leaking or "weeping".

(4) A Lid Fit Test which involved filling the cup with coffee, placing the lid on the cup and tilting the cup to check whether any spillage occurred. Fibracan's Quality Assurance Manager used unofficially to demonstrate the lid security by tossing the filled cup into a sink and the lid would remain on the cup.

(5) General Inspection: a quality controller manually inspected in a laboratory sample hot cups over a two hour period to ensure that there were no holes or other defects.

45. Until early 1996 the lids for the hot cups were manufactured and supplied by Mono Containers, a company in the same group as Fibracan. In the course of manufacture Mono Containers carried out numerous tests agreed with Perseco to ensure that the lid conformed to the specification. These included:

i) A Lid Fit Test conducted every two hours to ensure the lid fitted the cup sufficiently to prevent any liquid spillage.

ii) A Shake Test conducted every two hours.

iii) A Tilt Test conducted every two hours.

Perseco also randomly tested samples in the same way.

46. In February 1996 Fibracan was replaced by Cap-it-All. The specification called for a lid that must fit snugly to withstand excessive vibration, yet be easily removed and be free from any defects which would detract from its appearance or affect its performance. The material used was of thicker gauge than Cap-it-All's standard products. In June 1998 retention grips were added as a precaution to compensate for the loss of grip caused by tearing back the tab.

47. Prior to Cap-it-All replacing Fibracan, Cap-it-All developed and tested the lids over a period of almost 12 months. The development tests included:

i) A 45 degree tilt test to ensure that the lid was watertight.

ii) Picking up full cups by the rim of the lid to check if there was a firm fit.

iii) Tipping cups full of hot liquid over on a flat surface to ensure that the lid did not

come off.

iv) Checking that the lid could be applied to the cup quickly and easily and so as not to damage the cup or the lid.

48. After the cups had gone into production Perseco randomly tested samples from time to time in their laboratory. These tests included test iii) above.

49. Mr. Ives criticised the foam hot cup for its high thermal efficiency. He said that this meant a consumer had no sensory understanding of how hot the contents were and the drink was not allowed to cool. However, I am quite satisfied that McDonald's were entitled to assume that the consumer would know that the drink was hot and there are numerous commonplace ways of speeding up cooling such as stirring and blowing.

50. Mr. Ives's principal criticism of the cups and lids was that there had been no "drop test" in their development and/or manufacture. It was his view that a full lidded cup should have been dropped from a height considered reasonable in the circumstances to see if it retained its contents. He accepted that no cup and lid of the sort used by McDonald's would retain its contents if it dropped to the floor from a table or whilst being carried on a tray. The test he seemed to have in mind was knocking a full lidded cup over on a flat surface representing a tray or table, for he thought that if a cup and lid were properly designed they would retain the liquid if the cup tipped over on a tray.

51. As I have already remarked, it is surprising that Mr. Ives had not himself carried out such a test on the cups and lids used by McDonald's over the relevant period. There is no reason to think that he would not have been provided with samples for this test had asked for them, but he did not ask. What he did do was to carry out a tilt test in which a regular and a large cup were filled with water, placed on a non-slip surface, tilted and the angle at which they toppled over established. The large cup fell over at 18 degrees and the regular cup fell over at 20 degrees. Mr. Ives said in his report that a tilt angle of 18 degrees could easily occur if the cup was being carried on a tray and the consumer was distracted or the facility crowded. However, Mr. Ives did not say that the fact that the cups tipped over at these angles was a defect; instead he appears to have seen this feature as pointing up the need for a drop test. Indeed, in cross examination he accepted that his only criticism of the cups was that they did not feel hot to touch.

52. Mr. Ives says in his report that it is an established procedure that drop tests are carried out to evaluate packaging effectiveness. However, as I have already said, he has no experience in the manufacture and supply of cups and lids to be used to hold hot drinks in restaurants and other similar outlets. He could not say therefore from his own experience whether such a test was standard in the manufacture of cups and lids of the sort used by McDonald's. Nor had he made any enquiries of manufacturers of cups and lids to see if they routinely carried out drop tests.

53. In fact tests to ensure that the lids prevented spillage were done by both Mono

Containers and Cap-it-All. Thus, as I have recorded above, during production Mono Containers conducted a Lid Fit Test, a Shake Test and a Tilt Test every two hours; and during the 12 month development programme Cap-it-All carried out a 45 degree tilt test to ensure that the lid was watertight and a test in which full cups were tipped over to ensure that the lid did not come off. Mr. Ives said that it was insufficient for Cap-it-All to do these tests only during development of the product and not regularly during manufacture. However, he was unable to say that the lids and cups used by McDonald's allowed the contents to spill out if the cup was tipped over when lidded because he had not tested this himself.

54. In my judgement the cups and lids were adequately designed and manufactured to retain a hot drink if the cup was tipped over. It was sufficient for Cap-it-All to carry out the tilt and tipping tests during the development period. At the end of that period they had developed a cup to the satisfaction of McDonald's consultants (Perseco) and there is no evidence that the cups did not retain their contents if tipped over. Moreover, even after the development period Cap-it-All performed random tilt and tipping tests, as did Perseco.

55. In his closing submissions, Mr. Horlock argued that McDonald's could and should have used a more stable cup and that the cups used at the relevant times were inadequate because they were unstable. I reject this contention. It was not supported by the claimants' expert; there was no evidence as to the ease or difficulty of coming up with a cup with a wider base; and in any event, the cups and lids had been designed to retain their contents if the cup tipped over.

56. Mr. Horlock also submitted that to reduce the risk of injury, drink-through lids should have been adopted together with a warning that it was safer to keep the lid on. Implicit in this submission is the further contention also found in Mr. Ives's report that the consumer's choice of creamer and sugar should have been added before the lid was put on and the cup handed over to him. In my opinion it was not negligent for McDonald's to use lids that had to be removed for the drink to be consumed; nor was it negligent to leave it to the consumer to add what ingredients he desired. In using non drink-through lids McDonald's were anticipating the desire of many of their customers to drink with the lid off rather than through the lid, and they were entitled to assume that the customers would know that they should be careful to avoid spills. I note too that nowhere in his report did Mr Ives say that drink-through lids whether with a warning or not should have been adopted.

57. As to the contention that additional ingredients should have been added at the point of service, I do not think that McDonald's were negligent in leaving it to the consumer to add creamer or sugar. The lid was going to have to be removed for the drink to be consumed, a feature which I have held did not involve a lack of reasonable care by McDonald's. And if the lid were re-fixed for some reason after the addition of further ingredients but before consumption of the drink, there is no evidence that the lid would not have continued to retain the contents if the cup were tipped over.

58. Mr. Ives was critical of the tear-off/tear-back tabs on the grounds: (a) that before the introduction of the additional grips, once the tabs had been torn off or back the lid lost part of its grip; and (b) the tabs did not avoid having to remove the lid to add milk or sugar or to remove a tea bag. However, as I have said above, there is no evidence that these aspects of the tear-off/back tabs played any role in the cases brought by the claimants. Also, I am far from satisfied that if the cup tipped over, the lids were liable to come off if the tabs had been pulled back. Further, as I have already said, the need to remove the lid to add other ingredients did not pose such a risk that it was negligent not to have inserted all the ingredients before handing the cup to the consumer.

59. Finally, I understood Mr. Horlock to submit that McDonald's were negligent because it was reasonably foreseeable that: (a) cups would be knocked over with sufficient force or fall from a sufficient height for the hot contents to spill out; and (b) some lids would not be put on securely in particular when the string from a tea bag passes between the lip of a cup and the lid.

60. McDonald's were not under a duty to ensure that there were no accidents involving hot drinks. Their duty was to take such steps as were reasonable in the circumstances to avoid or reduce the risk of injury. McDonald's offered the public the facility whereby they could purchase hot drinks to be consumed on or off the premises. This was something the public wanted and inevitably meant that those who bought to consume on the premises would carry their drinks to and place them on a table. There were bound to be times when the restaurants would be serving numbers of people. Lids were placed on the cups at the point of service to retain the contents and help keep them hot. The lids were designed to be removed by the customer who it was reasonably anticipated would want to consume the drink with the lid off. The cups and lids were designed to retain the drink if the cup were tipped over. There was no evidence that it was reasonably feasible for another type of lid or cup to have been designed and manufactured which would have allowed the lid to be easily removed by the customer and at the same time would have retained the hot drink if it dropped to the floor from a table or tray or was knocked over violently. In my judgement, the steps McDonald's took in respect of the cups and lids to avoid injury were reasonably adequate. It was up to those frequenting the restaurants to take care not to drop or knock over hot drinks. The risk that drinks would be dropped or violently knocked over and cause scalding injuries could not be avoided if the facility the public wanted was going to be made available.

61. As to the submission that it was negligent to allow the tea bag string to come out under the cup, there is no evidence at all that this rendered the lid less effective than it otherwise was. I accordingly reject that submission.

62. It follows from what I have said in paragraphs 39 to 59 above that I propose to answer generic issues (3) and (4) "No".

Generic issues (5) and (6)

(5) Whether there was a duty upon the defendant to warn its customers as to the risk of scalding from hot drinks.

(6) If there was such a duty, whether the defendant was in breach of it.

63. From January 1995 the cups had printed on their sides the words: "Caution: Hot!" and "Caution: Contents Hot!" The claimants submit that: (a) there should have been warnings before 1995; (b) the warnings should have alerted the customers to how hot the drinks were and the seriousness of the injury they could cause; and (c) the warnings should have appeared at the point of service.

64. The claimants contended that there was a duty to warn for the following reasons:

(1) The temperature at which the products were served was dangerous and entailed a risk of injury.

(2) Spillage was reasonably foreseeable.

(3) The cups did not communicate to customers the temperature of the contents.

(4) Whilst adult members of the public and children above infant age would know that a hot drink was hot, they would not or might not know the severity of injury which might occur with the briefest of contact.

(5) Whilst some customers might be aware of the risk, the duty to warn arises because some may not be aware of the risk.

(6) McDonald's warned its employees of the risk of injury to them posed by the coffee machines; if McDonald's felt they were under a duty to warn their employees, they must have been under a duty to warn their customers.

65. I think it a fair inference that small children very rarely buy or intentionally consume coffee and tea in McDonald's restaurants. (It is certainly the case that in all the claims that have been brought, the hot drinks were bought by an adult). In my opinion, McDonald's could therefore expect that the great majority of those who bought hot drinks in their restaurants would be in their teenage years or above. In my judgement, these customers could be taken to know that the coffee and tea they were buying was hot and could cause a nasty scalding injury if it spilled on someone. Most customers would not know precisely how hot the drink was, but they would know that tea and coffee is made with very hot water. Nor would most customers know just how severe the scalding injury could be, but they would know that it could be very painful and serious. They would also know that drinks occasionally get spilled in restaurants such as those

run by McDonald's.

66. The McDonald's Planned Maintenance System Card produced in the U.S. and distributed in the UK principally to managers contained warnings about the risks of burns. In 1989 the warning was: "Brewing and serving temperatures will cause skin burn." By 1994 this had become: "Brewing and serving temperatures of coffee are extremely hot. Hot coffee can cause serious skin burns." And the 1996 Planned Maintenance System Card contained 4 warnings that hot water can cause serious burns. However, the fact that McDonald's warned its employees in these terms does not mean that they were negligent in not giving similar warnings to their customers either before or after 1995.

67. Whether McDonald's were negligent in not warning their customers depends on an objective assessment of all the circumstances, including the risk of injury and the customers' appreciation of those matters that gave rise to the risk. As I have said, I am quite satisfied that those who bought coffee and tea could be taken to know that such drinks sometimes get spilled and are served at temperatures which cause serious and painful injury if they come in contact with someone's skin. I accordingly find that there was no duty on McDonald's to warn their customers about the risk posed by the temperatures at which tea and coffee were served, notwithstanding the warnings they gave to their employees and the fact that from 1995 a warning has been printed on the cups.

68. If, contrary to this finding, McDonald's were under a duty to warn, I find that the terms of the warning printed on the cups since 1995 was adequate to discharge the duty. It was not necessary to spell out that the temperature was such that the drink could cause a serious burn. McDonald's were entitled to assume that the words: "Caution: Contents Hot!" and "Caution:Hot!" would have warned those likely to be buying tea and coffee that a serious burn could be suffered if the drink was spilled onto someone's skin.

69. Accordingly, I propose to answer "No" to generic issues (5) and (6).

<u>Generic issue (7)</u>

(7) As regards the hot drinks which it produced for sale to customers, whether the Defendant was in breach of the Consumer Protection Act 1987 because those hot drinks were "defective".

70. The relevant provisions of the CPA are as follows:

2 (1) Subject to the following provisions of this Part, where any damage is caused wholly or partly by a defect in a product, every person to whom subsection (2) applies shall be liable for the damage.

(2) This subsection applies to –

(a) the producer of the product;

(b)…..

3 (1) Subject to the following provisions of this subsection, there is a defect in a product for the purposes of this Part if the safety of the product is not such as persons generally are entitled to expect; and for those purposes "safety", in relation to a product, shall include safety with respect to products comprised in that product and safety in the context of risks of damage to property, as well as in the context of risks of death or personal injury.

(2) In determining for the purposes of subsection (1) above what persons generally are entitled to expect in relation to a product all the circumstances shall be taken into account, including –

(a) the manner in which, and purposes for which, the product has been marketed, its get-up, the use of any mark in relation to the product and any instructions for, or warnings with respect to, doing or refraining from doing anything with or in relation to the product;

(b) what might reasonably be expected to be done with or in relation to the product; and

(c) the time when the product was supplied by its producer to another; and nothing in this section shall require a defect to be inferred from the fact alone that the safety of a product which is supplied after that time is greater than the safety of the product in question.

71. Part 1 of the CPA must be construed in light of the object and purpose of Council Directive 85/374 of July 25, 1985 ("the Directive"). The 2nd and 6th Preambles of the Directive read:

> "Whereas liability without fault on the part of the producer is the sole means of adequately solving the problem, peculiar to our age of increasing technicality, of a fair apportionment of the risks inherent in modern technological production;"
>
> "Whereas, to protect the physical well-being and property of the consumer, the defectiveness of the product should be determined by reference not to fitness for use but to the lack of the safety which the public at large is entitled to expect; whereas the safety is assessed by excluding any use of the product not reasonable under the circumstances;"

72. Articles 4 and 6 of the Directive read:

Article 4

The injured person shall be required to prove the damage, the defect and the causal relationship between defect and damage.

Article 6

1. A product is defective when it does not provide the level of 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 reasonably could be expected that the product would be put;

(c) the time when the product was put into circulation.

2. A product shall not be considered defective for the sole reason that a better product is subsequently put into circulation.

73. I gratefully adopt the analysis of Burton J. of sections 3 and 4 of the CPA and Articles 6 and 7 of the Directive in A and others v The National Blood Authority and another [2001] 3 All E R 289. Accordingly, I proceed on the following basis: (a) the burden of proving that a product is defective is on the party who so asserts (here the claimants); (b) in determining whether the safety of the product is not such as persons generally are entitled to expect, the court, acting as an informed representative of the public at large, must objectively assess the legitimate expectations of persons generally and whilst those expectations may accord with actual expectation, they may be more than what the public actually expect; (c) in determining the safety of the product the court should take into account all the relevant circumstances including in particular the matters recited in s. 3(2) of the CPA; (d) however, the avoidability of the risk of harm is not a relevant circumstance; (e) products that are obviously dangerous (such as a knife) are not defective: the consumer has a free choice whether to expose himself to the risk, but that choice must be an informed choice.

74. McDonald's accept that in adding hot water to coffee grounds and tea bags it is a "producer" of hot drinks to whom s. 2 (2) applies. The issue to be decided therefore is whether the claimants have proved that during the relevant period the safety of the tea and coffee served by McDonald's was not such as persons generally were entitled to expect.

75. The claimants submit: (1) the expectations of persons generally will be affected by the potential seriousness of injury that the tea and coffee served by McDonald's ("the product") can cause; (2) the temperature at which the product was served was such that serious injury would result from the briefest contact; (3) the product was served in

containers and in circumstances in which they were liable to tip or be knocked over with ease; (4) clear and unambiguous warnings of the risk of injury could have been given to customers but were not; (5) the size of McDonald's organisation and the resources available to it were such that the public was entitled to expect that the subject of the safety of adult and child customers had been fully researched, considered and assessed and that appropriate reasonable measures were in place to safeguard them against risks of serious injury. This was not done. There had been no research. The risks had not been assessed. In reality and in contrast to the safety of employees, safety of customers was not considered; (6) drinks were served to customers in restaurants which were crowded and busy with excited children; and (7) the safety of customers was dependent on three unwarranted assumptions made by McDonald's: (i) the lid would be placed securely on the cup; this could not be guaranteed particularly since it was a task likely to be performed by youthful employees and, in the case of tea, if the string from the tea bag was between the lid and the cup, security of the lid was less likely to be achieved; (ii) the cup would not be knocked over with sufficient force or in circumstances such that its contents would be spilled; (iii) adult customers and child customers would be aware of the nature and extent of the risk of scalding injury from contact.

76. It is clear on the evidence that hot coffee or tea spilled if: (a) a lidded cup was dropped to the floor from a tray or table; (b) a lidded cup was violently knocked over; (c) a cup was tipped over after the lid had been removed to allow the drink to be consumed; (d) a lidded cup whose tab had been torn/pulled back was tipped over, in which case the drink would escape through the resulting gap in the lid, but much less quickly than if the lid were off. In the nature of things spills onto a visitor were occasionally bound to occur causing a deep thickness burn. There were no warnings given to customers until 1995 after which the words "Caution: Hot!" and "Caution: Contents Hot!" were printed on the cup.

77. However, I hold that the safety of the hot drinks met the legitimate expectations of persons generally. I do so for the following reasons. The serving staff were trained and one of the matters included in the training was the capping of hot drinks securely. This training took place as soon as an employee started his employment. On his first day there was an orientation class followed over the next three weeks by on-the-job training. At the end of this and before the end of the fourth week a probationary review had to be successfully passed before continuous employment was offered. Within the first three weeks every new employee had to complete an Observation Check List ("OCL") which included the procedure of capping hot drinks securely. By using OCLs and on-the-job training a full time employee was fully trained after five months at a standard restaurant, six months at a drive-thru restaurant. After full training the employee had to complete ten OCLs in each succeeding six month period and the results were discussed between the manager and the employee. Further, a Performance Appraisal was conducted every six months at which OCL scores were considered. The staff were also warned in McDonald's Health & Safety Manual that hot drinks could be very dangerous, especially to young children and instructed, inter alia, tactfully to advise customers if they thought drinks could be a hazard. The training was thorough so that the fact that 70% of the serving staff were between the ages of 16 and 20 did not mean that visitors were subjected to greater risk than if the staff had been older.

78. I accept Mr. Hathaway's evidence that he carried out a risk assessment of hot drinks causing serious burns and that the conclusion resulted in the warning and instruction in the Health & Safety Manual mentioned above. But even if this step had not been taken, the omission in itself would not be relevant, since in my opinion what the court is concerned with is the ultimate safety of the product and not what considerations the producer gave to its safety.

79. The drinks were served in polystyrene cups that were amply strong enough to hold their contents. The serving staff were trained to place lids securely on the cups before they were handed to customers. The insulation efficiency of the cups meant that purchasers could not tell by holding the cup just how hot the contents were. However, the great majority of those who bought tea and coffee would be of teenage years or older and they could be expected to know that the tea and coffee served by McDonald's was hot and would cause a serious scalding injury if spilled on someone. The angle at which full cups tipped over was 20 degrees in the case of a regular cup and 18 degrees in the case of a large cup. However, having been designed and manufactured to do so, the lids stayed on the cups if they were tipped over. This was so, in my judgement, even if the lid had been removed and then put on again. If the tab had been torn back or off, the lid would stay on but the contents would come out of the resulting gap in the lid but much less slowly than if the lid had been removed.

80. Persons generally expect tea or coffee purchased to be consumed on the premises to be hot. Many prefer to consume a hot drink from an unlidded cup rather than through a spout in the lid. Persons generally know that if a hot drink is spilled onto someone, a serious scalding injury can result. They accordingly know that care must be taken to avoid such spills, especially if they are with young children. They expect precautions to be taken to guard against this risk but not to the point that they are denied the basic utility of being able to buy hot drinks to be consumed on the premises from a cup with the lid off. Given that the staff were trained to cap the drinks securely and given the capabilities of the cups and lids used, I am satisfied that the safety of the hot drinks served by McDonald's was such as persons generally are entitled to expect. Accordingly, I hold that in serving hot drinks in the manner in which they did McDonald's was not in breach of the CPA.

Conclusion

81. The burns suffered by many of the claimants were serious, involving severe pain and skin grafts. I have taken this carefully into account whilst considering the issues I have to determine. However, for the reasons given above, I answer "No" to all of the preliminary issues; the allegations contained in those issues that McDonald's are legally liable for these unfortunate injuries have not been made out.