

Interaction Space

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Abstract. In this Science Fiction prototyping article I present a future proposition of people interacting with technologically-designed or socially engineered producer entities. Entities customized specifically to solve complex societal problems. It is within this consumption/production interaction space that I propose that entrepreneurs will be able to exploit high revenue streams and develop business models and value chains from their innovations. I explore the concept of interaction space entities by means of a fictional reflection of how life might be in the interaction space in the future through two vignettes and a factual discussion of the research inspiring these views.

Keywords. Science Fiction prototyping, interaction space entities, business models

Introduction

The traditional divide between production and consumption which influenced marketing thought is being eroded by technological development and marketing scholars [1] are now considering issues such as co-creation where consumers are part of the design/production process as central to our understanding of marketing², particularly when considering the online environment[2]. I will engage with the new dominant logic of services marketing as initially proposed by Vargo and Lusch [3] and its further refinement [4][5].

While the work of current management theorists and those which followed have focused on the goods/service divide, I consider here moving forward to embrace the notion of goods and services being intertwined. Additionally, Vargo and Lusch [4] introduced the idea that value can only be created and acknowledged by the consumer in the act of consumption. Value cannot be abstractly defined in isolation from the consumption experience, therefore they move from notions of value in exchange (which has underpinned much marketing thought) to value in use. Vargo and Lusch introduced a refined notion of 'co-production' referring to the customer as 'co-creator of value' rather than the earlier concept of 'co-production' which critics attributed to a

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² Marketing is a social and managerial process by which individuals and groups obtain what they need and want through creating offering and exchanging products of value with each other.

more goods dominated approach. Coupled with co-creation of value, they define 'co-production' as 'the participation in the creation of the core offering itself'³.

The traditional 'good', the physical product is being replaced by the mode of distribution of the service. Secondly, the digital economy is placing the consumer as a central figure in the 'co-production' of products. The notion of the passive consumer of production outputs no longer holds in the new fragmented design and industrial landscape and Vargo and Lusch's conceptualization of the co-creation of value in use and co-production can shed light on the changes occurring across the economy.

Web 2.0¹ allows users, as individuals or social networks to produce and distribute products/services on the basis of their observations or opinions, and computer-based selection and management systems support collective work processes to gather the information that is spread across the whole network. The economic logic behind such developments is that businesses now have unprecedented opportunities for user participation and (re)engaging with their audiences [6][7] and also for cutting costs by 'crowdsourcing' tasks that were formerly performed by paid professionals [8].

There are low barriers to civic engagement and artistic expression which exist in the Web 2.0 domain. This participative culture supports sharing what is created in a context where members of the social network have a sense of their contributions being of value.

The two fictional vignettes attempt to turn the process of 'co-creation' back full circle from a service oriented concept into physical interaction processes.

PART A – STORY VIGNETTES

1. Background (to vignette 1)

In 2031, mankind would be punished by air polluted with carbon dioxide, long summer droughts, glacial winters and three plagues which decimated the fertility of the male species. The inoculation when it did come was most effective in countries with more money and efficient health care systems than ours. We suffered from stringent health care economics and the greed of the pharmaceutical giants. Also, too many people here were poor and isolated so we fell behind our Western partners. God had become a personal equity plan rather than a public good, and while men and women strived to reach their own personal capitalist utopias - both society and the environment broke down. It was widely held that the interactive space would lead the renaissance for society to come out of its darkness. So entrepreneurs began to look at ways to give the hoards of single women or childless couples what they termed the 'baby experience.'

³ Ibid., p. 48.

¹ Web 2.0 is the second generation of website development and design on the internet and is frequently referred to by scholars as social media [7].

2. Designing and selling the “baby experience”

Technology now gave women an opportunity to buy a ‘baby experience.’ With the decline in male population children were becoming a scarce resource and women were prepared to pay large amounts for fertility treatment. Entrepreneurs provided venture capital for medical researchers to create the Heptapod’s. Male entities genetically engineered to guarantee high chances of female fertility. But the treatment was highly expensive and the product design/innovation targeted at very rich and successful career woman typically in their late 30s/early 40s who could afford the extortionate treatment costs.

2.1. *I Made You*

The chances of Sophie being eaten by a shark are almost nil. Sophie is searching for New York’s underbelly. Steam pours out of a manhole cover. Smoke from the nostrils of a monster. She avoids anything that smells of tourists. There is a thrill of adventure, maybe, or at least the dream of one. Her dark brown hair with its gentle waves, tied up in a chignon, the way the French do best. The eyes are grey and impossible to read. They remind one of the crystal ball you would expect to find in a gypsy caravan.

‘Can you help me? I am afraid that I am terribly lost,’ said Sophie.

The man is hard to age. He looks Yemeni, muscular and ruggedly handsome with a sandy complexion interjected by the wrinkles and crevices of a sun-driven and smoke fuelled youth; an odd combo of a man - who can be cool but never slick. He has a diamond implanted in his right ear lobe. A fake gold Rolex glitters against his sandy skin. His diamond white eyes penetrating laser like through the glacial soul stood in front of him.

Sophie observed the blue scorpion on the right side of his neck, a lasting symbol of his former life in the Legion. But he was not her type, far too militarized and rugged. Then she noted the silver slug curled in his ear. In the middle of it there is a single blue eye that flickers occasionally.

‘Where do you want to go to?’

‘The Heptapod B club, where am I.’

‘Your right here,’ he said

‘So I guess I’m not lost then.’

They walk a short distance together toward the entrance of the club. He pushed open the thick heavy mahogany doors like they were half their weight and walked into the neon lit room. The centrepiece of the room was a square 6ft by 6ft wooden dance space with a 9ft pole in the middle of it.

The sandy man said slowly, 'Your first time here, right.'

'Yes, I'm petrified.'

'Do you need a drink?' he asked trying to comfort her.

'Yes, vodka straight with no rocks please,' she replied.

They had their first vodka and three more quickly followed in staccato fashion like they were drinking under a threat of prohibition.

'Hey, hey... I'd better take it steady. Many thanks for the drinks but I need to see the owner and introduce myself,' said Sophie (assuming that he was the hired muscle).

'I am the owner.'

They stared at each other. The seconds passed. Their interaction being no longer relational but transactional.

Sandy man remained cool and asked her casually 'So your here for the (fertility) treatment?'

The girl looked ruffled even surprised. She kept trying to reason with herself that it was worth the terrified hours ahead, the bewildered sense of insanity, the confusion and fear. Sophie switched subject, 'did you get my payment?'

'Yes, \$20,000 was inputted into our social bank this morning,' he replied with the calm of an accountant.

'What becomes of the Heptapod after tonight?' she queried.

'To ensure your utmost confidentiality he will have his intelligent memory erased in the morning. Then we take him for prototype (inventory replenishment). The whole prototype remanufacturing process typically takes nine months, though now we're beginning to implement the lean production philosophy of Toyota, and our aim on full production would be reduce this eventually down to seven working days.'

Sophie with her Columbia MBA listened attentively before asking, 'how many of these prototypes do you have in stock?'

Heptapod B's at the moment, and we're expecting another shipment of prototypes shortly from China to arrive tomorrow morning.'

'Expanding fast,' Sophie said surprised.

The man piped up, 'yes, our services are in high demand here in New York and we're aiming to be quoted on the NASDAQ within five years, if all goes to plan and the productivity results from our prototypes continue to be positive.'

Sophie did not totally buy into his marketing rhetoric 'but you have problems, right, The variation in (baby) output. I read in the Times that there's only 50-60% probability of conception.'

Sandy man paused for a few seconds, gathered his thoughts before diplomatically continuing, 'yes we have had some variation but the prototypes are being refined all the time and the risks are coming down very quickly. We guarantee your money back if not successful and the option of a fifty per cent discount, when you come back. But that can only be after three years due to federal law.'

Sophie also knew that there was a five year waiting list for the treatment. She sarcastically replied, 'interesting, let's hope we can add to those output figures.'

As she looked around the room she noted that there were two shut doors and a corridor with a right-angled corner. She's beginning to feel like Alice in Wonderland. Sophie looks around the corner and the corridor stretches away in a straight line ending with several steps. It looks like a fire escape back to street level. She glances towards the bar and there is the Heptapod coming towards her blocking out the neon light. He is dressed fully in an all black outfit.

'Is this the one?' she asked sharply.

Ifty said, 'Yes and best of luck - carrier!'

The Heptapod put out his hand to greet her and as she shook his hand a warm glowing sensation diffused quickly throughout her body. He guided her up the stairs and they walked into the room where she slipped her clothes off. The clone looked towards her and stared only momentarily at her chest protruding out. Joan noticed this and covered herself with her arms.

'Here take the over coat' said the Heptapod.

She neatly slipped the over coat on and felt the smooth warm texture of the worsted cloth on her naked flesh.

* * *

As the morning haze hung over her she wearily plucked out the grey shadow of the Heptapod figure as he left the room. She heard a voice outside the room, the accent it seemed familiar. Deep into her fractured memory she plunged, the tiredness hit her like a sudden virus. But she kept searching for an answer, her mind refused to rest.

2.2. Story links to the co-creation literature

Story 1 proposed to provide a fictional extension of existing co-creation/prosumer design concepts [1] to fertility treatment prototype innovation.

3. Designing the academic prototype (vignette 2 background)

Through vertical integration Melberg University in 2031 were managing the intellectual socialization of young people from a very early primary school age through to PhD attainment. Melberg University had initiated a control experiment in 2016 whereby they had purchased from adult providers the future intellectual property rights of their children's education. A full 19 years from concept stage through to doctorate delivery. They had a tight control group of 20 outstanding children selected with predicted IQ's of over 150, who were put on an academic fast track program with the ultimate aim that they would lead every department in each faculty of the university by 2035. The vision was to create one of the world's leading university in terms of intellectual capability and research productivity. If successful they aimed to sell the IP of this intellectual route map to other ambitious institutions.

3.1. The Appraisal

The secretary, Linda handed me another cup of coffee and said, 'Professor Langer should be finished in a few minutes, I sincerely apologise for the delay, but I believe it is an urgent meeting with one of the prototypes, Bahareh Zavar. Do you know her?'

'No can't say I do, our paths have never crossed' I replied. 'Why should I?'

'I hear she is soon to be your boss in the autumn. A woman boss and half your age!' she exclaimed mischievously.

'Fascinating.'

We smiled at each other. I saw a pretty but fading beauty with still enough power to turn more male heads than those that ignored her. She resonated a counter-cultural prettiness frozen in the flower women of the late-1960s. Her eyes sent out a message that I was a rough cut and out of place here. But she wasn't as cold as her colleague's and one detected a glint of rebelliousness still simmering in those clear blue eyes. A rebelliousness long forgotten in this age of the intellectual prototype. These were the first to emerge from the social experiment to create a super educational elite from birth. Taken from their parents they had been programmed through FBI mind control techniques to be the perfect thinkers and knowledge creators. Their peer group, the naturals (defined by their curiosity and intelligence) were left reeling in the wake of their extraordinary academic progress. A European intellectual elite to finally challenge the Americans and Chinese.

As soon as Linda noticed I was staring at her, she turned and floated away from me as graceful as a swan gliding over a lake. I checked my watch it was 11.15, I needed a Camel cigarette, I needed some whisky, and I needed the stripper I'd met in the Calypso bar on my return home to Melberg (after three years in Dresden) last night. 'Shit she could drink.' Just like Frank senior, my father, who had been buried in a coffin designed in the shape of a bottle of Jack Daniels.

My guess was that they had initially recruited me to their university research team (investigating corporate espionage) in order to meet the government imposed social quota. Underclass rough cuts from council estates (white trash) who somehow managed to peddle their way through to get a higher education especially in such a prestigious place as Melberg University. They knew I'd always lived to work and spoke fluent German so I fitted their bill for their overseas base in Dresden.

Langer was my polar opposite, stoic, a hard working and intelligent man from good Saxony stock with the sensitivity of the Hitler Youth. The youngest Chair of Corporate Espionage in the UK, at 30. My thoughts turned to his appraisal of me; I guess it would read something like the following: Firth is not a reflective man and not a particularly philosophical one. Stubborn, will full, contemptuous of instruction, telling himself that one day something would come up to take him away from here. He meets failure as one day he will meet his death, with cynical resentment and the courage of a loner. He'd lasted longer than most now he was beaten. We are in a results business and the bottom line financial target for his team has not been met. My replacement was in place, on completion of her PhD would be this prototype thing, Zavar. Firth you will no longer be needed in the field but will have an teaching job here in Melberg and you will be under the direction of your new team leader.

Curiosity gripped me so I arose from my seat and bent down to have a look through his key hole. I clocked the smiling face of Langer and the back of the prototype, they were eating grapes together, smiling and joking. Langer was a short man with close, iron grey hair (a product of writing a 1,000 words of academic writing a day) and the physique of a swimmer. He was very strong. This was discernible in his back and shoulders, in his neck and in the stubby formation of his hands and fingers. The prototype was his protégée, his clone the woman he wanted to take to the world summit of academia. I reckoned he kind of loved her not sexually, but in the image of himself. An aesthetic love for his artistic creation.

I guess they might call it cloning or social engineering, the creation of a perfect unemotional academic with the beauty and allure to open up the right doors and to go to bed with the right people.

My mind flicked over to the stripper I'd met in Melberg the previous night, I checked the mobile, and her number was still there, this comforted me. Juliette who told me she did the stripping in the Calypso to fund her travelling and climbing. She seemed educated and didn't have the same glacial stare and lack of feelings of the usual dancers I'd met in Dresden. Her iced soul had a touch of warmth cutting the ice caps like the impact of global warming on the poles. But like my fellow clients who fell for this game every week we were all powerless to act in any other way. I blamed it on my

addictive personality. But somehow Juliette although half my age seemed to understand me and talk to me in a much more effective intellectual language than my three ex-wives.

Juliette guessed I was from Melberg, which I was, and rich, which I was not. She put my age at fifty, which was about right. She guessed I was single, which was half true. Somewhere along the line there had been some divorces; somewhere there were children, now in their teens, who received their allowance from a rather odd private bank in the city.

I was startled out of my trance by the piercing voice of Langer behind me, 'Dr Firth we are now ready to see you.' My stomach turned, it always did, stress cut through my gut like a scalpel cutting human tissue. Panic entered my mind; I needed the toilet and quick. No, Bogart, Cagney, Mitchum they never showed weakness and they took a punch in the face and never flinched. I recalled the 'White Heat' gangster scene of James Cagney, while acknowledging the inevitability of his death remained cool at the top of a water tower while police fired bullets from all directions at him: an image of his mother appeared to him, 'how are you son?' ... 'top of the world ma! .. top of the world.'

I entered the room; Langer stands directly in front of me, with the posture of a marine. He gives me direct eye contact and a firm handshake. 'Good morning Firth, I would like you to meet my prototype, Bahareh.' I looked towards her, she looked back at me, startled like a rabbit caught in the headlights of a car.

'Juliette!' my subconscious screamed. My subsequent laughter was that of a man embracing an organization not trying to fight clear of it.

3.2. Story links to the literature

The second story develops existing concepts on educational pro-sumption processes [15].

PART B- The Link to the Authors Papers

I have published 25 research papers [9-13] on the design interaction space between producer and consumers and the viability of this space for creating business models and new value chains. The theoretical base for this work is provided by intellectual works on blogging [14], digital economics [6]; crowdsourcing [8][15], interactive marketing [1] and services marketing [3][4].

This article is based on my research observations and insights into the changes occurring across both manufacturing and service supply chains. Firstly, as stated above, organizations can be viewed as moving from providers of goods, to providers of services. The traditional 'good', the physical product is being replaced by the mode of

distribution of the service. Secondly, the digital economy is placing the consumer as a central figure in the 'co-production' of products. The notion of the passive consumer of a product/service no longer holds in fractured post-industrial landscapes and Vargo and Lusch's conceptualization of the co-creation of value in use and co-production can shed light on the changes occurring in many industries.

Though it is important to note that my current research investigation into co-creation practices in the regional news media sector confirms a strategic gap between the theory and actual industry philosophy. I have found a general reluctance on the part of news media organizations to open up their most value activity processes to the active involvement of citizens. Consumers are offered only limited opportunities for engagement with the editorial process, which are largely restricted to opportunities to 'debate current events' while being firmly excluded from other aspects of news production. In a recent British Academy funded workshop that I organized in Dresden with local news media organizations (Dresden University of Applied Sciences, March 11 2011) the participants (n = 23) acknowledged that industry often mistakenly talked about co-creation as a 'disruption' and they felt this was too negative a term for the opportunities offered by the revolution occurring in social media. Co-creation clearly challenges organizations to extend the level of their direct engagement with audiences as participants which in the news media case study involved consumer participation in the processes of gathering, selecting, editing, producing and communicating news.

4. Concluding discussion

In these stories my core proposition is that in the future consumers will pro(sume) the design of products. A mixture of innovative designs, services, experiences and products will be created through consumers being fully involved and participating in their design, creation and future development. Story 1 relates to the co-creation role between a Heptapod and a women requiring fertility treatment and the need for a more natural and pleasurable experience than that which exists at present. This is proposed to be a lucrative market for the entrepreneur whose target demographic would be the rich, ambitious career women in their late 30s/early 40s. While in the second story the university (the producer) interacts with the consumer (the PhD student) from a very young age with the ultimate objective to create an elite intellectual class to manage Melberg University. A future of co-created products and service experiences represents a fundamental design paradigm shift than what we have at present and the risks and gains from developing such prototypes and technologies will be a fascinating prospect.

Prahalad and Ramaswamy[1] stress that consumers have different levels of sophistication in engaging with technology, but this article moves beyond existing studies of technology bridging the producer/consumer interface in examining how pro/consumers may in the future instigate physical moves into the interaction space rather than the current state of play where they are looking to save costs through incorporating information and communication technologies.

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