Section 1.b
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Introduction: Interdisciplinary Perspectives and Trends in Open Innovation

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Open innovation has been described as a means of assisting firms utilising ideas and knowledge from inside and outside the firm. It has been defined as “a distributed innovation process based on purposively managed knowledge flows across organisational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organisations business model” (Chesbrough et al, 2014, p vi). Open innovation strategies may lead to better financial performance by reducing costs related to innovation, increasing commercialisation and financial gain.

Understanding open innovation in some way explains how sharing knowledge with internal and external stakeholders can promote innovation. Understanding processes can reinforce the importance of engaging with customers early in concept development and design stages of new products and services. Also openness can promote co-creation between firms, customers, suppliers, academia and government. The essence of such cooperation by internal and external stakeholders creates relationships to explore common interests and goals.

From an open innovation perspective, value creation and capture is accomplished by (i) outside-in open innovation, i.e. ideas drawn into the organisation from the external environment. This involves opening up organisation’s innovation processes to external inputs and contributions, (ii) Inside-out open innovation utilises unused or underused ideas and assets gathered from outside the organisation and (iii) Coupled open innovation links outside-in and inside-out open innovation processes combining knowledge inflows and outflows to collaboratively develop and commercialise an innovation.

Traditionally, knowledge is considered as being held by the firm as core competences and it is assumed that this is a source of sustainable competitive advantage. Accordingly knowledge used in, and resulting from, innovation and the knowledge resulting from the innovation remains within boundaries of the firm. Open innovation opposes this view as it...
integrates diverse knowledge from the wider environment into the business ecosystem and creates new knowledge for multiple stakeholders.

Due to the inter-disciplinary nature of open innovation it can be discussed and theorised from many viewpoints, such as strategy, value chain, business models, core competencies, knowledge creation and more recently in design management. Levels of analysis vary with considerable research frequently conducted at organisational level, while more is needed in areas such as inter-organisational value networks. To date, large organisation have been at the focus of open innovation research, primarily because they are able implement open innovation to some degree without strategic change. More recently, open innovation practices in SMEs have become important, as these small firms have insufficient resources to cover all innovation activities and must look beyond firm boundaries for growth opportunities. Thus, inter-organisational networks are important drivers of innovation in SMEs as they often struggle to make the best use of strong network ties. Exploring open innovation in SMEs can provide insight into how best to utilise their networks.

Open innovation research faces many difficult questions and the focus of this track is to explore the interfaces between open innovation and knowledge creation.

“The smart art market products from the contemporary art world: A case of specific exhibition from Taipai” paper 1 by Fu and Lin, considers how this has become a vehicle between art and mass communication. The authors suggest that this widens access and can be considered a new economic model for selling art. Digital technology is ubiquitous and democratises the consumption of art so that high quality art can be offered to the public at affordable prices. Accessing large audiences has the potential to increase profit through the consumption of cultural artefacts in the virtual and in real world, simultaneously. The study utilises semiotic methodology to explore representations of image and symbolism through metaphors embedded in the pictures. Principles of metaphors and image schemes provide tools to aid interpretation the artist’s work. Three artists work are evaluated in this paper, Mika’s photography, Rébecca’s princess illustration and Tong’s topography of different countries. The smart art market uses technology to reorganise contemporary art in order to capture social, culture and economic value.

Paper 2 by Canik, Bohemia and Telebasic, “Mapping coupled open innovation processes from activity theory framework”, presents a case study that explores how organisations undertake coupled open innovation in medium sized enterprises. This exercise evaluates design management literature and practice. Activity theory methodology is utilised in a novel way to analyse the phenomenon. It is very difficult to capture open innovation activities and processes and the authors explain that their proposed method emphasises who is doing what, why and how in complex environments. The case study findings revealed how importing and exporting mechanisms were undertaken in joint R&D projects using seven categories, namely, object, subject, community, division of labour, instruments, rules and outcomes. Mapping importing and exporting mechanism based on the seven categories is the main contribution of this study. It showed that leveraging joint R&D projects through to commercialisation is still challenging. Organisations do not fully benefit from the outcome of these projects. From this it was recommended that more studies focus on the commercialising of R&D projects through, IP strategies and new
business models. The implications for design practice include design thinking and design tools to steer the open innovation processes that will help the organisation to understand the processes, develop open innovation models and identify needs for both products and services through open innovation processes.

Paper 3 by Fain, Wagner, Kay and Vukasinovic, “Bespoke innovation: filling the gap between the classic and user-centred open innovation.” This paper explores the boundaries of open innovation by considering the properties and problems associated with different forms of governance. It considers variations of open innovation categories and associated forms of governance in terms of public and private goods. Public goods: (i) technical standard setting organisations, involves interaction between parties and transfer of knowledge resulting in a technical compatibility standard; (ii) User innovation, describes collaborative innovation such as the open sources movement. Private goods: (iii) Classic open innovation, where intellectual property only has value if it leads to commercialisation; (iv) Bespoke and customisation, a form of user-oriented open innovation where knowledge required to produce a specific new product maybe distributed across the partners, contributing to the final innovation. An illustrative case describes a traditional heavy-engineering company delivering bespoke products tailored to the need of the customer on a contract basis. Findings highlight the four forms of open innovation to explain different governance systems and in the case example of bespoke innovation. Customers’ needs define the design of the products while assets remain locked within the boundaries of the firm undertaking the product development. Implications from this paper suggest that each variant offers valuable lessons and highlights issues related to managing open innovation. Classifying and defining variants of open innovation provides a useful basis for identifying and analysing similarities and differences between alternative forms of governance.

References

About the Track Facilitators

**Nuša Fain** works mainly on R&D-marketing integration in product development and the study of cultural aspects of multidisciplinary and multinational design education. Her research interests include product development, innovation management, teamwork and cross-functional integration in product development projects.

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