

Explanations for food preferences: the Evolutionary Explanation, including reference to Neophobia and Taste Aversion.

From an evolutionary perspective there are two survival requirements; one is the need for a varied diet which is high in energy and rich in nutrients; the other is the need to avoid potentially toxic foods that threaten our survival.

Food preferences are a desire for particular foods which were created because ancestral animals preferred to eat food that increased their chances of survival and reproductive success.

Evolutionary Explanation

The evolutionary explanation argues that food preferences exist today because they provided an adaptive advantage. For example, food preferences linked to sweet taste are a reliable signal of high energy food. In addition a preference for foods which are high in calories, such as fats, carry an advantage because those calories are converted to important energy, essential for survival. A food preference for salt taste appears in humans around 4 months of age, and research has shown that this is innate. Harris et al (1990) found that babies between the ages of 16 and 25 weeks who had been breastfed preferred salted rather than unsalted cereal. Breast milk is low in salt so this supports the suggestion that salt preference is innate.

Torres et al (2008) Supports the evolutionary explanation, as they reviewed relevant studies enter the link between stress and eating behaviour. They concluded that humans have an increased tendency to prefer high fat foods during times of stress. During such times, are fight or flight response is initiated and this mechanism helps us cope with stress but creates a greater demand for energy.

Neophobia

Neophobia is an innate predisposition to avoid anything new. It is an adaptive behaviour which reduces the risk of danger until we learn that things are safe. Humans have an innate unwillingness to eat new or unfamiliar foods and this is most pronounced in childhood.

It has been shown that food neophobia is associated with physiological responses that indicate fear towards novel foods (Raudenbush & Capiola, 2012).

Birch (1999) suggests that neophobia appears at a time when children begin to explore their environment and may encounter foods independently of their parents guidance. Neophobia tends to diminish once we learn that specific foods will not poison us or cause us to become ill. At this point it gives way to a different evolutionary mechanism which encourages the consumption of a more varied diet, giving greater access to important nutrients.

However, one limitation of neophobia is that it is no longer adaptive in the modern food environment. Most of the food we consume, in the developed world, is sold by retailers that are subject to strict laws. Food is therefore safer than it ever has been and offers little threat to survival.

Taste Aversion

Taste aversion is an innate predisposition to learn to avoid potentially toxic foods which are signalled by a bitter or sour taste. Humans and other animals are genetically hardwired to learn taste aversions that make us less likely to eat food that has gone bad or is toxic. A taste aversion is much more likely to be the outcome of eating poisoned food which suggests it is an adaptive response to aid survival. Bitter taste in food are usually a reliable warning sign of toxins or that the food has gone off, so it is a beneficial survival mechanism to be able to detect these tastes quickly. Steiner (1977) found evidence of negative facial expressions in newborn babies in response to bitter tastes.

There is also the idea that taste aversion can be conditioned. When we become ill after consuming a meal, there is a propensity to target a particular taste as the cause of the illness. The qualities of the taste most likely targeted include more novel, less preferred, and higher protein content. This association between a particular taste and illness is a form of learning that is termed conditioned taste aversion (CTA). The ability to acquire CTA occurs across species and across ages within a species.

Taste aversion can form rapidly, even from a single exposure, and can occur after a significant time delay between the food intake and the onset of illness. This aversion is often selective, meaning it is more likely to develop towards certain tastes or smells associated with the negative experience.

However, there are individual differences when it comes to taste aversion. Some people differ in their ability to detect bitter tasting chemicals, which suggests that this is perhaps not an adaptive ability.

Culture can also play a part in differences in food preference. Cashdan (1998) proposes that some foods are avoided, and even disliked because of cultural values and beliefs. This goes against the evolutionary argument that food preference is universal and innate.

