Ecologies of 'upcycling' as design for learning in Higher Education

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Abstract

As society changes, new ways of understanding and using existing semiotic resources are needed. This study looks at artefacts from a social semiotic perspective in order to explore the concepts of 'recycling' and 'upcycling' and their relevance for pedagogy in Higher Education. We look at recycling in terms of 'texts' and employ methodological tools from multimodal discourse analysis. 'Recycling' involves converting materials from one product to create a different product with a different function, without necessarily adding any type of value. In 'upcycling', economic, aesthetic or functional value is always added. 'Upcycling' can thus be understood as a process of recontextualization of semiotic resources, in both spatio-linguistic and sensory terms. This paper looks at how resources are recontextualized as part of global ecologies of production and consumption. Then, we explore these insights in the pedagogical domain, looking at possible implications of the principles of 'upcycling' and value adding through design as a means for educating global critical citizens.

Keywords

Ecology can be described as an ever-changing flow of inter-connected instances. The concept of ecology in the humanities and social sciences points to dynamic perceptions of, for example, design, meaning-making and learning (cf. Barton, 2007). One global ecology of production and consumption of artefacts is that of 'upcycling' waste and the movement of materials between places and spaces in the developing and industrialised world (cf. Hetherington, 2004). 'Recycling' involves converting materials from one product to another without necessarily adding any type of value. In 'upcycling', on the other hand, economic, aesthetic or functional value is always added that, for instance, makes it possible to export a re-designed metal bottle top from South Africa and sell it as an earring in a high street shop in Scandinavia (see figure 1).

Figure 1: South African 'upcycled' earrings in a shop in Stockholm

In figure 1 the earrings are represented as material artefacts displayed for sale in a specific place and at a specific time. However, within an ecological perspective on artefacts, these earrings can be seen as instances in a chain of recontextualizations in which meanings and functions have been continuously and creatively worked upon, changed and transformed. The provenance in the material of bottle tops (the metal) is still recognisable, and so is the brand name of the original soft drink, but both the function and the value of the original artefact is transformed.

Pennycook (2007) discusses recontextualization and creativity more broadly as re-design and renewal rather than original production and individual creation of newness. He relates recontextualization to student writing and student texts.

> An understanding of recontextualization allows us to appreciate that to copy, repeat, and reproduce may reflect alternative ways of approaching creativity. We may therefore need to look at student writing practices not as merely deviant or overly respectful, but rather as embedded in alternative ways of understanding difference: to repeat a text in another context is an inexorable act of recontextualization and it is only a particular ideology of textual originality that renders such a view invisible. (Pennycook, 2007: 589.)

We share Pennycook's interest in recontexualization as an intersemiotic and transmedial remix. We approach 'upcycled' artefacts in terms of 'texts' and employ methodological tools from social semiotics and multimodal discourse analysis in order to interrogate the phenomenon (Kress, 2010; van Leeuwen, 2005). Firstly, we look at how resources are recontextualized in global contexts, then we explore how these insights can be relevant in the pedagogical domain of Higher Education.

An example of how resources are recontextualized in 'upcycling' is the 'upcycled' plastic curtain made to hang across a doorway represented in figure 2. Displayed in a Stockholm shop, the plastic curtain is made from cut up plastic bottles. The fact that the curtain is 'upcycled' through the use of rubbish is a sales argument that is communicated through the design of the product.

Figure 2. South African upcycled plastic curtain in a shop in Stockholm

Viewed as a 'text' the curtain can be analysed in terms of how *semiotic resources* – "the actions and artefacts we use to communicate" (van Leeuwen, 2005: 3) – are used and recontextualized. The material (parts of plastic bottles) that form the substance of the curtain have largely had their logos removed, except the bottle tops containing the logos of 'Minute Maid' and 'Coca-Cola'. The brand names point to a provenance in everyday consumer goods, but so do the semiotic resources of shape, pattern, colour, materiality of plastic. Experiential, sensory provenance is significant here as the shapes of the fragments of the bottles, just like their plastic materiality, remain highly recognizable. In terms of connotation, plastic is the material of "chemistry, not of nature" (Barthes, 1972: 54) and it is detrimental to the environment. Plastic is also the preferred material of mass-production and modernity. The most down-to-earth and practical, cheap plastic objects, described by Barthes (1972: 54) as "at once gross and hygienic", have been 'upcycled' for aesthetic and commercial purposes. The 'upcycling' process goes from South African mass-produced everyday plastic objects of various shapes and functions into rubbish which is then re-designed into a curtain of significantly higher value.

Even a condensed multimodal analysis of an 'upcycled' artefact such as the plastic curtain can yield a tentative typology of recontextualizations in 'upcycling'. The recontextualization of brand names and logos can be described as *spatio-linguistic* recontextualization. Writing and other inscriptions, including the shapes of logos, are manifestly recontextualized from the original

product through the state of being rubbish into the 'upcycled' product where they become signifiers (Kress, 2010) of 'upcycling' generally rather than of, for example, 'Coca-Cola' or 'Toilet Duck'. The curtain is also characterised by *sensory* recontextualization where there is a manifest recontextualization of specific materials and shapes from an original product to an 'upcycled' artefact. Although the shapes and material of household plastic are maintained from the original artefacts and remain productive signifiers in the recontextualized, 'upcycled' curtain, they express other meanings (cf. Björkvall and Archer, forthcoming).

'Upcycling' as designs for learning in educational contexts

If connected to student interest in meaning-making processes (see Archer, 2008), the analysis of 'upcycling' and recontextualizations in global and commercial contexts can offer relevant parallels to learning through design in (Higher) Education. Three notions are critical here: learning as *transduction* of meaning across modes as a means for learning (Kress, 2010), citation as *remix,* and the development of a *metalanguage* of critical commentary. Stein (2008), for instance, looked at how students drew on 'found resources' in an impoverished area in Johannesburg to re-construct meaning in a classroom environment. This entailed fashioning figures in the tradition of 'fertility dolls' using 'upcycled' materials from the rubbish dump nearby, including bubble wrap, cloth, plastic bags. Here, learning can be understood as students' active transduction of meaning across modes using the semiotic resources available to them at a particular moment in a specific socio-cultural context.

In a similar example, students in a second year project, entitled 'Recycling and Art' at an art school in Cape Town were required to create three-dimensional sculptural objects using waste materials. Figure 3 below represents a student art installation made from, among other things, cables and CDs.
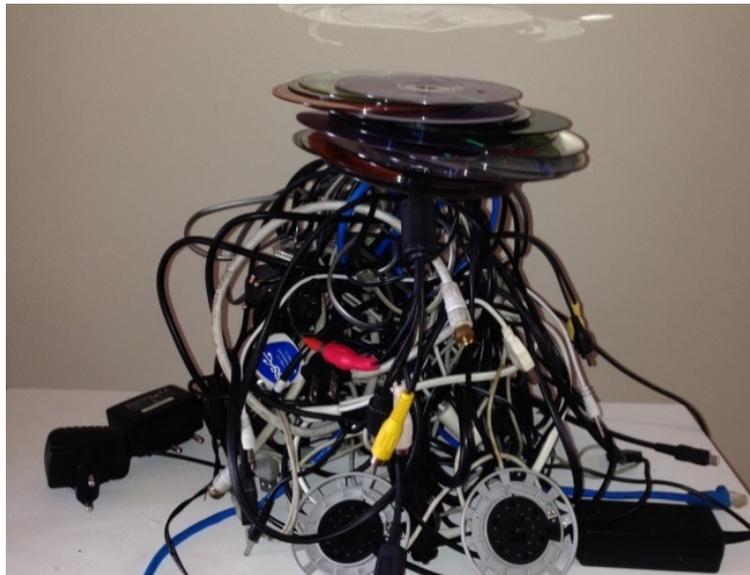

Figure 3: Art installation from mobile phone chargers

There is an explicitness of the sensory provenance of the material of the wire and the discs. The installation points to the fact that in a 'wireless' and mobile world, wire and CDs are becoming somewhat obsolete and more showpieces than functional objects. These are the kinds of objects

that one keeps at the back of your drawer, because they were once important and useful. The entanglement of the wire can be interpreted as *critical commentary* on modernity and consumption. Where there is such a proliferation of electronic goods, the act of disposal is the ultimate act of consumption.

Another important area that the semiotic construct of 'upcycling' can illuminate is that of citation practices in a range of texts and contexts, including academic discourse. Here the concept of intertextuality is of paramount importance. It is possible to cite in all modes, but with different constraints and possibilities. In music citation is called 'mixing'; in the fine arts, citation could be seen as 'collage'. Design or original work can use precedents which do not necessarily have to be referenced. Given our globalized, technologized contexts, downloading from image banks, the use of free music and open sources has become the norm, raising questions around copyright and 'originality'. Citation in both verbal and visual modes involves appropriating a source into your own argument and thus creating a 'new' composition.

Last, but not least, ways of talking about 'upcycled' artefacts and the recontextualization of semiotic resources could form the basis of a multimodal metalanguage of critical commentary. Of interest here is how one object can pass critical commentary on another object through 'upcycling'. How do 'remix' texts leverage referential meaning to create new meanings? By critical commentary we mean the ways in which the dominant discourses of the primary object are highlighted and imploded in order to critically reflect on some aspect of society. Some of these differing discourses may complement each other, and others may compete with each other or represent conflicting interests or ideologies. This is Bakhtin's (1981) notion of dialogism, the recognition of the polyvocality of any sign. To refer back to the plastic curtain in figure 2, we see a concoction of irony, humour and irreverence in this artefact which encourages critical reflection on the over-consumption of plastic goods coupled with a desire to sell good design. The craft-like patterning of shapes and colour of the plastic parts function as a critical commentary towards mass-produced and highly transient plastic. The rationale for developing a way of recognizing and talking about critical commentary is to feed this back into educational curricula in order to develop critical citizens in a global world.

Conclusion

We have outlined some of the possible ways of utilizing the principles of 'upcycling' and value adding in designs for learning. This has included notions of transduction and student interest, interrogating citation practices, and possible multimodal metalanguages. Here it is useful to end on Pennycook's notion of creativity: "Taking difference as the norm, rejecting a model of commonality and divergent creativity, viewing structure as the apparent effect of sedimented repetition and bringing a sense of flow and time into the picture have radical implications" (Pennycook, 2007: 588) for the way we view texts and the pedagogies associated with them. In thinking about 'upcycling' as a semiotic construct, we are forced to "question assumptions about context, diversity, ownership and originality" (Pennycook 2007: 588). The unsettling of these assumptions is crucial in developing critical students and citizens in contexts of change and diversity.

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