

Comparison on the Beverage Industry Sustainable Presence and Future in Society

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The report will underline an understanding on how the beverage industry has help create a throwaway society that is not sustainable any longer and needs to change in the foreseeable future.

The global beverage container industry is a massive worldwide network that will continue growing in value and production, offering more jobs and sustainability for many individuals as humanity's thirst for never ending consumption for these throw away products grows. These throw away products are an issue that has been constantly addressed over the last couple of decades due to how it has a huge negative impact on the environment. A throw away product is a product that is designed to have a single use and not be cared or thought about by the consumer after its fulfilment is used. But the products exterior, the beverage container for example does not disappear into thin air it can remain around longer than the individual who consumed it. It would have no purpose in the space/area it would then occupy after it has been used, it would be a constant remainder of a problem that needs to be solved before it has such a negative impact that it can't be reversed.

'Single-use plastics that take five seconds to produce, are used for five minutes, then take 500 years to break down again.' (Clark 2018)

The beverage container would be most wanted if products could be investigated and charged for causing wrong doing to earth's eco systems. Just like crime you can't simply ignore this and hope for the best instead you need to combat against it to prevent it from getting out of control but since the production of plastics in the 1960s to present time the inaction outweighs the action taking to prevent the negative impact from not being able to be reversed.

Coca Cola is arguably the most recognisable beverage company in the world and serves '1.9 billion drinks a day across 200 countries' (Coca-Cola 2017). These serving include glass bottles, plastic bottles and aluminium cans which are all designed in some way or another to be thrown away after use. Surprisingly, an article by (Laville & Taylor 2017) shows that 'The top six drinks companies in the world use a combined average of just 6.6% of recycled Pet in their products'. Pet is the most common plastic used for drink beverages and coca cola is obviously part of the big six, so is coca cola trying to improve this. Well the 6.6% was only reported on after coca cola refused to publically disclose its global plastic usage in 2016-2017.



Figure 1. Examples of drink beverages(sirsonik 2014)

Not all throw away products are left to decompose, in fact there are many schemes from small to big across the globe that are

aiding in the clean-up of such products and researching different recycling methods on how we could use the products for another purpose. Statistics show that in 2016 '74% of plastic (PET/HDPE) drinks bottle were recycled in the UK' (BPF 2019). Action against the negative impact of throw away products has become more documented and more sought after in recent years due to public demand and awareness of this matter. Which is a positive and welcoming sign of relief but...



Figure 2. Turtle with plastic around its shell (Ruiz-Grossman & Dahlen 2017)

'By 2050 the ocean will contain more plastic by weight than fish' (Laville & Taylor 2017)

The above statement and photo (see figure 2) is quite frankly frightening since 'More than eighty percent of our ocean is unmapped, unobserved, and unexplored' (NOAA 2018) which could suggest or theorise that actually the negative impact has already begun and changed earth's eco systems. In 2006 a discovery was made which suggests the impact has already begun, when an alien like plastic material was found and later dubbed 'plastiglomerate' (see figure 3) a 'hybrid blend of...man-made waste consisting of molten plastic and beach sediment' (Franklin & Till 2018, p. 226-227). The pair also go on to say that plastiglomerate is 'evidence of the negative and mutating impact of plastic pollution and as a warning sign for what inaction may mean for the future'.

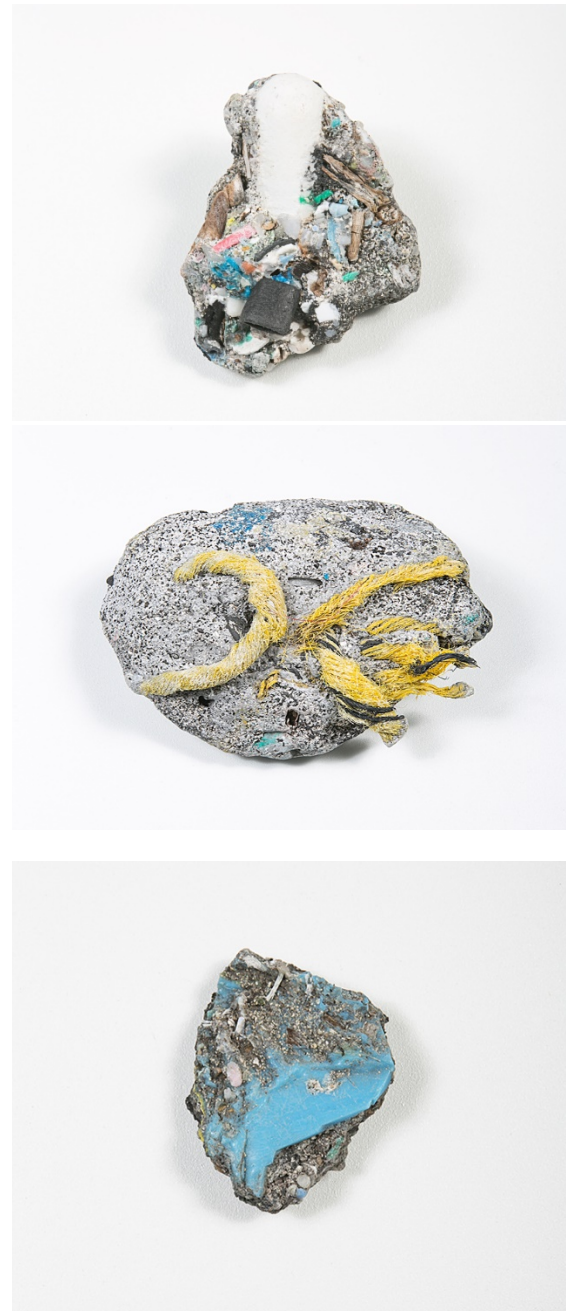


Figure 3-5. Examples of a plastiglomerate in Franklin & Till (2018, p.227)

'Sudden and violent public concern over plastic. It has become the bogeyman among concerned citizens' (Clark 2018)

Its common knowledge that the manufacturing and production of plastic in the beverage container industry needs to change but how?, could you stop its production all together, reinvent it, replace it with glass and aluminium or even use a new

material. Glass and aluminium are also heavily produced and manufactured by these beverage companies and are more easily recycled than the plastic (pet) used. But could they fill the space and not cause numerous ripples and backlashes of problems that are related with changing the manufacturing and production of plastic in the beverage container industry. These problems could range from damaging economies, shortage in supply and demand, loss of jobs including the businesses/venues that sell the product as well as factory employees. Therefore whatever new agenda is used would need to maintain the change that must and needs to happen from spiralling out of control.

As mentioned earlier on in the report 'The global beverage container industry is a massive worldwide network that will continue growing in value and production, offering more jobs and sustainability for many individuals', so if this industry wants to continue growing and offering as typed before, how will they do it. Ideally a solution that could be considered is replacing the plastic with aluminium or glass since they are still throw away products, so our society and the industry structure doesn't have to have a dramatic change that would come with trying to bring a new product or material to market. Therefore the throw away culture could remain for now but have a less of a negative impact.



Figure 6. Plastic, glass and aluminium (Murphy 2017)

Research shows that aluminium is the most recyclable beverage container by how each can averagely has '70 percent recycled

content -- more than 3X the amount in a glass or plastic bottle'. This research conducted by the aluminium association in 2016 also states how it only takes 'just 8 percent of the energy to produce aluminium from recycled material versus producing new aluminium,' which justifies why it is a suitable replacement for plastic. There is however a crucial point with the design of the can on why it may not take off and be the replacement since even though plastic is the most consumed and thrown away it can still be reused if the consumer chooses because it has a lid that can be resealed. Whereas the majority of canned drinks do not which could prompt the consumer to care less about the throw away impact it could have. Another aspect is that the plastic container is clear and shows the consumer what they are about to drink whereas the can is not.

Glass on the other hand can be clear as the plastic depending on the manufacturer's choice and can in some cases have a lid that can be resealed. It is also 100% recyclable without losing much of its purity and quality which prompts and 'reduces the manufacturer's carbon footprint — furnaces may run at lower temperatures when recycled glass is used because it is already melted down to the right consistency' (Murphy 2017). Murphy also mentions that it can be 'back on shelves in a month' which suggests it could meet the supply and demand that plastic has at the moment if it were to replace. Unfortunately glass is fragile and is not suitable for many aspects such as having a drink bottle (glass) in your bag at school or while jogging/running. The fact that it is fragile does create the problem that would accumulate if it were to be thrown away like plastic is the smashed glass (since it's fragile) could be harmful to humans and animals alike.

All three of these materials produce emissions of greenhouse gases in various stages of

manufacturing, some more than others. The transport of these would also produce emissions and this is taken into account by manufacturers since they need to determine how they enable the design of the container to be able to fit in the transportation vehicle as much as possible. Glass is the least effective since it's fragile and can't be as tightly transported as aluminium cans or plastic bottles and are significantly heavier than these two. Meaning more fuel is used up when transporting glass beverages. It turns out according to (Murphy 2017) that the transportation of cans is more sustainable due to how they 'fit into a smaller space and their light weight means less gas to get them from point A to point B'. Another factor as well that is noted is that 'cans use less cardboard packaging when transported as well, meaning more room for more cans'. This saves money for the industry and reduces the need for unnecessary emissions.

At this point in the report you could be given the impression that the aluminium could replace the plastic container. Well what if an existing or new material replaced the plastic instead of glass aluminium, such as plant-based alternatives. They are already being used in other industries like toy manufacturers who are trying to create a more positive eco-friendlier identity (see figure 7).



Figure 7. Lego are including plant based alternatives in a move to become more sustainable (Averda editor 2018)

The plant based alternatives used would degrade quicker than regular plastic bottles and are less harmful, Coca-Cola is branching and incorporating these alternatives in hope to reach out and gain more financial income and respect from 'earth-conscious consumers' (Crafttech 2019). Crafttech also explains how 'Coke's transition to renewable materials is a step towards long-term sustainability that will carry the company into the future. If businesses are going to survive they must protect the communities in which they operate'. This clarifies that the Coca-Cola Company is in fact trying to improve the throwaway culture it help create by using a product that can still be thrown away but causes no harm or very little to the environment. If it can be fitted in to the manufacturing process that already exists then this could guarantee the company's employees in various positions and roles that they will be keeping their jobs.

Plant-based alternatives may be better for the environment by being eco-friendly but if it were to replace all plastic packaging (not only bottles) then a problematic cause of concern will happen. This concern is that it could take up 'nearly a tenth of all available land currently under cultivation in Europe' (Clark 2018). This is problematic since less food would be grown that could be a cause of concern for other industries. An additional factor that is also raised by Clark is that the plant-based... 'Tend to decompose straight to methane, a greenhouse gas measured to have 20 times the potency of CO₂'. Climate change is a main concern that is as or more important than cleaning up the throw away life style. Therefore, even if plant-based... seems favourable they could make matters worse.

Throw away life style is a lifestyle that can become sustainable but careful consideration is needed before a solution arises that comes with unidentified negative impacts that

weren't previously noticed. This lifestyle needs to understand the cradle to the grave terminology more than ever and by noticing these impacts beforehand can help understand and identify a reasonable and realistic outcome that could definitely solve the crisis caused by throw away products like the beverage container. The fact of the matter is that it is difficult task but not impossible, the solution could lie in choosing the method that replaces the plastic with an existing material such as aluminium before a plant based... becomes more sustainable. The aluminium container is not suited to every packing industry such as body wash and shampoo products. But it could help reduce the '13m tonnes of plastic that leaks into the world's oceans each year' (Laville & Taylor 2017).

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