Marginal and Total Utility

Marginal utility measures the extra utility (or satisfaction) from consuming an additional unit of a product. Total utility is the total satisfaction from the consumption of a product. If, for example, the extra utility from consuming another unit of the product is 6 units of utility (called utils) then total utility will increase by 6 utils.

Units	Marginal utility	Total utility
1	10	10
2	8	18
3	6	24
4	4	28
5	2	30

Notice in the above table that the Law of Diminishing Marginal Utility operates. This means that total utility increases at a diminishing rate. When marginal utility is 0 this means there is no increase in total satisfaction from the consumption of that unit (in this case the 6th unit). It is possible that you can overconsume some items (e.g. eat too much) in which case the marginal utility might be negative (the 7th unit) and total utility would then fall.

The paradox of value: marginal and total utility

Some products are widely available and are heavily consumed. This means that the extra utility from consuming one more unit is low, as is the price we are willing to pay for that unit. Even though the product may be vitally important, such as bread in the UK, the fact that it is widely available reduces the value of an additional unit. Other products, such as Ferarris, are not widely available and have limited consumption. This means the marginal utility of an extra unit is high and therefore we are willing to pay a high price for it. Even though bread is more important in terms of our survival and provides more total utility, we are not willing to pay as much for it as Ferarris because of its low marginal utility. This is known as the paradox of value.

Interestingly the typical example of the paradox of value is water and diamonds first outlined by Adam Smith in 1776. In the UK, however, the availability of water is less reliable than it used to be, which is reducing the supply and increasing the marginal utility and price we are willing to pay for it.