

# NEW FOOTING FOR SERVICE DESIGN: ROOTS OF MEANING

**Severine VAN HOECKE, Lien DE SCHEPPER, Emile COGNIE and Ivo DEWIT**  
University of Antwerp, Faculty of Design Sciences, Department of Product Design and Development, Belgium

## ABSTRACT

Innovative organisations worldwide are part of a rapidly evolving world concerning innovation, digitalisation and economic growth. Consequentially, manufacturing companies are seeing opportunities when exploring the new field of product–service systems (PSS) and are excelling in these. With regards to the liquefying advantage and valuable flexibility of servitization, there is still an under-addressed early exploration phase that primarily focuses on the mere service component. This lack of research attention might hinder organisations from developing PSS. Nonetheless, it acts as an opportunity to address servitization at an earlier development stage without compromising on radicality. The existing literature is abundant with tools and methods to optimise the PSS design process, but this paper focuses on the integrative design of PSS and proposes to continue onward from the early servitization component and service-based innovation literature. This paper redirects the spotlight on the intangible component and the impact of a meaningful user experiences in the early stages of the design process.

These contributions aim to avoid designing for a strictly product-oriented world and turn towards a human-fuelled existence, instead of floating along the current consumer-minded wave. Through radical service design, meaning will prevail and harbour our human needs and drives, compelling the excessive tangible products to take a step backwards and in doing so creating a positive ecological effect.

*Keywords: Service design, design methods, radical innovation, servitization, product-service system, value, meaning*

## 1 INTRODUCTION

In recent years, consumerism has given way to people's need for meaningful and fulfilling experiences. Designers sense the need to shift to service-focused innovations because of the shift towards a product-poor and information-rich economy, which is presently supported mainly by digitalisation. Service design has grown simultaneously with the emergence of digitalisation and has been attracting more attention. According to Penin [1], all economies are service economies. We find ourselves in a service revolution, inching away from consumerism to a service-based economy. Modern consumerism is inevitably shifting towards more meaningful solutions and raises questions about sheer technological-driven innovation. As this continues, economic growth in modern societies increasingly originates from service-based innovation.

This paper discusses the potential of radical service design in shaping the future. Radicality of service design implies letting go of existing defining borders and looking onward to a serviced-oriented future. Radicalism holds the power to make a drastic change for the better, disrupting the status-quo and inviting novelty [2].

The research will explore the radicality of service innovation that can be implemented by service providers. Aspects that will increase the effectiveness of the radical service design process will be discussed. It incorporates the necessity to design for human needs and meaning, which is achieved by prioritising valuable radical innovations on the service component. It will combine the existing conceptual literature on PSS design tools, novelty processes and philosophical frameworks to advise on how to lower thresholds when developing radical services.

## 2 LITERATURE REVIEW

### 2.1 Service's relations

Zeithalm et al. [3] describe services as “Immaterial, heterogeneous, inseparable and perishable”. Services are inherently intangible because they don't only rely on objects. They can change and adapt to their context. They're de facto interactions, so production and consumption happen simultaneously, and the experience can only be remembered but not kept physically. The description is still applicable to radical services, but the following still lacks further exploration: the emphasis on interactions and relations between the different actors of the service [4].

In post-phenomenology, the object and subject are not seen as different entities [5]. Therefore, the relations, which influence the human experience of the world, are taken into account. Ihde distinguishes four types of relations: embodiment relations, hermeneutic relations, alterity relations and background relations in the context of technology. But Secomandi [6] argues that those relations between the user and the digital context can be extended to interpersonal relations in services.

In the context of interpersonal relations in services, Cipolla and Manzini [7] distinguish the ‘I-It’ and ‘I-Thou’ encounters. The former are standard services, interactions with something already known. ‘I-Thou’ encounters involve relationships between two persons and in a context that is not known, nor predictable. An I-Thou encounter has several possible advantages for radical services: “it is a service that improves or regenerates contexts of life, enabling and stimulating participants to collaborate with others. Relational services are able to promote a ‘social learning process’ towards sustainability, indicating a way of living based on sharing and collaboration, promoting the reinforcement of local social fabric and the creation of new common goods” [7]. I-Thou relationships can only be ‘meta-designed’: the service can only start, support and assist the interpersonal encounters.

### 2.2 Radical service design

Despite what was stated earlier, there is still not enough incitement in the early stages of the design process, exploration and ideation. It hinders the creation of opportunities for radical service design in the later process because the service component is still under-addressed, which compromises its radicality. Radical innovations can shake and disrupt the market with creative solutions to put today's ineffective and counterproductive structures to the test [2]. But can the effect of radical services be predicted? Radical services will impact society in the long term by intervening in the system and disrupting current structures. Such intervention in a system can be seen as a leverage point with a circular and self-sustaining characteristic. As radical services are transformational, there is the possibility they won't fit in the current system anymore. Radical disruption brings a change to the user's life, in contrast to an incremental service which builds upon the existing. The power of the radical intervention lies in its capability of letting the user *aggregate value* to the information flow at the time and place of use.

*“Radical service design allows meaning to be the leading factor and harbour our human needs and drives while taking the relations and interactions of the different actors into account. Radical services are immaterial, heterogeneous, inseparable, and perishable. They challenge the socio-economical structures of today.”*

Suppose a *tax system where citizens choose how their taxes are being spent*; radical democracy, or a *university student selectively attending a class of choice solely to learn what he/she came for*; radical learning [18]. In addition, radical service unknowingly bonds the user with underlying factors such as *need fulfilment* and a *meaningful engagement*, which leads to a *positive emotional attachment*. Figure 1 below visualizes the previous aspects in a circular manner.

When it comes to *meaningful engagement*, designers must become aware of the real underlying reasons of *why* people consume and not *what* they consume. The attached meaning will determine if users interpret the service intervention as a substantial innovation that can change their quality of life. The whole design process starts with understanding the meaning people attach to products and services because people buy meaningful interventions and not the products themselves. Take Airbnb as an example, the online accommodation marketplace for lodging worldwide. In essence, it offers a more personal and engaging travelling experience that goes much deeper than traditional hotel booking. Lüneburg et al. [8] found that meaningfulness also depends on emotional and psychological meaning, not just the usability and utility of an innovation. But Hassenzahl [9] found that utility and usability are considered in the light of need fulfilment. Understanding ‘emotional ownership’ that's encompassed

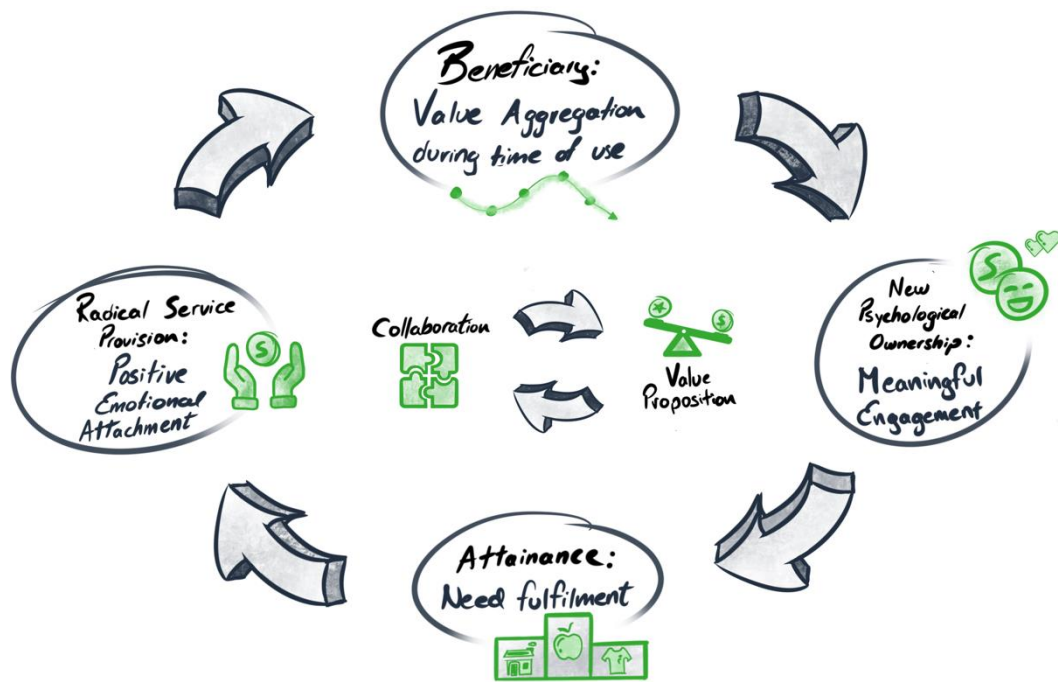


Figure 1. The four main stages of the Radical Service cycle

within the service, is of essence when understanding what value is offered and what needs are fulfilled before any meaning can be given to the service-to-be.

By *need fulfilment* is understood the ‘intangible component’ that serves as a mediator when creating value in the short term. Essential feelings that users seek to fulfil in life are addressed. These aren’t products or services themselves that fulfil user needs, but rather the opportunity they create. The sense of fulfilment can be addressed by emotional design, which can in turn create a positive emotional bond between the product and the user [10]. The core needs must be deduced from users’ habits and actions early in the design process, to appoint a uniquely long lasting & self-expanding characteristic to the service proposition. No economic or practical reward is desired by the users during usage because the engagement is already a meaningful activity to attain their emotional needs.

If the emotional needs are properly met and attained, the service can in turn create a *positive emotional attachment* with the user. Considering a customer’s values can aid the designer in sustaining the meaningful engagement and create something thoroughly radical. A person’s values are what they deem important in life to make it worth living, which is a subjective manner. Whereas the value of goods can be objectively measured, for instance with money. The Value Framework of den Ouden [2] describes four areas of value, which can be used to develop a radical service.

Radical services rely on developing no physical goods at all. This means the concept of value arises through *value aggregation* instead of possessing value. By decentralising physical goods, a radical service will naturally fill in this gap by allowing the beneficiary to aggregate value *during* the entire service provision. The actively involved user will now become the core value of exchange through psychological ownership instead of physical possession to make the interaction more meaningful. Today ‘possession’ mostly assumes physical attributes, which is tied to pride and advocacy. Since the physical aspects of a service are now limited to the bare minimum, for the user, the shift to no physical goods will cause the service to become a more meaningful and psychologically rich ownership. According to the Service-Dominant-Logic (SDL) theory [11], the user of the good itself should be the central piece instead of the product. But when the user’s needs are being accounted for in the service, the need for physical ownership will become negligible because the real emotional needs will have been met through a sense of advocacy and joy. In such relational service the danger exists that the limits of ‘economical rationality’ will be reached [12]. People will unlikely be willing to pay for services that appear as intrinsically ‘human,’ e.g., during an encounter at a school gate, one parent proposes you to bring your child to school [13]. Transforming this free offered ‘service’ as a priced one, would jeopardise the integrity of the encounter.

## 2.3 The Impetus of Services

The Impetus of Services Embedded within the Radical Service scheme in Figure 1, sits the idea of collaboration and a rigid value proposition. How can a service provider steer this self-sustaining value creation without any physical object attached to it? Designers or Service providers cannot deliver value but offer only a value proposition to be aggregated by the beneficiary in the moment and the place of the value creation [4]. An authentic value proposition “explicitly addresses social responsibility and eco-effectiveness” [14]. By incorporating symbolic, emotional, functional and economical dimensions into the statement, the organisation will thrive authentically and stay close to the customer to avoid discrepancies between the business proposition and the customer perception [15]. The proposed value doesn't lie in the outcome itself, but in its self-expanding characteristic. Looking at Apple, the beacon of innovation during the early 2000's, with the launch of iTunes. Apple gave birth to a radical new way of experiencing music. iTunes grew as an easy, affordable, and legal way to become part of the growing digitalization of music. All of this, counted on artists and musicians to participate in the growing trend without customers owning a single physical CD.

Through collaboration, the tacit knowledge, which includes the meaning people attach, needs and values, of other involved parties can be included in the design. Collaboration in a multidisciplinary team is therefore essential because it is often not known who possesses the appropriate knowledge [16]. The team needs to be composed of interpreters and relevant stakeholders. Interpreters, such as artists, designers, or philosophers, can create an impact for the customers during the design process. They listen to the design discourse as a first step. By looking closely into the context, they interpret the meaning people assign to specific activities. Interpreters can even influence the meaning that people give to object and services by proposing radical but realistic ideas. They have the power to change the existing cultural paradigms and introducing new meanings [10]. Ideally, companies, institutions, or even untargeted people can further strengthen the team. However, an overly keen focus on customer preferences tends to lower the innovation ambitions and outcomes [17]. Customer involvement should therefore be restricted only to the design phase [18]. If guided by the right tools and people, they could lead to an increase in radicality.

## 3 CONCLUSIONS

Radical service design allows meaning to be the leading factor and harbour our human needs, drives and values while taking the relations and interactions of the different actors into account. The different kind of relations characterise the different services and serve as an inspiration source for designing different kind of services. The embodiment relations, hermeneutic relations, alterity relations and background relations are distinguished, as well as the *I-Thou* from the *I-It* encounters. They challenge the socio-economical structures of today. The *I-Thou* encounters lie hand in hand with the post-phenomenological viewpoint. Such relations are meta-designed during the start of the service and while supporting and assisting the interpersonal encounters. It further emphasises this relational behaviour between object and subject not as separate entities but rather as a human experience of the world.

Radical services are immaterial, heterogeneous, inseparable, and perishable. Looking at *Figure 1*, the service provider must lean on collaboration in a multidisciplinary team as well as a clear Value Proposition. It is necessary to reveal the tacit nature of human needs, drives, values, and the meaning people attach to products. By making use of interpreters, it is also possible to influence those.

Since in radical services the only forms of value are the user and the service itself, no physical ownership ought to be considered in this radical model. Decentralising physical goods and replacing this by remembering the experience of the service instead of an economical, physical, or practical reward. It is up to the service provider to steer the value creation in an indirect manner. The user is seen as the creator who aggregates value throughout the use of it. Designers can accomplish this by attaining the user's need fulfilment, by considering a meaningful engagement for the user from the very start and ensuring a positive emotional bond to close the cycle. Furthermore, stakeholder collaboration during the early stages of development should help state a clear value proposition. The latter should encompass how value will be aggregated, by whom and to whom.

Further Research The paper touches upon the effect of radical services. But to be able to predict this, it is necessary to pinpoint and test the parameters of radical services. The elaboration during early process steps that dig for value and the emphasis on meaningful engagement are beneficial steps when creating services that cater to need fulfilment. The extent to which it would produce a radical solution is left unanswered. This paper suggested the fundamentally embedded parameters of immateriality,

heterogeneity, inseparability, perishability complemented by the integration of meaning people attach to services, their need fulfilment, and their values. The kind of relational encounter could be an indicator of the degree of radicalness of a service. Although in the case of the latter a clear definition or radicalness indicator could be developed. Similarly, it isn't indicated which parameters carry more weight.

It would be interesting if based on the literature framework different kind of blueprints for radical services could be formed and tested. Likewise, the success of a more systematic and step-by-step guidance for radical service development could be a valuable starting point for further research. This way it will also become clear if the statements made in this paper will remain valid even if a more detailed approach existed. Is a visual cycle, as was given in Figure 1, useful when being implemented in a 'real world' context? Would a co-creation toolkit for the collaborative process help move the design process forward in the right direction? Would it focus on the important aspects of gathering essential information to exercise a maximum influence on existing cultures? Would a complimentary model on push-strategies over pull-strategies still highlight the four crucial stages as mentioned earlier?

The impact of integration of meaning, need fulfilment, positive attachment, and the effect of psychological ownership of non-physical goods still needs to be researched. Although these have been identified as four main stages of a radical entity, their effectiveness and dependency still need to be researched. When it comes to the effectiveness of one of the stages or the Radical Service cycle in its whole, there is still room for an exploration on the short- and long-term effects of radical services themselves. How and why a radical deployment would cause a long-lasting change for the better and reinforce itself thanks to its self-expanding characteristic. In other words, a loop with a sustainably reinforcing quality. Alternatively, the deployment of a novel service can also reach a simple instant gratification without any self-sustaining quality.

Lastly, the extent to which a radical service effectively reinforces the social fabric of society needs to be further assessed. Since the radical solution is purely intangible and does not propose any physical attribute attached to the service provision, it relies on a relational character. This relational aspect is almost non-measurable and hard to define. Up to what point the service maintains its relational character before reaching an economical rationality, is closely related to the research touched upon in this paper. The extent to which the radical service can keep its relational character is still unclear.

## RELEVANCE FOR DESIGN EDUCATION

This paper incites to reflect on the stages of an innovative service of a radical nature. With a collaborative approach, this paper challenges service design educators to question the fulfilment of needs and the meaning for the user.

## REFERENCES

- [1] Penin L. (2018). *An introduction to service design: Designing the invisible*. Bloomsbury Publishing Plc. <https://doi.org/10.1080/14606925.2019.1615677>.
- [2] den Ouden E. (2012). *Innovation design: Creating value for people, organizations and society*. Springer. <https://doi.org/10.1007/978-1-4471-2268-5>
- [3] Zeithalm V. A., Parasuramon A. and Berry L. L. (1985). *Problems and strategies in Services Marketing*. Vol. 49 No. 2, pp. 33-46. *Journal of Marketing*. <https://doi.org/10.2307/1251563>.
- [4] Morelli N., de Götzen A. and Simeone L. (2020). *Service design capabilities* (1st ed.). Springer, Cham. <https://doi.org/10.1007/978-3-030-56282-3>.
- [5] Ihde D. (1990). *Technology and the lifeworld: From garden to earth*. Indiana University Press. <https://iupress.org/9780253205605/technology-and-the-lifeworld/>.
- [6] Secomandi F. (2012). *Interface matters: Post phenomenological perspectives on service design*. [Doctoral thesis, Technische Universiteit Delft]. TU Delft research repository. <https://doi.org/10.4233/uuid:57e33f9a-b634-4cb2-bad0-8c5b35f7ae65>.
- [7] Cipolla C. and Manzini E. (2009). *Relational services*. 22(1), pp.45-50. *Knowledge, Technology & Policy*. <https://doi.org/10.1007/s12130-009-9066-z>.
- [8] Lüneburg L.-M., Papp E. and Krzywinski J. (2020). *The potential of wearable demonstrators introducing innovative technologies*. *Proceedings of the Design Society: DESIGN Conference*, 1, 2029–2038. <https://doi.org/10.1017/dsd.2020.306>.
- [9] Hassenzahl M. (2010). *Experience design: Technology for all the right reasons*. Morgan & Claypool, San Rafael, CA. <https://doi.org/10.2200/S00261ED1V01Y201003HCI008>.

- [10] Verganti R. (2009). *Design driven innovation: Changing the rules of competition by radically innovating what things mean*. Harvard Business Press.
- [11] Zsigmond T., Zsigmondová A. and Machova R. (2021). *From goods-dominant logic to service-dominant logic*. SHS Web of Conferences, 120, 02015. <https://doi.org/10.1051/shsconf/202112002015>.
- [12] Gorz A. (1989). *Critique of Economic Reason*. Verso. London.
- [13] Mason P. (2016). *Postkapitalisme, De Bezige Bij*. Amsterdam.
- [14] O’Cass A. and Sok P. (2015). *An exploratory study into managing value creation in tourism service firms: Understanding value creation phases at the intersection of the tourism service firm and their customers*. Tourism Management, 51. <https://doi.org/10.1016/j.tourman.2015.05.024>.
- [15] Polanyi M. (1996). *The tacit dimension*. New York: Doubleday anchor. <https://press.uchicago.edu/ucp/books/book/chicago/T/bo6035368.html>.
- [16] Goduscheit C. R. and Faullant R. (2018). *Paths towards radical service innovation in manufacturing companies - A service-dominant logic perspective*. Journal of Product Innovation Management, 35. <https://doi.org/10.1111/jpim.12461>.
- [17] Melton H. and Hartline M. (2015). *Customer and employee co-creation of radical service innovations*. Journal of Services Marketing, 29, 112–123. <https://doi.org/10.1108/JSM-02-2014-0048>.
- [18] Meadows D. (1999). *Leverage Points: places to intervene in a system*. pp. 13. The Sustainability Institute.