



AllPosters

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Introduction V

The definition of 'barbecue' given by Oxford Dictionaries is as follows: "a rack or appliance used for the preparation of food at a barbecue" (Oxford Dictionaries, 2014). This already indicates in how many different ways someone can interpret the word barbecue. And how many different products go under the same name. In this report the most used products, that suffice the definition given by Oxford Dictionaries, are considered.

The barbecue is a product with a broad history. The product evolved from a very primitive way of preparing food (in particular meat) over a fire to the numerous modern ways food can be prepared nowadays. People use smokers, wood heated pits, coal and gas fired grills and many more. How did the primitive way of preparing meat above or next to a fire, evolve to the several modern ways people prepare meat nowadays? In this report the answer to this question is given by a product family tree that is based on literature about the history of the barbecue. This product family tree is based on Eger's theories about Evolutionary Product Development and Product (Eger, A., 2013) Phases and Ehlhardt's theory on the Product Evolution Diagram. Also a graph is used to show the price development of the product over years. Finally, the results are compared to the prediction that Eger's theory gives.

My thanks go out to the people of The Virtual Weber Bulletin Board! They offered me a great collection of vintage Weber catalogs, which helped me a lot during research.

History Y

Barbecuing has a very broad history. The barbecue started evolving around 200.000 years ago and the evolution of barbecuing products is still going. In this chapter the history of the most popular barbecues is displayed. Wood, coal, gas, infrared and electric are considered as most important ways to barbecue and thus the focus in this brief history of barbecueing is on these categories.

200.000 B.C.

Bones and tools as old as about 200.000 years were found by Israeli scientists in 2007 and offered enough evidence (burn marks around the joints and scrape marks on the bones) to assume that early humans were serious about barbecue back then. The hunters preferred the parts with thicker flesh and meat on them. This was probably discovered thanks to a natural (forest) fire. Possibly, just after one of these forest fires, the early human found a partially burned animal and ate the meat that became easier to digest. They copied this way of preparing meat by laying their hunted animals close to, or even in fires. But, they learned that the food wouldn't burn as fast and would taste better if it wasn't held directly in the fire (they built primitive racks over the fire) and that the temperature was easier to regulate when the wood was burned down to coals (Go Articles 2013).

1200

The start of the Iron Age gave new possibilities to prepare food above a fire. Since the metal could be held close over the fire without getting burned to ashes, the development of a gridiron gave a boost to regulating the cooking temperature (Amazing Ribs, 2012).



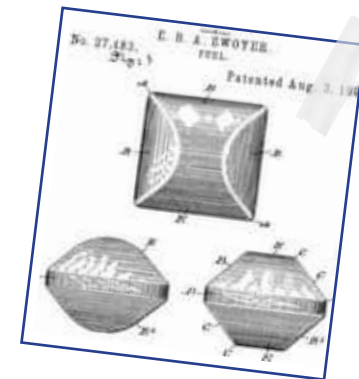
1492:

Columbus met Arawak Indians on his journey through the new world. He learned their way of cooking over a fire. The word for the wooden rack over the fire was called 'barbacoa'.



1897

Ellsworth B.A. Zwoyer patents charcoal briquettes. Her invention gives new possibilities for cooking over heat. Henry Ford uses this idea to make use of sawdust waste in his car production line (Bellis, M.).



1900-1930

The Great Migration (southern blacks traveling to the big cities) takes recipes and techniques through the United States (The Hayner Public Library District, 2013).

1948

Grant Hastings used the growing post-war market and the growing interest in backyard barbecuing, by bringing his Hasty-Bake grills to the market. The grill was the first commercial transportable backyard barbecue.



1952

In 1952 George Stephen of Weber Brothers metal grills invented the recognizable shaped Weber grill, by cutting a buoy into half. He used one half to hold the grills, and supported it with simple paws. Then he shaped a lid from the other half and added a handle. The meat that was cooked in this barbecue was a lot juicier thanks to the perfect lid which kept the moist inside.

1959

Twelve newly hired employees of Weber-Stephen Products were able to produce 15,000 grills in one year. Weber-Stephen products entered mass production.

1950-1960

The massive deployment of gas pipelines in the fifties and sixties in the United States gave new possibilities to prepare food without coal or wood (U.S. Department of Energy, 2014). It gave a huge boost to gas based cooking solutions.

1960

Thanks to the pipelines, a great invention was introduced in 1960. The Walter Koziol's Modern Home Products company (Antioch, Illinois) produced the first consumer gas grill. The grill was named 'The Charmglow Perfect Host' and got its gas from gas pipes (Modern Home Products 2013).

1961

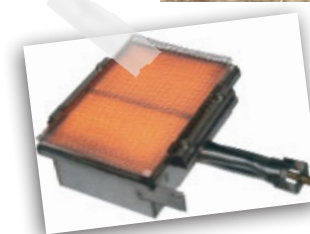
TEC infrared invented the first gas powered infrared burner in 1961.

1963

In 1963 Modern Home Products introduced the first painted steel rectangular gas grill with a lid. The lid made gas cooking more efficient and created better cooking results (Modern Home Products, 2013).

1963

President Lyndon retreated to his ranch on Christmas Eve 1963. He had to discuss important matters with the West German Chancellor Ludwig Erhard.



President Lyndon invited Erhard to his ranch (instead of having a formal State Dinner) and organised the first presidential barbecue in history (Amazing Ribs, 2012).

1970s

Weber sells about 800.000 units a year: production is highly automated (Espoz, J.B., 2013).

1973

In the early 70s own made heavy duty steel cookers were made from barrels, pipes and large propane tanks. These tube-shaped pits could be mounted on trailers and were carried to each new working location by Texas oil rig welders (Amazing Ribs, 2012).

1977

Another important development in gas grilling, was the in popularity gaining liquid propane tank. In the 70s Char-Broil (a manufacturer of grills) was the first to use a liquid propane tank and a grill in one product. Gas grilling gained popularity because of important advantages compared to coal: it's easier to start and stop grilling, and less cleanup (W.C. Bradley Co., 2014).

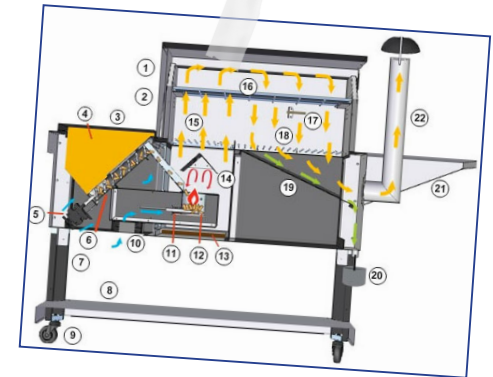
1980

It took until 1980 before TEC infrareds founder Bill Best to use his invention of gas powered infrared heating (mentioned earlier) to cook food without drying it out. Bill Best was the first to discover this big advantage of infrared cooking (TEC infrared, 2014).



1982

Joe Traeger saw a chance in 1982 in using compressed sawdust (a byproduct from local lumber mills) as fuel for a furnace. Furnaces were sold in in the colder months so a product for hotter days needed to come. Traeger Heating created a grill that had an auger which fed the fire with pellets .



1985

Traeger grills was started up, and Joe Traeger produced the first consumer pellet grill (Derricks, R., 2013).

1988

Questions rise about health risks of barbecuing. Belgian studies show that - if used right- charcoal barbecueing has no serious risks (Consumentengids,



1990s: The great developments in the internet and world wide web make the sharing of ideas and experiences a lot easier (Internet Society, 2006).

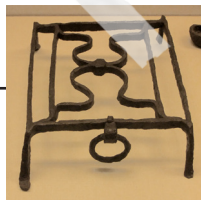
Product family tree E

To visualise the way the barbecue evolved into several product categories a Product family tree is made. The product family tree is displayed on these two pages. Vertical lines indicate important happenings that influence the tree and further development of the barbecue. A new product category evolving from another is shown by a new 'branch' in the tree. A dashed line indicates the 'ending' of a product category; some people still use it, hardly anyone uses the product.

200.000 B.C.: Cavemen learn from burned animals in forest fires and start cooking food over or next to fires.



1200: The start of the iron age gives new possibilities for cooking over a fire.



1492: Columbus met Arawak Indians on his journey through the new world. He learned their way of cooking over a fire. The word for the wooden rack over the fire was called 'barbacoa'.



1900-1930: The great migration takes barbecuing traditions and recipes through the whole States.

1897: Ellsworth B.A. Zwoyer patented charcoal briquettes Henry Ford further utilised the idea by using his production waste to form coal

1950-1960: Deployment of gas pipelines in the US

1959: Weber enters mass production and produces 15.000 peaces in one year

1948: First commercial backyard barbecue by Hasty-Bake



1952: First Weber kettle made by hand

200.000 B.C.

1200

1400

1700

1900

1950

Political: —
 Economic: —
 Social: —
 Technical: —

1980s: Questions about health risks of barbecuing rise.

1990s: Advanced controllers keep the temperature in smokers and barbecues constant

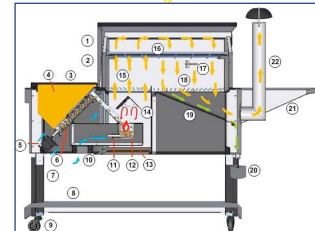
1961: First infrared gas burner invented by Bill Best.

1963: First presidential barbecue held by president Lyndon

Early 70s: Oil rig welders start welding their own barbecues.

90s: Flourishment of the world wide web makes sharing of experiences easier

2013: Advanced pellet grills/smokers can be controlled by a smart-phone or tablet



1985: Traeger starts producing the first consumer Smoker.

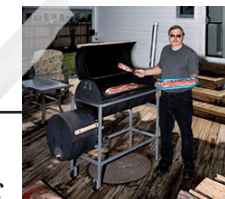
2006: Internet has made sharing easier and improves the quality of home made barbecues

2013: The latest model of the Weber One-Touch Silver still looks a lot like the very first design in 52.

2013: Hobbyists still enter competitions for wood barbecuing

2013: Latest gas-grills are weather resistant, temperature is easy to control, and are easy to clean.

2013: Also infrared grills have ergonomic designs, are easy to handle, and multifunctional.



1960: Modern Home Products produces the first consumer gas grill

1963: Modern Home Products produces the steel rectangular gas grill with a lid

1977: Char-Broil is the first brand to use a liquid propane tank and a grill in one product.

1980: Bill Best uses his invention of infrared heating in the first infrared grill ever.

1960 1970 1980 1990 2000 2010 2014

Price development

1950



Because of the large differences in products and prices and to avoid comparing apples and oranges, the prices of the classic weber kettle grill are used to define the target cost level of the product redesign.

On the next page, the graph shows the price development of one weber product line. This barbecue kettle grill line gets several names through the years (first JBK-710, later BK-710 and today the One-touch silver), but is seen as one product line because of the size (22.5 inch), characteristic weber shape and basic features (an air vent, grill grid, and lid).

1963



1964



All prices are American selling prices, because of the American origin of the Weber company. Shipping costs and other additional costs would unnecessarily obscure the analysis. Most prices were found in a great collection of both vintage and recent Weber product catalogs that were found on an online barbecue forum (The Virtual Weber Bulletin Board, 2013).

The graph show a explainable raise in prices at the start of the Weber grill. The invention of the kettle grill by Weber was so popular that the demand was way higher than the supply of the handmate kettle's. This demand remained very high for a long time. Even when the production of the Weber grills was automised in 1959 (Espoz, J.B., 2013). This demand stayed high, even around 1967, when the popularity of the gas barbecue was clearly rising and competitors came on the market. This resulted in a lowering in the relative price of the Weber BK-710. It also influenced the production of the kettle. Highly automated processes made a lower price possible. Lowering the price even further became nessecary with the rise of the fastfood industry in the 70s. People had less money to spend, and spent it on the cheapest food: fast-food (Arnold, S.C. (2012). A gaining competition with less qualitative, but also comparable barbecues explains the relatively low prices in the last three decades.

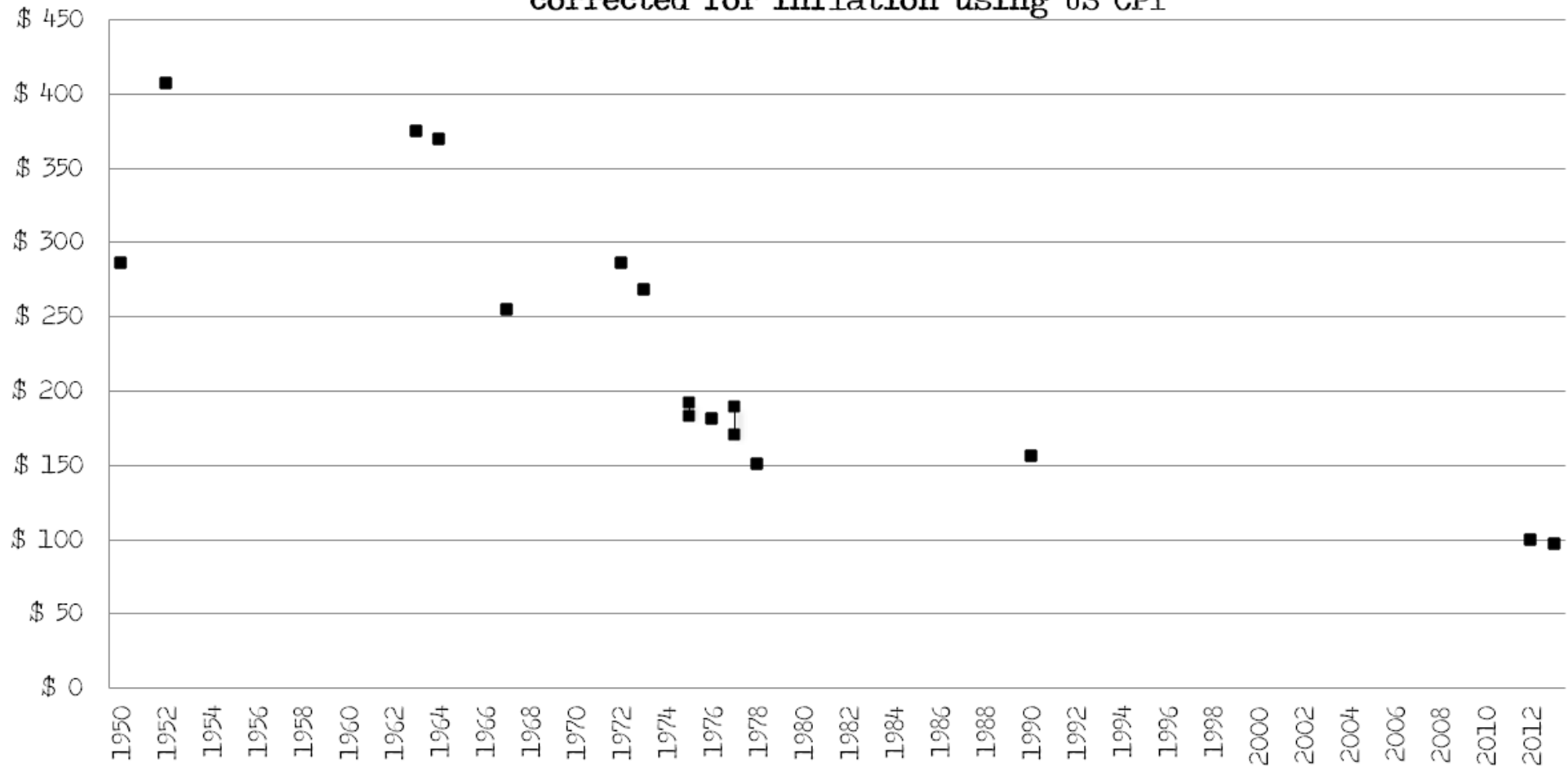
1967



1973



US \$ Price Development of
Weber JBK-710, BK-710, and One-touch Silver, over Time
corrected for inflation using US CPI



■ Lowest \$ Price (indexed)

■ Highest \$ Price (indexed)

Product phases

In this chapter the different product phases of the barbecue are explained by Egers theory on Product Phases (Eger, A., 2013). Every phase has its own characteristics. The characteristics in the evolution of the barbecue that were recognized to be assigned to a phase are explained. Because most information is known about the classic Weber kettle grill (the JBK-710, BK-710 and One-touch Silver) this information was leading to decide when each phase starts and ends.

Performance (1900-1952)

In the start of the 20th century, oil-rig welders made their own barbecues. These first barbecues were purely functional. Tubes were used and were welded to barbecues. The first backyard barbecues were build with concrete and stone and also were only functional. During this phase the knowlegde about barbecuing rose. It was only a matter of time before the first commercial barbecue made his entrance.

Optimisation (1948-1965)

As the first consumer barbecue entered the market in 1948 by Hasty-Bake, ergonomics, and improving performance started playing an important role. This became visible when Weber invented the compact transportable kettle grill with adjustable airvents to control temperature, a lid to improve cooking quality and handles and wheels to transport the barbecue. Also the prices of the Weber kettle grill are still relative high in this period, compared to todays selling price.

Itemisation (1952-1970)

In 1956 Weber redesigned the JBK-710 to look more like todays grill. Almost everyone still reckognises this shape as a classic backyard barbecue shape. Many competitors tried to use the shape to attract customers (J.B. Espoz 2013). The Weber kettle is considered as the dominant design for charcoal barbecues. Even today, after a few minor changes in design (e.g.: plastic handles) competitors try to copy weber.

Segmentation (1959–now)

The start of mass production in Weber's factory in 1959, producing 15.000 units in one year, shows that production slowly gets more automated. The lowering in prices and growth of competition in the 70s indicate a higher level of automation of production processes.

Also Weber starts making gas grills in the 80s (Espoz, J.B., 2013), and the range of products grows by the year (Various Weber product catalogs).

The start of the Weber recipes magazine, and the Weber product catalogs, show that Weber is trying to bind with the customer through extra service.

Indivitalisation (not yet)

There are no clear signs of individualisation yet. The customer has no real influence on the final result of the production.

Awareness (not yet)

There are no clear signs of the awareness phase as well, except for good functionality, ergonomics and safety.

On this page Egers theory is tested by this report about the barbecue. Individualisation and awareness are left out, because there are no clear signs of the product being in one of these phases at the moment.

- + : applies to Egers theory
- +/- : applies to Egers theory partly
- : does not apply to Egers theory

Overall conclusion:

The Product Phases theory applies well to the information about the barbecue that was collected for this report. Two characteristics applied only partially. The rest applied well.

The styling of the barbecues is not as well as might be expected. The Weber kettle grill almost hasn't changed since it's first redesign in 1959, and the shapes of most gas grills are only functional. A redesign of the Weber One-touch Silver should have a design that creates an emotional binding with the brand. Also the brand should express its ethic values through this design. A mass customisable weber grill could be the next step to keep profits high enough.

	Performance	Optimisation	Itemisation	Segmentation
Newness	+	+	+	+
Functionality	+	+	+	+
Product development	+	+	+	+
Styling	+	+	+/-	+/-
Number of competitors	+	+	+	+
Pricing	+	+	+	+
Production	+	+	+	+
Promotion	+	+	+	+
Service	+	+	+	+
Ethics	+	+	+	+

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1963

1964

1967

1972

1973

1977

2002

2005

2006

2007

2008

2009

2010

2011

Source:

www.tvwbb.com