Position through contextualising

This project explores aluminium beverage cans and their underlying relationships among their history, symbols, material, reputation, recycling system, and production system.

Liboiron, M. and Lepawsky, J. (2022) *Discard studies: wasting, systems, and power*. Cambridge, Massachusetts: The MIT Press. Available at: https://search-ebscohost-com.arts.idm.oclc.org/login.aspx?direct=true&db=nlebk&AN=2955243&site=ehost-live&scope=site (Accessed: 28 April 2024).

Liboiron and Lepawsky consider recycling a form of discarding as it not only builds a green reputation for disposable products but also rationalises and enables their production (2022).

Since the creation of the recycling symbol (♺), commissioned by the Container Corporation of America in 1970, recycling has become an official industry practice, an institutionalised business that neutralises the act of discarding and offers disposables a place within the system (Liboiron and Lepawsky, 2022) and transfers the responsibility to consumers. Among all the packaging materials, aluminium's recyclability earned itself various dedicated recycling symbols, painting a green image and rebranding the metal as sustainable and futuristic.

However, according to the International Energy Agency (2023), the manufacturing process of aluminium is highly energy-intensive and results in a significant amount of carbon dioxide emission and industrial waste called red mud. Moreover, the extraction of aluminium ore, bauxite, has led to environmental degradation and social issues. In Odisha, India, alone, the metal mining industry, including the Aditya Birla Group, the aluminium supplier of the Coca-Cola company, has displaced millions of people, depriving them of livelihood resources, many of whom are underprivileged groups, such as tribal people (Jena, 2016). Recycling has shifted public attention away from these issues by tasking consumers with reading symbols and sorting waste, addressing only the symptoms but never the origin (Liboiron and Lepawsky, 2022) — the system of production. Even when failing to deliver the promised environmental impact, recycling remains the focal point and an effective distraction for the bigger system failures and contradictions.

Furthermore, consumer products like beverage cans are only one of the many aluminium applications. In contrast, transportation, construction, and renewable energy infrastructures consume most of the primary aluminium ever produced (European Aluminium, 2024). To put this in perspective, a Boeing-747 aeroplane requires 66,000 kg of aluminium (European Aluminium, 2024), and a standard 330ml aluminium soda can weighs approximately 0.015 kg. The Aditya Birla Group, a multinational conglomerate based in Mumbai, India, is a leading aluminium, copper, and metal producer. In addition to beverage packaging companies like Coca-Cola, its subsidiary company, Novelis, holds long-term contracts with high-profile clients in the aerospace and automotive industries, such as Boeing and Toyota (Novelis, 2024). This is what Liboiron and Lewpasky called a scalar mismatch. The high recycling rate of aluminium cans does not offset the transportation industry's growing demand for the metal or its production waste and social impact; however, the green image built from the recyclable cans has been applied to the material as a whole and enables the production of primary aluminium (2022).

This is why recycling is less about sustaining the environment and more about legitimatising resource extraction and manufacturing systems. This project aims to contextualise the issues associated with the aluminium industry by visualising the underlying structures of aluminium production from extraction to refinement to industrial waste to relevant policies to displacement to applications.

Voss, G. (2024) *Systems ultra: making sense of technology in a complex world*. London : Verso.

Voss argues that systems are imagined through languages (2024). What are the visual languages that enable the recycling system? The introduction of the recycling symbol in 1970 led the world to reimagine disposables as recyclables. Though recycling hasn’t met its purpose of conserving the environment to this day, the internationally recognised symbol still implicates the possibility of a better future where waste is manageable and even re-processable.

One contributor to the recycling symbol's success is its visual simplicity—three folded, chasing arrows lining in a triangular direction—which allows the symbol to lend itself to almost any materials, technology, or context. More than 50 years after its creation, variations of the recycling symbol have bombarded the packaging industry. One variation is the notorious resin identification codes placed inside the recycling symbol, which mislead

consumers into thinking all packages with a symbol are recyclable and disposing them in the recycling bins.

Aluminium, one of the most recyclable materials, is often called a ‘miracle’ or a ‘green’ metal. The material has also earned several dedicated symbols, championing and validating the recycling system. Because of the ‘totalising’ nature of systematic thinking (Voss, 2024), the sustainable image of aluminium packaging has been extended to all other aluminium applications, such as transportation, even though the latter uses a large amount of primary aluminium and the recycling process of aeroplanes and automobiles is drastically different from that of consumer products.

Similar to the abstract symbols, as Voss noted, ‘system’ is a totalising concept that can be taken out of its original context and applied to anything in the world, and, as a result, it makes the world subject to study and technical control (2024). When the system is applied to the recycling practice, industries are established to collect the litter, store the recyclables, re-direct the contaminated and unqualified waste, export the recyclables and ultimately maintain the completeness and orderliness of the larger system, ensuring an undisrupted flow of production.

However, Voss also mentioned an ‘admission of failure’ (2024). Litter still exists and even overflows the waste management and recycling system (Moore, 2012, cited in Liboiron and Lepawsky, 2024).

How could graphic communication design demonstrate the recycling system's complexity, contradictions, and failures? When writing with words, Voss employs metaphors to comprehend systems (2024). This project produced two forms of publications—one is a traditional booklet that can be read page by page, and the other is multiple strings of interlocking parts of systems underneath the aluminium beverage can, such as the history of this container and the source materials. Compared to the booklet, the strings of objects are much more challenging to navigate and read — a physical analogy for the complex structure relationships in the aluminium industry.

Uj, W. (2024) *Happyland*. Available at: https://wuthipoldesigns.bigcartel.com/product/happyland (Accessed: 7 May 2024).

Happyland is a popsicle-shaped zine picturing the renowned dystopia-like neighbourhood in Bangkok, Thailand. The zine's vivid colours and playful shape complement the rejuvenated district and strongly contrast against the infamous history of the closed theme park. The wooden handle transforms the traditional zine into a three-dimensional object from a two-dimensional publication, propelling readers to imagine the unique theme park experience, such as licking a popsicle, while unfolding the booklet. How does string format influence the understanding of the aluminium industry? Will new knowledge be produced if the publication is transformed again into the shape of a beverage can? How does the string of objects shape the reader's interpretation of the traditional publication?

Atelier HOKO. (2022) *Science of the Secondary #13 Rubbish*. Available at: https://atelierhoko.com/science-of-the-secondary-13-rubbish/ (Accessed: 7 May 2024).

Science of the Secondary: Rubbish is a visual research and study on the daily practice of discarding published by Atelier HOKO. It visualises each step of discarding through photography and collage, from preparation before disposal to disposal to alternatives for disposal, such as hoarding or gifting. The publication presents the practice of discarding on a micro-scale, highlighting it as a cultural and collective practice supported by either official infrastructure, such as bins, or unofficial infrastructure, such as hidden places where our waste can fit. How could the production, the consumption, the material and the images of aluminium be broken down? How could graphic communication design showcase different scales, both macro and micro, to show the scalar mismatch that is often seen in environmental activism campaigns(Liboiron and Lepawsky, 2022)?

Haraway, D. (1988). 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', *Feminist Studies*, Autumn, 1988, Vol. 14, No. 3 (Autumn, 1988), pp. 575-599. Available at: https://www.jstor.org/stable/3178066

Haraway argues that knowledge is always situational and partial rather than universal (1988). Voss also points out that systems are relational structures reinforced by cultures (2024) and relations are always contextual. During World War II, steel cans were an essential type of container, preserving food supply for the army. Meanwhile, the Coca-Cola Company also had a successful campaign by making its soft drinks affordable and available for all soldiers, which led to their worldwide growth in the post-World War II era. Therefore, I suggest that when Coca-Cola released its first steel can in 1960 (The Coca-Cola Company, 2011), they were trying to make its products more portable and capitalising on the positive sentiment associated with steel cans. However, when looking back at the switch in packaging materials in the context of the recycling system, disposable steel cans have also offloaded the burden of collecting glass bottles from the producer and transferring the duties to the consumers.

Blauvelt, A. (1994). 'An Opening: Graphic Design's Discursive Spaces', *Visible Language*, vol. 28, no.3, pp.205-216.

Blauvelt argues that graphic design's history must be examined in its social context, including its production, distribution, and consumption. The Container Corporation of America commissioned the design of the recycling symbol amid the awakening of environmental issues on the first Earth Day (Liboiron, 2012). The recycling symbols gained global recognition and legitimised the production of paperboard boxes due to their recyclability. Today, the recycling symbols advocate not only for paperboard but also a wide range of 'recyclable' materials, such as plastics and aluminium. Because the symbol is in the public domain (Liboiron, 2012), it has been overused and over-consumed without much standardisation or guidelines, contributing to much confusion and partially leading to the failure of the recycling system. Yet, if we look at the origin of recycling symbols, it still serves its real purpose of keeping the production of disposable products flowing.

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