

## Higher Product Design

### Unit 1: Outcome 1

This exemplar should be used in conjunction with the marking commentary

### STAVROS BOTTLE OPENER



## Higher Product Design      Evaluation of “Stavros” Bottle Opener

### Product Description

The “Stavros” bottle opener was designed for Alessi by Marc Newson in 1999. It is made from thermoplastic resin and stainless steel. It retails at £10.95, measures 145 x 49 x 10mm and comes in a range of colours.



### Aspects to be evaluated

I intend to evaluate the following:

*The performance of the bottle opener.* This product is relatively expensive compared to other bottle openers and the buyer would expect that it at least opens a bottle. It is also likely to be used by a range of people and it is important that they can use it with ease. The opener should work without causing any danger to the user. The bottle opener should also be able to withstand repeated use.

*The materials of the bottle opener.* The materials are important for this product because they will affect its life expectancy (especially because it is used in damp conditions). This product is a type of tool. It is therefore important that the materials for this product are durable. The materials are also important because this product must be hygienic. The materials must not contaminate the liquid in the bottle and it must be able to be cleaned easily.

*The aesthetics of the bottle opener.* The aesthetics of the bottle opener will have a bearing on the amount that are sold. Therefore the looks of most products are very important. For this product the feel and balance are also important. The aesthetics may also affect the target market as some age groups may have different opinions on the aesthetics of the same product.

*The ergonomics of the bottle opener.* The sizes of the bottle opener are important because they will affect its ease of use. The force required to operate the bottle opener will also affect its ease of use. The ergonomics will also affect the comfort of the bottle opener for different users – is the Stavros more suitable for a particular user (gender and age)? The ergonomics may also affect the use by right handed and left handed users.

*The value for money of the bottle opener.* It is possible to buy much cheaper bottle openers. Therefore to survive in the market place the Stavros must have some point(s) of difference. The points of difference may include extra functions, better materials or simply that it is a “designer” bottle opener.

The reasons for the selection of the aspects for evaluation are summarised in the table below:

Aspect	It is important that this aspect is evaluated because:
Performance	<ul style="list-style-type: none"> <li>• I want to know if the opener functions correctly</li> <li>• I want to know if it is suitable for a range of people</li> <li>• I want to know if it can be used repeatedly</li> <li>• I want to know if it can be used safely</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• I want to know if they are suitable for use with this product</li> <li>• I want to know are hygienic</li> <li>• I want to know are durable</li> </ul>
Aesthetics	<ul style="list-style-type: none"> <li>• They have an effect on the sales</li> <li>• They have an effect on the target market</li> <li>• They affect the look of the product</li> <li>• They affect the feel of the product</li> </ul>
Ergonomics	<ul style="list-style-type: none"> <li>• They affect the ease of use of the opener</li> <li>• They effect the function of the product</li> <li>• They effect the comfort of the product</li> <li>• The product has to be used by a range of consumers</li> </ul>
Value for Money	<ul style="list-style-type: none"> <li>• I want to know how this opener compares to others</li> <li>• This is relatively expensive – why?</li> <li>• I want to know if people are willing to pay the extra money</li> </ul>

## Evaluation strategy

Aspect	Evaluation Method	Display of Results
Performance	User trial and tests.	Written report
Materials	Examination/test	Written report
Aesthetics	Comparison to other products. Questionnaire.	Graphical and written summary
Ergonomics	User trial/observation	Pictures and written summary
Value for money	Comparison to other products. Questionnaire.	Graphical and written summary

A range of users will be selected for the user trials and questionnaire. The range will cover male and female, a variety of ages and left and right handed users. This range will show if the Stavros is more suitable and/or attractive to a particular target market. The tests will involve simulating repeated use of the Stavros over a short period of time. This will involve using it to open a large number of bottles, repeatedly washing it in a dishwasher and leaving it to soak in water for 24 hours. The Stavros will be compared to the two bottle openers shown below.



Scotland Souvenir Opener  
Cost £1



Designed by Ross Lovegrove for Guzzini  
Cost £4.50

This allows comparison to a similar “designer” bottle opener and a basic bottle opener.

## Product Evaluation

### 1. Examination

The evaluation of the Stavros was started by carefully examining it and its packaging.



The Stavros is very simple in design, consisting of two materials.

The main component is the stainless steel body which is coated by a thermoplastic resin. The description of the materials was obtained from a number of web sites which sell this product.

The steel body is 3mm thick and runs the full length of the opener.

The thermoplastic resin is also 3mm thick and has a seam around the centre as if it has been pressed onto the body. Otherwise the bottle opener is very smooth.



The bottle opener is fairly heavy – it weighs 150 gms.

The packing is very basic consisting of plain brown corrugated cardboard with a label stuck onto to it.

In summary, the weigh and bulk of the product makes it feel very strong and functional. The packaging adds to this feel of functionality.

### 2. User trials/Questionnaire/Observation/Comparison to other products

All of these evaluation techniques were carried out at the same time.

The range of users selected is given below.

User Number	Age	Gender	Left/right handed
1	20-24	F	R
2	20-24	F	L
3	10-19	F	R
4	25-29	M	R
5	5-9	F	R
6	40-49	M	R
7	40-49	F	R
8	30-39	M	L
9	5-9	M	R
10	10-19	M	L

The users were asked the questions on the User Evaluation Sheet (appendix 1) and their answers noted.

Bottle opener No.1: Ross Lovegrove

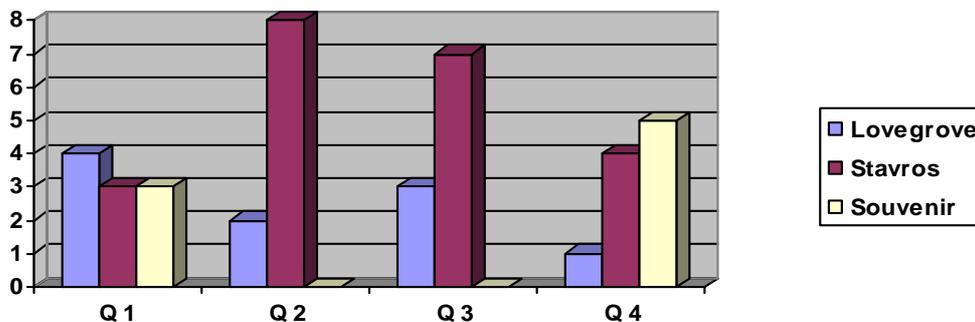
Bottle opener No.2: Stavros

They were observed when using the bottle (Q3) and observations noted.

The results are given below:

User Number	Q1	Q2	Q3	Q4
1	3	2	2	3
2	2	2	2	3
3	2	2	2	3
4	2	2	2	2
5	3	1	1	3
6	1	2	2	2
7	1	2	2	2
8	3	2	2	2
9	1	1	1	3
10	1	2	1	1

The preferences trend can be seen in the graph below:



Observations were made when the users were handling the bottle openers.

The use of the Stavros with an adult male, adult female is shown below:



Male adult

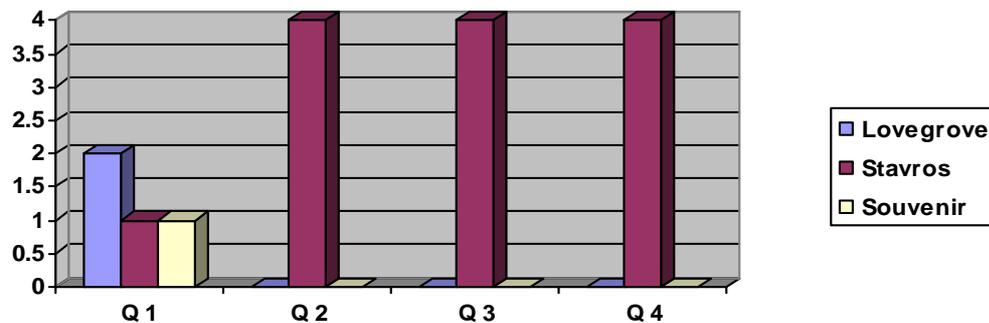


Female adult

A lot of information can interpreted from these evaluation methods:

- The initial reaction to the look of the Stavros was on a par with the other two openers. One user was put off by the colour.
- The “feel” of the Stavros was by far the best of the three openers. Comments included “feels really smooth”, “feels really strong”.

- Most users preferred using the Stavros. Comments included “easy to grip”, “good size”.
- The number of preferences fell to 4 when users were told the prices of the openers. The souvenir opener took top spot even although it had scored zero in the previous two questions and had been described as tacky by a couple of users who choose it. Comments included “the cheap one does the same job”.
- There was a clear trend with the 25+ age group. All four of them opted for the Stavros as soon as they handled it. This preference continued when using it and when told the prices. The trend is shown below:



- The four who preferred the Stavros were more mature and had fairly well established households.
- The Stavros was more suited to an adult hand, either male or female. The children found it a bit big and heavy. The two children commented on the lightness of the Lovegrove. The children could not open the bottle with the souvenir opener because it is too short for them to apply leverage.

### 3. *Test*

The Stavros was washed in a dishwasher in a house every day for two weeks. It was also left in a bucket of hot soapy water overnight and dropped into a pot of water which was just off the boil. All of these tests had no effect on the Stavros.

It proved to be very difficult to test the Stavros in action as it would require the opening of a large amount of bottles. However, an attempt was made to file the opening mechanism. The blade proved to be hardened and therefore it can be assumed that the Stavros would be very durable. This test was also carried out on the other two openers. Neither of them fared so well. Both are constructed of much thinner gauge plate and the souvenir opener appeared not to have been hardened at all and was filed away very easily.

## Conclusions

### *The performance of the bottle opener.*

The Stavros performed its function very well. It proved to be easy to use and was felt to be highly effective by all adults. The children who tested it found it a bit too big.

### *The materials of the bottle opener.*

High quality materials have been used for the Stavros. This is evident in the thickness of the steel plate used which not only runs the full length of the opener but is 3 times as thick as that used for the other openers. The thermoplastic resin is also very thick. This quality of material not only ensured that the Stavros passed all functional tests but helped give it a feel of quality. This feel of quality was picked up by all users as soon as they handled the product.

### *The aesthetics of the bottle opener.*

The looks of the Stavros received a mixed reception. Perhaps the bright green sample that was used put some of the users off. However, when the users were allowed to handle the Stavros they (with the exception of the children) all liked it the best. It's "feel" and the "smoothness" were all favourably commented on.

### *The ergonomics of the bottle opener.*

All adults (right handed and left handed) used the Stavros with ease. The children managed to open the bottle but found the Stavros a bit big and a little heavy.

### *The value for money of the bottle opener.*

There was a clear divide on this aspect. More mature adults, perhaps with more money or who were looking for a better quality product thought this good value for money and would, indeed buy it. However, the younger users thought it was too expensive and opted for a cheaper functional opener.

## *Summary*

This opener is part of the Alessi range of products. These products are all designed by well known designers (such as Philippe Stark). They are aimed at the top end of the market and are relatively expensive. The target market is affluent homeowners.

Based on this evaluation the Stavros appears to be successful in hitting the target market. In addition to being aesthetically pleasing the opener is functional and durable.

1. **Look** at the three bottle openers and list them in order of preference.

1<sup>st</sup> Choice  2<sup>nd</sup> Choice  3<sup>rd</sup> Choice

Comments:

2. **Feel** the three bottle openers and list them in order of preference.

1<sup>st</sup> Choice  2<sup>nd</sup> Choice  3<sup>rd</sup> Choice

Comments:

3. **Open a bottle** with each of the openers and list them in order of preference.

1<sup>st</sup> Choice  2<sup>nd</sup> Choice  3<sup>rd</sup> Choice

Comments/Observations:

4. The cost of the openers is A: £4.50, B: £10.95, C: £1

Which of the openers would you purchase? List them in order of preference.

1<sup>st</sup> Choice  2<sup>nd</sup> Choice  3<sup>rd</sup> Choice

Other comments/observations: