



# HEAD OUT OF THE CLOUD: CO-CREATION AS GROUNDING IN A DIGITAL AGE

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**Abstract:** *There is a growing realisation amongst consumers and businesses that at times we need to break away from being constantly and globally connected. Embodied co-creation experiences can address this need, offering opportunities to recognise the agency we have in the world and supporting personal and environmental wellbeing. Through the case study of a Mobile Jewellery workshop, this paper explores the impact of engaging the consumer physically in the making of their product. It demonstrates how inviting customers to create their own products can be both financially and environmentally sustainable, elaborating on a contemporary understanding of 'preciousness' that aligns with the UN's sustainable development goals.*

**Key Words:** *Personalisation, Co-creation, Transformational Knowledge, Embodied learning, Environmental Sustainability*

## 1. INTRODUCTION

Mass customisation and mass personalisation are most often experienced via online platforms, and engagement with these platforms has been identified as having a positive impact on the user as a space to express and construct an extended self (Belk 1988; He, Melumad, and Pham 2019). Drawing upon this understanding of the creative-achievement benefits and 'pride of authorship' inherent in personalisation interfaces (Turner et al 2020; Trentin et al 2014, Schreier 2006), this paper seeks to investigate the impact of a hands-on practice in a digital age, and how the experience can benefit society at large. Working as a fine jeweller between 2005-2020 I made and sold work in a number of ways: through designing and creating collections to be sold in galleries and shops, through working to commission for individuals and also through the running of workshops where I first enabled people to customize pieces and then later taught people to make their own jewellery. Drawing on this range of experience I will reflect here upon the benefits of engaging customers in the making process; both for myself as a business, for the environment and for my customers. In particular I will draw upon personal experience of running a Mobile Jewellery Workshop teaching customers to make their wedding rings. In this case study, techniques of working in precious metal were

taught so that the customers (or students, perhaps, depending how the experience is viewed) are able to craft wedding rings for each other. These finished rings are powerful objects: not purchased off the shelf, not personalised through add-ons such as engraved messages, but fully created – from scratch – by the fiancée. Furthermore, these rings become symbolic not only of the marriage but also contain a memory of the day spent together, learning a new skill.

Personalisation is frequently viewed as a technique to increase consumption however this case study presents an alternative view through three factors:

1. Facilitating co-creation through these workshops enabled my business to be financially sustainable whilst reducing my environmental footprint; fewer materials were consumed and fewer products were created without reducing income.

2. The personalised or co-created object has meaning that can ameliorate over-consumption by becoming an item of increased value - something to be cared for (Kuksa et al). Wedding rings handmade by a loved one are not merely valued for their material worth, but rather communicate a contemporary understanding of 'preciousness' which values our material world, the non-human actors that we live alongside and the natural systems that sustain us.

3. By removing consumption experiences from the digitized, transactional sphere of online shopping and re-grounding ourselves in the physical reality of our 'stuff', we are more clearly able to understand the impact of each purchasing decision and to recognize our ability to make thoughtful changes in the way we consume.

This paper further suggests a parallel with larger themes of connection and disconnection. Digital worlds enable us to connect to each other across time and distance, but these intangible connections do not match up to real world interaction. And increasing time spent online means less time connecting to our physical reality and environment – a factor that will hinder empathy for non-

human environments as we seek a more environmentally sustainable future. There are needs both for us as individuals and for us as collective to remove our head from the cloud so to speak; to break away from being constantly and globally connected.

*“To many, the tactile, grounded, communal ideas that handmade things represent feel like antidotes to the digitisation and isolating nature of modern life and the social, political and economic upheavals of this moment”* (Ray 2024, p92)

The example below will illustrate how making can strengthen our connection to our environment (Ingold, 2013; Rixhon, 2020; Silvis, 2023), and how sharing these experiences with others can forge and strengthen interpersonal relationships and increase wellbeing (Yair, 2011; Russell & McKnight 2022). Through this a case is made for an alternative form of co-created consumption as a valuable diversification strategy for business.

## 2. CO-CREATION AND THE POWER OF MAKING

### 2.1. Eliminating barriers to ethical consumption

Silvis (2023) suggests that the popular narrative of thoughtless unethical consumption is a part fiction, or at least a generalisation; the reality is more nuanced. People buy new products that coexist with the old; consumption sits alongside the caretaking of existing products not at odds with it. Consumers increasingly want to make ethical choices (Steifenshofer 2021) and companies who can offer this, or can make ethical purchasing simpler, are at an advantage. The case study presented here demonstrates how craft workshops can provide a form of scaffolding (Vygotsky); by building people’s confidence in their abilities and increasing self-efficacy they are more likely to to achieve their environmentally ethical intentions and close the intention-action gap (UNEP 2017). Craft workshops can build confidence by demonstrating physical capabilities as well as highlighting ways in which we can customise, improve or hack our material world. Physical interaction with the material world can be a concrete way of visualising our human agency as well as the agency of our material surroundings, tempering an anthropocentric world view and increasing empathy and understanding for non-human actors (Cheng 2019).

### 2.2 Open design for an interconnected world

Understanding is often considered to be a mental process but embodied mind theory (Varela & Rosch 1999) implies that it is in fact your body making sense of something. We are not just vessels, carrying around our exquisite brains in clunky circuitry and parts that enable us to live in this world. Rather our minds extend out into the world, making sense of it as our bodies interact with it. An embodied understanding of the world has direct repercussions. In 'Supersizing the Mind', Clark (2010)

explains the significance of an external or bodily idea of “mind”.

*“It matters that we recognise the very large extent to which individual human thought and reason are not activities that occur solely in the brain or even solely within the organismic skin-bag. This matters because it drives home the degree to which environmental engineering is also self-engineering. In building our physical and social worlds, we build (or rather, we massively reconfigure) our minds and our capabilities of thought and reason.”* (Clark 2008 pg xxviii)

If we wish to co-create a more environmentally friendly way of acting and being in the world, it is imperative that we begin to interact in a more physical, tangible way with this world that we are a part of. Coombs et al (2019) suggest that we cannot solve a crisis of consumption by more design, rather the concept of design should be unpacked and reimaged; an opening up of possibility. I view one of the possibilities of undesign as a letting-go, of enabling customers or consumers to exercise their voices and actions and to impact the design process in ways that benefit them.

A metaphor for how this looks can be seen in the design of the Oval park at Ohio State. Laid to grass with no delineated pathways, the landscapers allowed students to use the park as they saw fit. Over time, clear pathways or desire lines began to appear (in this example the shortest routes between buildings, but in other similar examples these may be journeys around hillocks, tracks winding between trees, shortcuts or avoidance of muddy ground). The landscapers then pave these paths, thereby avoiding the issue of trodden grass elsewhere (Borneman 2021).

This example of co-design allows customers to be the architects of their surrounds and enables their voice to matter. It creates efficiency of action and material, and prevents environmental degradation (through treading over plants). If we map this method onto product design we can see that by presenting an unfinished or open product to the user, the resulting co-design can enable a finished object which is more efficient and better suited to the individual. By using personalisation or co-creation mechanisms in this way, more equitable results are achieved and ideas may appear that would not otherwise have been possible.

### 2.3 The Craft of Noticing

To move forward in a more environmentally considerate and thoughtful way, a first step is to both notice and pay attention to the issues. This is easier said than done: we have so many demands upon our attention that we no longer see the world we are inhabiting. Technology is a key antagonist here. We live across two (or more) worlds simultaneously; I am on a computer typing and could be anywhere: a chair and a table (or, in my case right now, a floor and my knees) are nondescript tools that enable me to inhabit a digital world whilst becoming blinkered to physical reality (until my body hurts from not sitting at a table, perhaps). Crawford (2015) writes about advertising making demands on our attention but even the loudest and largest adverts struggle to compete with the little boxes of dopamine in our pockets in the form of our mobile devices. With this

blinker presence in the world, it can be hard to perceive both the environmental reality surrounding us (yes, the weather is changing) and, more importantly, our potential ability to do something about it.

Physical, embodied acts can play a key role in regaining our power of noticing (Cheng 2019) and subsequently our ability to make real changes to the way we live & work in order to consume in a more ethical and sustainable way. If we get involved in the making of our products; if we see – really experience - the materials, the processes, the place in which they are made; then we are in a position to both understand and to notice. Our attention is drawn in a different way. For companies with an eye on the profit line, note that reduced consumption does not necessarily mean reduced income; rather I propose that personalised consumption and co-creation (specifically here, customers being involved in the making of their products) can contribute to sustainability as it provides both shareable skills as well as making-real the impact of our actions and decisions.

### 3. CROSSING THE THRESHOLD: FROM CONSUMER TO ACTIVE REPAIRER AND CREATOR OF OBJECTS

To make the jump from consumer to active repairer and creator of objects involves first a level of curiosity about how things are made (Collins 2018). Once we know what has gone into the making of our products we become empowered to make informed choices. We may buy cotton over acrylic, or choose PET recycled from plastic bottles. We may buy second hand or, given the skills, choose to knit or sew something ourselves. With the skills from a workshop we may also be able to mend, repair or adapt things that we already own. When making skills are practiced and repeated over time the maker may start seeing things in a new way. They become able to view objects as material; ready to be transformed. This shift in perspective is familiar to craftspeople but may be an alien concept to ‘digital natives’ whose material possessions are rarely designed to be repaired by their owner (Perzanowski 2021). Therefore an open source approach to materials can be seen as a threshold concept. Meyer and Land describe a threshold concept as

*“[...]akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress. As a consequence of comprehending a threshold concept there may thus be a transformed internal view of subject matter, subject landscape, or even world view.”* (Meyer and Land 2003, pg.1)

This is also referred to as “troublesome knowledge” (Perkins 1999); a concept that cannot be truly understood without first changing the way you see the world. Understanding therefore becomes a transformational experience that cannot be easily forgotten or unlearned.

The understanding of a threshold concept requires that the student brings something to the table. It is not something that can be learned passively, but must be experienced actively and in an engaged manner. This is where physical personalisation or co-creation holds the potential to provide an opportunity for learning; both learning how to make and also – through material practice – to see the world as a craftsperson might see it.

Prahalad & Ramaswamy (2004) discuss the idea of co-creation as the logical next step from Pine & Gilmore’s *Experience Economy*. A co-created experience sees customers move from passive recipients of goods and services to *connected, informed, and powerfully active collaborators in the creation of value* (Prahalad & Ramaswamy 2004).

In so much of life now we are locked out of impactful experiences and relationships with the products we own. Most of our belongings are now incomprehensible to us; not only are we unable to make them, but we cannot even fix or repair the majority (Perzanowski 2021). However people are fighting back against this and discussions around craft, making and repair have been on the rise. In 2011 Daniel Charny curated “The Power of Making” at the V&A, a celebration of process over product which showcased techniques and creations from talented craftspeople around the world. In the catalogue for the show, Charny explains the issues that drove him to curate this exhibition;

*“despite all the value that exists in making, fewer and fewer people know how to make the things they use, need or want; or even how these things are made... The distance between the maker and the user is growing and, with it, knowledge, understanding and appreciation are diminishing.”* (Charny 2011)

An embodied engagement with the coming-into-being of our products creates a level of understanding and a relationship that goes beyond merely 'how to make'. Making experiences, co-creating and engaging with the creation of our products can help to develop a wider understanding and appreciation of the material world, leading to greater care and concern for our surroundings and enabling us to unmake, fix and repair the material objects we interact with.

As a maker and educator I can see the tangible benefits of a making process; slow accomplishment of a skill brings with it a strong sense of empowerment and agency in the world – that what we are able to say and think and do matters. This transformative shift leads to a change in the way the students approach the material world; with more respect for the material things around us, we cannot help but develop a more considered and ethical approach to our consumption. This is the start of what Bennet calls for in ‘Vibrant Matter’ – an ability to view our surroundings as materials with agency; to acknowledge that the world can impact us and to act in a way that considers the symbiotic nature of our relationship with material. Mirroring Clark's expanded mind theory, Bennet notes that these material 'things'

*"...do far more than simply effect what human agents do; things transform and impact the specific way in which reality discloses itself for human beings." (Bennet 2010)*

Changing our material world changes us. And in craft activity this can have positive impacts beyond the individual – these forms of co-creation further helping to build resilience and strengthen communities. The Crafts Council report of 2011 identifies that;

*"craft-based experiences encourage a sense of achievement and ownership. This, in turn, builds the confidence that strengthens social interaction and ultimately wellbeing" (Yair 2011, pg 5)*

#### 4. MAKING MEANINGS: CHERISHING AND PRECIOUSNESS

Understanding breeds compassion; an awareness of the previously invisible journey that our products have taken to reach us fully formed: the raw material extraction, the complex industrial processes, the people working both physically and digitally to design, develop, manufacture, package and ship these items. The impact of our little moment of spending on a wider environmental and societal economy. Because price is no indicator of the real cost of an item; money is an incomplete and blinkered means to measure; it tells us nothing of the costs of emotion, connection, quality of life, cleanliness, health that are traded unremarked whilst products are traded. I cannot pretend to address this here; the life of many products is a mystery to me also. I do, however, have in-depth knowledge of my small area of practice in fine jewellery, and have worked (along with others) to first identify and then mitigate problematic practices. I spent time trying to reduce my environmental footprint and ethical impact as a jeweller through sourcing fair-mined and recycled metals and by changing workshop practices (for example, swapping out harmful chemical acids for gentler citric acids, and replacing large machinery for hand tools and slow processes). One of the most environmentally impactful things I did, however, was to open up my workshop space to my customers.

##### 4.1 The Mobile Jewellery Workshop

My partner and I spent time converting a horsebox into a mobile jewellery studio with a solar-powered workshop space. We partnered with National Trust venues and other areas of natural beauty and parked up, opening up the whole side of the van and enabling making processes to take place in the semi-outdoors. I had taught jewellery making for a number of years, and decided that wedding rings would be the perfect candidate for a co-creation experience for my customers. Within the Mobile Jewellery Workshop the parameters of the session were simple: using precious metal techniques to craft a pair of wedding bands.

Over the course of a morning customers were taught how to work precious metal: measuring, annealing, forging, soldering, sanding and polishing. In the afternoon they were able to each create a wedding band for their partner. I would assist if needed to ensure a

quality of product and satisfied customers, but it quickly became apparent that for some students the experience was more important than the finish; these customers enjoyed marks and scratches as mementos of something handmade and unique to them.



Fig. 1. *A pair of wedding bands in silver and white gold, made by students in the Mobile Jewellery Workshop*

Beyond this simple premise, the design and creation of the rings could go in many directions. Usually a design would be discussed and agreed upon before the workshop (to ensure I had the necessary materials and tools to hand), but occasionally once the students became familiar with the processes of working precious metals new ideas would present themselves. This demonstrates the presence of ‘unknown unknowns’; without knowledge of what is possible, customers for the most part (with some notable exceptions which I will expand upon below) drew upon existing ideas and designs. Once holding the tool in hand however, a new way of seeing presents itself; ‘this tool can do this; can it do that?’. Practical education is expansive, it enables us, it shifts the way we view our material world.



Fig. 2. *Inside the workshop space*

From the perspective of ‘making a living’, the workshop format presented an interesting alternative to creating classic wedding ring ‘products’. The workshop brought in a full day’s earnings for myself as the teaching jeweller, yet only one pair of rings has been made to achieve this end. The goal of ‘making a living’ is therefore achieved with less production, less waste and a slower working pace. Environmentally friendly hand

tools and slow making can be embraced, in fact this can add depth to the experience for the participants and provides a more accessible entry into the craft.

At the Mobile Jewellery Workshop the focus was on the process and the experience as an event in itself. The location and workshop space were self-consciously designed to be ‘instagrammable’ – rather different from the reality of a working jewellers’ space. Photos would be taken for the couple as they worked, and music added to a relaxed atmosphere of making. These factors commodified the experience and may have invited a rather transactional approach by the participants. However as the business grew it began to attract students with more creative ideas that could not be merely purchased elsewhere. They approached me as someone who could facilitate their more unusual ideas and designs, as a supporting framework within which they could create their own product.

Fig. 3. shows a ring made by a student who wanted to include materials from the place where he met his partner; a found steel bracket and some leaves from Spitalfields market in London. He had no working knowledge of jewellery so we worked together to develop a design; agreeing to first use the leaves to imprint a texture onto silver and then cutting a ring from the cast steel and inlaying this within the silver band. The cast steel was a rough mix of stainless & mild, making it difficult to saw through with our piercing saws. Drill holes were made to aid this process, and in the end the student chose to keep the drill holes in the piece rather than filing them back as planned, as a memento of the making process.



Fig. 3. Silver ring with leaf imprints and cast steel inlay; one of the more unusual rings made in the workshop

This project stood out as the first visible shift at the ring making workshops from students as consumers recreating what is for sale in the shops, towards students co-creating the craft experience. The decision to keep visible elements of the making process demonstrates a valuing of this process and of the co-creation experience. This example may demonstrate that younger participants are becoming more creative in their purchasing and design choices, and appear to value the meaning above the intrinsic commercial value of the object. This ring is raw, it appears unfinished, it uses materials considered waste by many. Yet this object holds memories and became treasured in a way that other wedding rings could not be.

I was impressed at the insight of this young couple and inspired by their way of viewing their material

world. This specific encounter sowed a seed of an idea which has since expanded into this project. Working from home in the pandemic, textiles artist Emma Rixhon could not access machinery and began working by hand, observing also how the experience of handmaking is one that is transformational in how we view and experience the world, in particular noting that;

*“Learning to cherish the lack of mechanical precision in my work slowly translates to cherishing the lack of precision in the world outside”* (Rixhon 2020 pg 208)

Viewing material as a craftsperson does enables existing material class systems of value and waste to fall away – everything becomes connected and is valued for its intrinsic properties. By extension, learning to make – and valuing the process – can lead to compassion for our extended material world.

## 5. COMMODIFICATION VS CO-CREATION

The ability of embodied co-making experiences to impact other areas of life is what this body of research will continue to investigate. It draws upon the ideas of transformational knowledge – that some learning experiences can be transformational by opening up previously unseen possibilities and creating a shift in the way the world is viewed, understood and experienced. Here is where the boundaries of a ‘commodified craft experience’ and a ‘co-created craft experience’ can begin to be unpicked. A commodity could be defined as something that can be purchased and owned via a transaction, often financial. Therefore a craft experience that has been commodified may invite a transactional view from the participant – they want a takeaway product and their feelings of achievement and ‘pride of authorship’ (Shreier 2006) are tied up with the success of this product. In a physical environment such as the Mobile Jewellery Workshop a commodified craft experience may be experienced as tourism, as separate from everyday life, and may be ‘othered’. Transformation is therefore unlikely to take place (although this is not a negative – these experiences may still be enjoyable, positive and increase wellbeing (Yair 2011)). A co-created craft experience on the other hand invites a more exploratory and open-minded engagement whereby the process of making becomes more important than the product created. Co-created experiences may be transformational, whereby new understanding can lead to an “altered world view” (Meyer and Land 2003).

Examples of this in action may be seen in the way participants use material knowledge to engage with products beyond the workshop; with new skills they are able to fix and repair other items they own and, more importantly, have gained a new way of seeing, a noticing of the material make-up of these products and an understanding of how they are made. This understanding can lead to a valuing of items that would otherwise be discarded;

*“A focus on process encourages an appreciation for imperfections, an understanding as to what caused them and a fondness for the result” Rixhon pg 205*

This has come about from the embodied way in which the student/customer engages in a co-creation experience, as Polanyi (1966) says;

*“it is not by looking at things, but by dwelling in them, that we can understand their meaning” - Polanyi 1966 pg 18*

## 6. DISCUSSIONS AND CONCLUSION

### 6.1 Commercial considerations

This case study reflects upon a small scale business. Elements of this practice can be adopted by larger companies, with some considerations: Firstly, digital co-creation experiences are facilitated by an online interface whose useability has a significant impact upon the value of the customisation experience (Trentin et al). Within an embodied co-creation experience the workshop facilitator becomes this interface. The success of the workshop therefore is in part reliant on the insight and empathy of the facilitator – customisation such as this becomes about pedagogy as much as consumer choice. Turner et al correlate the consumers' perception of value with the experiential nature of customisation. But I wonder, does the value come from the experience itself or does it lie with the customer and with their attitude and approach to the experience? As in teaching, a good student will arrive ready-to-learn, with an open attitude to new experiences and a willingness to co-create the experience in order to synthesise new knowledge. For enterprises within the experience economy, therefore, research which draws upon pedagogic practices may be of use in developing the field.

Secondly, whilst digital customisation is accessible and non-committal (it is possible to go through the whole design process online and not proceed to the check out if not entirely satisfied with the design), embodied co-creation on the other hand requires more commitment from the customer and an acceptance of the unknowable nature of the process. It is also harder (yet not impossible) to ensure accessibility for all in a physical space. The resulting impact however is incomparable to an online experience and the feedback I have received from customers is reflective of their resulting pride and sense of achievement. Embodied action brings us out of our everyday lives, it teaches new ways of being – craft is a transformational process. Through the creation of a product, a new facet of knowledge is gleaned for the individual, with potentially longer lasting consequences.

A comparative example demonstrates how workshop facilitators can be brought into other businesses to add a co-creation angle to their offer. In 2019 a public jewellery making experience was run at JW Evans in Birmingham's Jewellery Quarter - a silversmith's factory now opened as a museum. Here a hands-on experience of making in this space was presented as a new way of engaging with the exhibits; enabling an embodied understanding of what it was like to work in this historic space. The process of making in this instance could be

considered to be the product sold - more so than the resulting jewellery that is created (Steiner 2021).

### 6.2 Further research

The case study outlined here presents a number of limitations. Firstly, as a small-scale case study, it presents issues relating to scalability. However commercial co-creation examples do exist within the experience economy which could be further studied, for example where customers are able to mix their own perfume, cook a meal or prepare cocktails. All of these experiences are educational – in an experience economy the line between education and commerce is difficult to discern and so research into positive educational experiences and methods can be equally relevant to apply to studies into commercial experiences. Secondly, it is noted that this is a personal observational account and as such lacks empirical data e.g. from customer questionnaires. As this project develops data will be sought to explore the validity of these observations across extended contexts for example in online co-creation workshops, community-based projects and in education.

Larger scale co-creation enterprises such as the 'Design Your Own' configurator by Converse allow vast numbers of customers to customise their own products. These experiences have been shown to increase feelings of self efficacy after using the configurator (Turner et al 2020, Sandrin et al 2014) but longer term impacts would merit further research. A comparison between in-person, embodied co-creation and online co-design such as this may help to identify the point at which the co-creation experience becomes more deeply transformational in nature.

This paper therefore forms the starting point for a larger body of research, and the questions that will be further explored are:

- Can involvement in the making process encourage longer-lasting use of a product through the ability to fix, repair and maintain?
- Can this knowledge lead to repair and maintenance of other products and a sense of custodianship of our wider environment?
- How can making experiences be positioned to support community networks and to empower groups of people to share skills?
- Can such empowered communities use these skills for environmental regeneration?

Noting the limitations outlined above, this paper suggests three benefits of facilitating co-creation as part of a business strategy:

1. Decreased production costs and decreased environmental impact.
2. Increasing the value of the product through meaning-making and
3. Supporting the wellbeing of customers by providing valued screen-free experience and sharing skills.

Further environmental benefits may occur in situations where the experience is transformative in

nature, where customers take these skills and apply them beyond the co-creation experience.

This expands upon existing research which highlights the self-efficacy, agency and enjoyment which current online co-creation experiences offer (Turner et al 2020; Sandrin et al 2017; Trentin et al 2014). In an embodied experience, consumers empowered with material skill are able to not only maintain and repair products but also to make informed decisions about future material consumption. Furthermore, these individuals, with a new way of seeing, are now able to notice material surroundings in a different way – enabling maintenance to become more timely and effective (invoking the saying “a stitch in time saves nine”).

For companies curious in aligning with post-growth economies but concerned about profit, this method suggests an effective alternative income stream which reduces material & energy consumption without reducing income. By inviting customers to play a part in the making of their products stronger bonds are formed both with the person and their product through this shared experience of making. Engaging with products in relation to their materiality and how they are made can increase wellbeing and can foster a contemporary understanding of value which recognises the value of maintenance and repair. The experience economy continues to grow, and if we can harness this to support environmentally ethical practices then everyone benefits.

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