

Design and Personalisation

By a Person or for a Person?

Iryna Kuksa
School of Art and Design
Nottingham Trent University
Nottingham, UK
e-mail: iryna.kuksa@ntu.ac.uk

Tom Fisher
School of Art and Design
Nottingham Trent University
Nottingham, UK
e-mail: tom.fisher@ntu.ac.uk

Abstract: Personalisation permeates our everyday lives. From advertising to healthcare and from clothing to architecture – most services and products can be tailored to suit particular needs and preferences. This paper considers questions including: where does it leave designers when consumers specify their products? Do personalised health services deliver value to the tax-payer? Deriving from a symposium on the topic, it identifies the dimensions of the phenomenon and typologies within it by investigating specific instances of personalised designs, their consequences for users, and for society. The presentations to the symposium will be chapters in ‘Design for Personalisation’ published by Gower in 2015.

Keywords: *Personalisation; inclusive design; design-led social innovation; mass customisation; co-creation; social policy.*

I. INTRODUCTION

To grasp the implications of the personalisation of objects, services and experiences, requires a clear understanding of both what we expect personhood’ to be, and of the potential enhancements, and threats, personalisation may bring to it. This is a matter of deciding the scope of the subject. Drawn narrowly personalisation appears to be a largely technical matter with instrumental objectives - to increase sales, to maximise clinical effectiveness; to give users a better experience. But the range of commercial, political and community interests that emerge around it, and the range of academic and professional disciplines to which it is relevant, indicates that if we are to fully acknowledge the implications of personalised designs, such a narrow scope will not do. Reviewing a number of current instances of personalisation [1] [3] [4] [5] [6] [11] [12], a principle emerges related to the relative agency of ‘persons’ in different scenarios of personalisation. Broadly, personalisation is either done *by* a person, or *for* a person and through this distinction it is possible to delineate some of its implications.

Co-production, co-research, co-design, co-creation are the buzz words of today, with communities and collective ‘grass-roots’ informal engagement with technologies identified as crucial sources for innovation. The antecedents to this can be found in Pine’s work on ‘Mass Customization’ [24] that challenged the ‘one size fits all’ assumption of conventional mass production, emphasizing the importance of information for both businesses and consumers. Latterly, and coming from a different direction, Inclusive Design has made understanding and addressing

the needs of all consumers increasingly mainstream [7]. Although initially aimed at those excluded from a meaningful interaction with a product due to age or disability, it implies getting all users involved in all stages of the product development, prompting emerging business models that aim at meeting individual needs most effectively.

Nowadays, Mass Customisation, Personalisation and Co-creation (MCPC) strategies commonly aspire to turn customer heterogeneities into opportunities to profit, implying the question whether this ‘co-creation’, - open innovation and user innovation - should influence our view of mass customisation and personalisation. Many companies state that customers don’t just prefer a personalised experience - they expect it [8], which undoubtedly affects approaches to managing the design of both material and ‘immaterial’ products, and therefore the use of information technologies and the data they collect.

Our online identities, patterns of behaviour and purchasing history, our digital ‘fingerprints’, are easily traceable and may stay ‘out there’ forever. Targeted advertising and tailored ‘smart’ content aims at personalising our experiences and while we are watching we are also watched by ‘smart’ spies that compromise our privacy. Personalised advertising stalks every Internet user, but the question of whether consumers really want to see it remains largely unanswered. Companies aim to reduce customers’ reactance to potentially intrusive marketing activities by improving perceived consumer control, allowing them to personalise the degree of intrusion. However, it remains to be seen whether, as consumers of information, we are actually in control of our privacy.

The increasingly open sharing of personal data creates fears and uncertainties, which exist in tension with the concept of ‘personalising’ public service provision. In the context of neo-liberal assumptions about the virtue of marketising public services, public institutions face the impulse to both protect individuals’ sense of agency, and to share their data. The health information technology sector, for example, is being transformed by big data, aiming to tailor individual clinical programs for every patient and designing devices to create personalised fitness routines and treatment plans. However, the issue of data accessibility colours many such initiatives, raising questions about who should have the right of access to such sensitive information

(health providers, patients or all) and how it should be regulated.

A full discussion of personalisation must include bottom up innovation by communities of practice that engage with technologies in new ways. It must acknowledge the commercial interests in play as the principle of personalisation plays out in public service provision, and the political background against which this takes place. It must recognise the implications for individuals' sense of agency of the personalisation of virtual experiences. It must inspect the specifics of the technologies that can bring personalisation about – but a key point is that the personalisation phenomenon does not reduce to these technologies, or any of these other factors. Its consequences exist in the relationships between them. This study therefore points to some of the challenges that arise in design for personalisation, looking into how organisations (and individuals) relate to their 'target' groups, examining how their ownership is designed, and exploring how design-led social innovation may influence our 'personalised' experiences of the world around us.

One might argue that all this innovation serves humanity and overlook other species. Recently, however, field biologists have alpstared using 'personalised' electronic tracking devices to study the behaviour of wild, free-ranging animals. Miniature tags containing video cameras, radio transmitters or physiological sensors are attached non-permanently to the animal, to collect detailed biological data. For ethical reasons, and since the purpose of these technologies is to study natural, undisturbed behaviour, devices are manufactured to be as small and lightweight as possible. Pioneering efforts are being made in this field, to move away from a 'one-size-fits-all' strategy towards complete customisation [25] [26]. Researchers tailor units to suit every individual animal captured, ensuring that safe limits are never exceeded, and that data are strictly comparable across subjects. This is personalisation that goes beyond the human person.

Now follows a discussion of Personalisation in relation to experiences and spaces, marketing and manufacture, provision and processes.

II. DESIGNING EXPERIENCES AND SPACES

An intersection is emerging between material spaces and immaterial technologies in the design of consumers' experiences of retail where a range of technologies from internet to Radio Frequency Identification (RFID) are facilitating the personalisation of shopping [17]. Driven by consumer demand and competition, customisation and co-creation have become increasingly significant to fashion brands not only through the personalisation of physical products, apparel, and accessories, but also through their distribution and the location of the customising activity [17]. This shift from mass to individual fashion means that nowadays any customer can not only borrow someone else's personality (through, for example, customising a famous

footballer's T-shirt), they can also influence the perception of what constitutes fashion (or a particular brand or a product) by creating new personalised communication tools such as fashion blogs. Further, the concept stores of fashion brands have evolved from goods-centered to service-centered locations focused on the experience of the brand. Their increasing use of interactive technologies, and omnichannel communication and distribution has led to a higher level of personalization.

This movement of virtual and real fashion spaces towards personalisation resonates with recent art practice and research that focuses on how art interventions may potentially personalise, our engagement with public space and everyday objects. The works of Turner Prize-winning artist Mark Leckey is a good example of the artist's reflection on the effects of personalisation brought by new technologies to inanimate objects [31]. Until recently, however, there has been little research done on, for example, measuring the impact public art has on various aspects of social life. According to Gheorghe [10], most previous studies were concerned with 'local evaluations of effects on the participants in the reception of specific works of public art' (p. 325). From the 2000s, however, the emphasis shifted towards the 'new genre public art' at the heart of which lays the participation and collaboration of community representatives in creating artworks [20] [21]. This approach to art-making aspires not only to facilitate 'social change' within participating communities, but also to influence and reconfigure public policies. Zebracki, Der Vaart and Van Aalst [30] synthesise other studies [13] [14] to identify the following claims about the contribution made by public art to urban spaces: (1) *physical-aesthetic*: aimed at enhancing aesthetic quality and improving the attractiveness of a place to encourage better use of the public space; (2) *economic*: focused on providing marketing and place-promotion opportunities and encouraging public-private partnerships; (3) *social*: directed at addressing community needs and dealing with social exclusion by revealing fundamental social contradictions or undermining dominant meanings of urban space; and, finally, (4) *cultural-symbolic*: aimed at boosting awareness of local history, promoting cultural and civic identities, and at contributing to local distinctiveness (pp. 787-788). There is, however, little empirical evidence to support these claims [2] [13] [15] [30].

The relevance of this analysis of public art to personalised design becomes clear when it is seen alongside design strategies that resemble those found in Fine Art. These are adopted in personalised retail spaces and some contemporary design professionals seek to use 'critical design' practice to raise the profile of current cultural, social and political issues, particularly those that derive from technologies. Critical design de-stabilises habitual ways of engaging with things, requiring any individual encountering such an object to 're-make' it for themselves. Professionals, who use this design practice, frame it as 'an affective and provocative agent and set out to ask more questions than they answer through design', stimulating the production of knowledge [22]. Aligned to this, design-led social innovation

seeks to provide a set of skills, methods and tools for communities to address a variety of issues including crime, social exclusion and social inequalities. Public participation in such practices enables designers to produce solutions tailored to resolve issues that arise in a particular spatial or community setting.

III. PERSONALISED MARKETING AND MANUFACTURE

These developments imply a distinction in principle between instances when personalisation is done by an individual – where they are able to determine their relationship with a product or service – and cases where personalisation is in effect provided for an individual. This distinction between personalisation *by* and personalisation *for* a person has different permutations in different cases, but may be a useful way to move towards a typology of personalised design.

New ‘smart’ technologies offer a dimension of personalisation in particular product types, especially in clothing. Body scanning technology and seamless garment production techniques promise personalised garments in the near future. Initiatives that have already taken shape include Mi Adidas or Fila Adatto, where customers can personalise sports shoes in terms of colour, materials and even a personal logo or a name tag. These applications were introduced not only to test consumer demands, but also to experiment with new manufacturing processes. ‘Walk in, get scanned, learn about your feet and walk out with a pair of custom fit Fila Adatto shoes’ is the description of what a potential purchaser can achieve while using an interactive kiosk in Fila flagship stores [3] [32].

Along with the benefits of personalisation, such innovations generate challenges in how consumers navigate knowledge to make informed and relatively quick decisions about what they want. Web 4.0 enthusiasts predict that intelligent software agents (such as Siri – an application for iPhone OS, or avatars) will be enhance the intuitiveness of navigation, acting as communication interfaces and providing active, personalised assistance. They will be able to learn a user’s preferences and interests, make suggestions, function with minimal supervision, customising their assistance to each participant [19]. Personalised applications for mobile phones are already pervasive, and many businesses endeavour to go mobile first, including the option of social media sharing. This inevitably raises the issue of privacy and personal data, an area in which legislation lags behind. Current research on privacy benchmarks in mobile application design seeks to promote responsible business practice by focusing on how to inform users whether an app’s developer has allowed it to use illegal personal data [18]. However, protection against this personalisation ‘for’ a user by an intelligent product, will take some time to implement.

The emergence of smart technologies is transforming the approaches to design and manufacture of new products, in principle allowing personalisation *by* users/ consumers. 3D printing, for example, has enabled the ‘publishing’ not only of utility items, but also art and sculpture, changing the ways contemporary designers and artists conceive new ideas and

think about future projects. Some futurists argue that 3D printing technology is moving towards desktop size, which may enable direct digital manufacturing from one’s home office. Others remain less optimistic [1]. Of course customisation is nothing new as people could always modify and personalise products they bought to serve their individual purposes. But the difference nowadays is that with access to the relevant technology people with no skills or specialised training [27] could make an utterly new product from scratch, market it and sell it, which could challenge existing business models.

IV. PERSONALISED PROVISION AND PROCESSES

Today, personalisation is placed firmly in the centre of social policy in the UK [12] and Europe. Its supporters assume that individuals are aware of their specific needs and being able to satisfy them brings a desirable autonomy – personalised clothing or footwear may indeed be more valuable to its owner than items that are just the same as all the others. However, assuming that this principle applies in the same way to all instances of personalisation is contradicted by the example of the negative consequences of the ‘automatic’ personalisation of mobile apps above. Increasingly users of public services are treated as consumers and an assumption that personalising those services will therefore bring unalloyed benefit is evident in the design of some services – in healthcare for instance. ‘Fetishising the ‘personal’ or individual in a collectively funded service brings many risks and may further entrench undesirable inequalities’ [6]. This ‘fetishisation’ may derive more from political drives to marketise services than a concern for service users – in a medical setting they may not feel capable of making such choices.

This is not to say, however, that particular treatments may not be usefully adapted to deal with variations in ability. Designing services and responsive modes for diverse populations with large in-group variation in terms of physical, cognitive and perceptual abilities [4] may bring direct benefit to individuals with particular personal needs, for example in teaching which is implemented according to the learners’ abilities. The aim here is to reverse the logic of the educational system from the disability point of view, balancing the level of challenge for each learner, to ensure a sense of achievement and progress [4] [28].

The prevention of disease by predictive diagnosis emphasises the importance of risk stratification in order to personalise healthcare regimes on the basis of risk patterns [11]. While this approach is underpinned by a discourse of increased choice, empowerment and responsibility [9] it exists in a particular relationship to issues around the provision of personalised public health services. Along with new technologies of healthcare such as antenatal imaging, this approach to personalising healthcare changes everyone into a potential patient – it pathologises states of health in which actual illness is absent. Just as predictive medicine in effect makes everybody a ‘medical case’ by definition, antenatal imaging ‘constitutes the fetus ... as a patient’ [29] (p. 25).

However, alongside these consequences in healthcare, technology also facilitates production of language-using systems (e.g., smart trainers) that may communicate to users personally helping them to acquire new knowledge, or change their behaviour. Some researchers argue however, that if such systems are given personalities and human voices, there is a danger that users may start attributing social agency and moral qualities to them – relating to them and having feelings for them [23]. It is entirely possible to have personalisation without personality.

V. CONCLUSION

Personalisation is now ubiquitous and we encounter it at some level on an everyday basis. What is crucial, however, is that we have enough knowledge of this new paradigm to understand it, to adjust to it, to make it serve us and to be aware of its potential consequences for our relationship with designed things, and each other.

ACKNOWLEDGMENT

The authors thank all speakers at the Design and Personalisation Symposium, who are also contributors to the forthcoming book commissioned by Gower: Christopher Barnatt, David Brown, David Burden, Katherine Checkland, Olga Golubnitschaja, Anthony Kent, George Kuk, Mathew Malpass, Jon Oberlander, and Matthew Sinclair. The Symposium was organised by the authors and took place at Nottingham Trent University, UK on 20 February 2014.

REFERENCES

- [1] C. Barnatt, “3D Printing and Personalisation”, unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [2] S. Bell, S. Morse, and Shah, “Understanding Stakeholder Participation in Research as Part of Sustainable Development”, *Journal of Environmental Management* 101, pp. 13-22, 2012
- [3] C. R. Boër, and S. Dulio, “Mass Customization and Footware: Myth, Salvation or Reality?”, London: Springer, 2007
- [4] D. Brown, “Design and Personalisation in the Context of Human Computer Interaction, Disability and Rehabilitation”, unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [5] D. Burden, “Design, Personalisation and Privacy in Physical and Virtual Worlds”, unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [6] K. Checkland, “Personalisation and Health: a Critical View”, unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [7] P. J. Clarkson, R. Coleman, S. Keates, and C. Lebbon, *Inclusive Design: Design for the Whole Population*. London: Springer, 2003.
- [8] Deloitte Research *The Changing Face of Retail*, online, available at: http://www.deloitte.com/assets/Dcom-Germany/Local%20Assets/Images/06_CBuT/2013/CB_R_store_of_the_future_2013.pdf. 2014.04.05.
- [9] Department of Health (DoH) *Putting People First*. London: HMSO, 2007.
- [10] C. Gheorghe, “Theories and Uses in Common: Responses of Art in the Public Sphere”, *META: Research in Hermeneutics, Phenomenology, and Practical Philosophy*, 2/2, pp. 316-327, 2010.
- [11] O. Golubnitschaja, “Advanced Healthcare Tailored to the Person: What is Beyond the Issue?”, Unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [12] E. Hall, “Shopping for support: personalisation and the new spaces and relations of commodified care for people with learning disabilities”, *Social & Cultural Geography*, 12:6, pp. 589-603, 2011
- [13] T. Hall, “Art and Urban Change. Public Art in Urban Regeneration”, In A. Blunt, P. Gruffudd, J. May, M. Ogborn, D. Pinder, (eds.) *Cultural Geography in Practice*. London: Arnold, pp. 221-234, 2003.
- [14] T. Hall, “Opening up Public Art’s Spaces: Art, Regeneration and Audience”, In M. Miles, (ed.) *Cultures and Settlements: Advances in Art and Urban Futures*. Bristol: Intellect, pp. 49-57, 2003
- [15] T. Hall, and I. Robertson, “Public Art and Urban Regeneration: Advocacy, Claims and Critical Debates”, *Landscape Research* 26/1, pp. 5-26, 2001.
- [16] L. Jancovich, “Great Art for Everyone?”, *Engagement and Participation Policy in the Arts*. *Cultural Trends*, Vol. 20, Nos. 3-4, pp. 271-279, 2011
- [17] A. Kent, “Personalisation, Customisation and Fashion”, unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [18] G. Kuk, “Can Android Induce Responsible Practice in Privacy by Design through Featuring Apps?”, unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [19] I. Kuksa, *Making Sense of Space: The Design and Experience of Virtual Spaces as a Tool for Communication*. Oxford: Chandos/Woodhead, 2014.
- [20] M. Kwon, *Public Art as Publicity*. In Sheikh, S. (ed.) *In the Place of the Public Sphere? On the Establishment of Publics and Counter-publics*. Berlin: b_books, 2005.
- [21] S. Lacy, (ed.) *Mapping the Terrain: New Genre Public Art*. Seattle: Bay Press, 1995.
- [22] M. Malpass, *Critical design and a history of marginalised practice*. Design History Society Annual Conference: Design Activism and Social Change. Barcelona: Universitat de Barcelona, 2011
- [23] J. Oberlander, *Personalisation and Language: Whose Voice is it Anyway?* Unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [24] J. B. Pine II, *Mass Customization: The New Frontier in Business Competition*. Harvard Business School Press, 1993.
- [25] C. Rutz, L. A. Bluff, A. A. S. Weir and A. Kacelnik, “Video cameras on wild birds”. *Science* 318, p. 765, 2007.
- [26] C. Rutz, et al, “Automated mapping of social networks in wild birds”, *Current Biology* 22, R669–R671, 2012.
- [27] M. Sinclair, *The (New Industrial) Revolution Will Not Be Televised*, unpublished presentation at the Design and Personalisation Symposium, NTU, February 2014.
- [28] P. Standen, P. The ViPi Educational and Pedagogical Framework. Internal Project Report, 2014
- [29] P-P. Verbeek, *Moralizing Technology: understanding and designing the morality of things*, U. of Chicago Press, 2011
- [30] M. Zebracki, R. Van Der Vaart, and I. Van Aalst, *Deconstructing Public Artopia: Situating Public-Art Claims within Practice*. *Geoforum* 41, pp. 786-795, 2010
- [31] M. Leckey, *The Universal Addressibility of Dumb Things*, De La Warr Pavillion, 2013, online, available at: <http://www.dlwp.com/event/mark-leckey> 2014.04.05. Firstborn, Fila Adatto Kiosk, available at: <http://www.firstborn.com/work/68/fila-adatto-kiosk> 2014.04.05.