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## Design for Subjective Wellbeing: Towards a Design Framework for Constructing Narrative

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**Abstract:** We explore the role that interaction with products and services can play in the narratives that we develop about ourselves. We propose a four-level model, which seeks to explain this and use it as the basis for analyzing eight immersion studies. In each, we investigate the role that products and services play in shaping narratives, which in turn reflect our self-identity. We also look at archetypes – the various ideals that we can have about ourselves – and at how the alignment of narratives with these enhances our wellbeing. The model offers the potential to link narrative to design features and to identify new market opportunities. However, we recognize there may be challenges in enabling people to articulate narrative and identify their ideal archetype.

**Keywords:** Narrative, Happiness, Archetype, Immersive Study, Design

## 1. Aims of the study

"We have, each of us, a life-story, an inner narrative—whose continuity, whose sense, is our lives. It might be said that each of us constructs and lives, a 'narrative', and that this narrative is us, our identities[...]. Each of us is a singular narrative, which is constructed, continually, unconsciously, by, through, and in us—through our perceptions, our feelings, our thoughts, our actions; and, not least, our discourse, our spoken narrations" (Sacks, 1998 pp. 110-111)

Narratives are central to the way humans understand our identity and our sense of self, and there is evidence to suggest that having a clear and positive narrative about our life, consistent with our values and aspirations, enhances our psychological wellbeing (Dolan, 2014; Jordan, 2000). We posit that products and services that support life narrative will enhance subjective wellbeing and contribute to happiness. Consequently products and services are likely to provide stronger relationships between owner and 'thing' and have longer, richer cycles of ownership. In the current

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climate this can be seen as an economical, environmental and psychological imperative. Through this study we aimed to develop a design framework that could be usefully used to design products and services that work in positive symbiosis with owners' life narratives.

#### 1.1 Method

We structured this work as a series of on going designerly conversations within our working group and with products that we own. Through a conversational workshop, we elicited four narrative types that appeared to relate to products and services and organised these into a hierarchy. These levels being:

- Life narrative
- Story narrative
- Incident narrative
- Thing narrative

We went on to explore this notion further by writing individual immersion studies focussing on our ownership and use of two products: a car; a domestic appliance. At the outset we considered that these might be, in turn, a high and a low interest product but this did not subsequently bear out. We left the immersion studies unconstrained with the consequence that some were written closer to pre-analysed lists of facts, and others with clear narrative threads in the unfolding story.

We analysed these immersion studies through a second conversational workshop. The text was mapped against the four narrative levels and, through this process, we began to explore how designed features might enhance the various narrative levels. However, it became increasingly apparent, as we added to or modified the design of our products through conversation and thought experiments, that life narrative is the overarching focus. Designing 'things' and 'incidents', understanding the operating agency and causality that will sculpt these into 'stories', has to be driven by the life narrative if it is to lead to a product that enhances subjective wellbeing for that individual.

To explore how design might operate in the four narrative levels, and to ground this work in theory, we mapped them against Jordan's four pleasures (2000) and Grimaldi et al's (2013) narrative definitions.

As the focus on the individual emerged, we sought a way to characterise individuals and their life narrative that would contribute to our framework. In design practice, this is typically done by creating personas, but this does not necessarily provide a full range of life narratives. However, Jungian archetypes (Mark and Pearson, 2001) appeared to provide this characterisation.

#### 1.2 Context for the work

People's life stories are so tied into their identity that neurological patients with damage in areas of the brain linked to narrative lose the sense of who they are (Bruner, 1991; Young and Saver, 2001). People constantly construct narratives from all the things in their lives, circumstances, events, facts, behaviours, people, objects, experiences and anything else that might come into someone's consciousness. Some of these narratives will be overlooked and forgotten, some will be throwaway anecdotes told over dinner about the present day, and some will become part of a repertoire of stories that are told and retold and are inextricable from people's identities. Collections of narratives

like these tend to become a representation of people's values and personalities, and often once someone dies these stories live on in the family as a symbol of that person's identity. Narrative is an appropriate medium for this as narratives are particularly good at presenting characters that we can empathise with (Bordwell, 1985; Briggs et al., 2012; Wright and McCarthy, 2008). The narrative that one person constructs can be very different from what another person constructs from the same situation. These narratives will depend on a wide variety of personal and social factors including perception, attention, values, personality, culture, experience, intelligence and mood. They will also depend on how well these narratives fit with their life narrative and the identity they embody or want to portray (Csikszentmihalyi and Halton, 1981).

Material anthropology has been studying the role objects have within life narratives and how people's identity and personality is tied into the narratives around their 'things' (Miller, 2008). What is the role of products and services in life narratives? Why do some products and services feature in life narratives while others are disregarded or treated as marginal figures? Why do we gel and form a relationship with certain products and services that seem to embody our life narratives, while other products and services take more of a background role and could easily be substituted?

An extensive overview of the use of narrative and stories in design are provided in McCarthy and Wright's Experience Centred Design (McCarthy and Wright, 2010) and Grimaldi et al.'s Narratives in Design (Grimaldi et al., 2013). This paper focuses on an aspect that is not central to these overviews, the ways in which certain users' character traits may make it more or less likely for them to incorporate a particular product into meaningful life narratives.

## 2. The outcomes from the study

#### 2.1 The four narrative levels

- Life narrative. A narrative about a person's life as a whole. Aspects of the narrative will focus on product features and product manifestations that range from aesthetics to ethics. Reflective responses to these factors will change over time. Interactions with, and ownership of, products and services can enhance or diminish a person's life narrative.
- Story narrative. The interaction with a series of products or services that enable an
  individual to build a story around a sequence of events connected by causality or
  agency. Story narratives enable articulation of a life narrative to ourselves and our
  social and familial connections. Collecting and recounting these stories reinforces life
  narrative and enhances subjective wellbeing.
- *Incident narrative*. A narrative around a single event or incident. Incident narratives operate in the same way as story narratives, reinforcing life narrative, but focusing on individual interactions or events.
- *Thing narrative*. A narrative about the physical properties and manifestation of a product or service. These physical properties can operate at both a visceral and reflective level depending upon their relevance to the life narrative.

Table 1. Mapping the Four Narrative Levels.

<b>Definitions of Narrative</b> (Grimaldi et al., 2013)	Representation of Events	Chronological	Characters	Causality or Agency	Values and Emotions	Conflicts and Climax	The Four Pleasures (Jordan, 2000)	The Four Narrative Levels
D5 Entertainment Value	•	•	•	•	•	•		
D4 Value-Laden Narrative	•	•	•	•	•		Ideo Pleasure	Life Narrative
D3 Logically Sequenced Narrative	•	•	•	•			Socio Pleasure	Story Narrative
D2 Sequenced Narrative	•	•	•				Psycho Pleasure	Incident Narrative
D1 Minimum Definition	•						Physio Pleasure	Thing Narrative

#### 2.2 The Immersion Studies

We present a short synopsis and subsequent analysis of the immersion studies. We recognise that although these provide a good depth of insight into aspects of product ownership and use that relate to our narrative levels, they lack the necessary richness to reveal a comprehensive life narrative.

#### 2.2.1 Study 1: KH

Female, age 39. Married with two children aged 3 and 8 months. Lives in Hertfordshire. The two product choices are low interest items in her life.





Figure 1. Domestic Appliance [left] (Hotpoint WML520P, n.d.); Car [right] (netcarshow.com, 2008).

#### **Domestic Appliance: Hotpoint Washing Machine**

Having bought a new house and moved out of rented accommodation, she and her husband had to buy white goods for the kitchen and the smallest portion of the budget was assigned to the washing machine. She chose to buy a Hotpoint as it was a brand that she knew, that she expected to be reliable, and online reviews considered it a good value model. She has had the machine for 5 years and it has operated problem-free but she is already pricing new ones as she feels that it may not last much longer.

She uses only three settings on the machine and finds the difference between them negligible. She has become less satisfied with the machine over time, noticing issues of design quality such as the powder drawers difficult to clean as they can't be removed. Recently her son got his finger caught in the closing mechanism of the door. This suddenly made the machine highly conspicuous to her, having previously been something that she hardly thought about or noticed.

#### **Car: Renault Clio Sport Tourer**

She is not interested in cars, nor the perceived status associated with them. This is the fourth car she has owned and the one that she is least interested in. It was a functional purchase - she needed a car with 5 doors because of her growing family and she needed enough space in the back for her biggest dog. She was offered the car at a good price and knew some people at the dealership, so she trusted them with the purchase.

The car is not a common model, which she likes. It gives good fuel economy. She has subscribed to a monthly payment plan that gives her a fixed fee for the annual service and MOT at the dealership. Reliability is important to her and she is concerned that now that the car has done 60,000 miles issues might arise here.

Table 2. KH: Immersion studies

Narrative Level Domestic Appliance		Car		
Life Narrative	She focuses on reliability value balanced against value for money. She values her family above material possessions.			
Story Narrative	The washing machine had performed well for years without being noticed but suddenly came to the forefront of her attention when her son got his finger stuck in the closing mechanism.	The decision to get this car came about as a result of her expanding family and it has served them well so far.		
Incident Narrative	Her son got his fingers stuck in the closing mechanism.	She became pregnant with her first child and needed a bigger car with 5 doors and large boot to accommodate her family.		
Thing Narrative	The washing machine is reliable, value for money, and inconspicuous.	The car is big enough to fit her family and dogs into. It is economical.		

#### 2.2.2 Study 2: PJ

Male, aged 49, lives alone. Divides time between home in Somerset and club in London. Has a 10 year-old son. Very interested in cars.





Figure 2. Domestic Appliance [left]; Car [right] (Mihnea, 2015).

#### **Domestic Appliance: Sainsbury's Kettle**

His old kettle stopped working and he needed a new one. This was a low interest product for him, so he wasn't willing to shop around and instead just chose from the selection in the supermarket when

he was doing his weekly shop. He chose what he thought was the most attractive one in the shop. It was a brushed metal one, which he thought looked sophisticated. It didn't worry him that it was comparatively expensive.

He has had the product for about 10 years now and it works fine. It is quite noisy which annoys him, but boils the water quickly which he likes.

#### Car: Audi Q7

He had previously owned a Range Rover Sport Supercharger that was a cartoonishly excessive vehicle and only did 15 miles to the gallon. It became unreliable so he decided to sell it and get a new car, buying the Audi Q7 on lease-hire. He went through a systematic buying process, choosing the Q7 because he wanted a reliable SUV from a prestigious brand. He enjoyed the buying process and included his then 8 year-old son in it.

He didn't enjoy the car as much as he hoped. The 'newness' soon wore off and the size of the car made it difficult to park, which made him feel embarrassed in front of his girlfriend. He also found that the car attracted less interest that his previous one when he talked about cars in the pub, because it was not as 'excessive'. The car was reliable and served him well, but he never grew attached to it.

Table 3. PJ: Immersion studies

Narrative Level	Domestic Appliance	Car
Life Narrative	He is a high-status person with good taste	He is someone who likes life to be full of 'excessive' things that can be talking points.
Story Narrative	When he buys things he puts quality and design before cost.	The car served him well for 2 years and took him and his son on many adventures, however it was too boring for him to bond with.
Incident Narrative	He bought it because it was the nicest one in the shop, without regards to the cost.	The car did not get as much interest in pub conversations as the previous one had.
Thing Narrative	The kettle is nice looking and comparatively expensive.	The car is a very large, high-status SUV

#### 2.2.3 Study 3: SG

Female, age 38, lives in London with two children, 9 and 2 years old. She hasn't ever owned a car so the car had to be a family car.











Figure 3. Domestic Appliance [left] (author's own image); Car [right] (autobelle.it, 2016)

#### **Domestic Appliance: Kettle (brand unknown)**

She doesn't remember why she bought this particular kettle, other than it was cheap and made of metal, which she preferred to plastic. She thought that it looked OK and it worked well. While she was away her husband threw out the kettle and replaced it with one that he said was faster. She thought it was a waste of money and doesn't notice any difference in speed, however she thinks the new kettle also looks OK.

#### **Car: Bianchina Panoramica**

The car belonged to her mother, but she was allowed to use it when she was a teenager after she passed her driving test. The car was very small and was associated with an unlucky comedy character; that he owned one was used to demonstrate how badly his life had turned out. The low social status of the car made it cool in the eyes of the 'punky' friends who she hung out with, and it became central to her social life. She would often take people to gigs in it and had friends crammed into it after a night out, coming back to her apartment to sleep over.

Table 4. SG: Immersion studies

Narrative Level	Domestic Appliance	Car
Life Narrative	She is a prudent and financially responsible person.	She is someone who lives an alterative lifestyle
Story Narrative	The kettle has worked well for many years and there was no need to replace it.	The car has taken her and her friends on many trips to see cool, alternative gigs.
Incident Narrative	She chose the kettle over the alternatives because it was made of metal and they were plastic.	People within her 'punky' peer group find the low status of the car to be an appealing quality.
Thing Narrative	The kettle is cheap and looks good.	The car is low-social status.

#### 2.2.4 Study 4: AB

Male, age 52. Married with two children aged 12 and 15. Lives in London. Is an inveterate fixer of things.



Figure 4. Car (author's own image) . No image of the washing machine was available.

#### **Domestic Appliance: Zanussi Washing Machine**

When he moved into a new flat with his girlfriend, he took a neighbour's discarded Zanussi washing machine that he had previously worked with his father to repair. Their flat did not have ready-made attachment points for washing machines, so he took pride in creating his own solution. He and his girlfriend watched the first wash together, an incident his best man mentioned at his wedding. They owned it for 6 years before the controller board broke, after which they bought another Zanussi. The machine worked reasonably well for 8 years, although he had to carry out a series of minor repairs during this time. Then the drum bearing went. When he went to buy a replacement part he was advised that he couldn't fix it. However, after a lot of effort he did, and it lasted a further 12 months.

After this, he and his girlfriend bought a Bosch. He didn't like it at first – regarding features like the screen as being indicative of needless complexity. However, he developed respect for it as it performed well over 11 years. Recently it developed a major fault which took a lot of work to diagnose and repair. However, again he succeeded, and he plans to keep repairing the machine indefinitely using parts bought from eBay, something not possible during the time he had the Zanussis.

#### Car: Mitsubishi Pajero

When he was younger he had had a variety of interesting, although not always reliable cars. Since starting a family he had had 'sensible but boring' cars, most recently a Fiat Punto. The car was continually getting bumped and scraped, so he decided to replace it with something more sturdy.

Initially he considered a Land Rover, but then discovered the Mitsubishi Pajero, which he felt offered a combination of ruggedness and comfort. He found one that was in good condition, and went with the whole family to go and collect it. He bonded with it immediately as he drove it home in torrential rain. The car has taken him and his family on some great trips both in the UK and France, and travelling in it always creates a sense of adventure. The whole family has bonded with it – they call 'her' Old Betsy.

Eventually the car started to have major problems, including a cracked cylinder head. He thought about getting rid of the car but his son wanted him to repair it so he set out to do so, getting lots of attention from the neighbours as he worked on it. He was successful and at the moment when he first started it up again, a neighbour cheered from her window, while another ran across the street to see.

Table 5. AB: Immersion studies

Narrative Level	Domestic Appliance	Car		
Life Narrative	He is adept at repairing things and surprises others with his ability and tenacity in this area. In doing so he is carrying on a family tradition.			
Story Narrative	He has continually repaired the machine and got it working again against the heaviest odds. He has done this with many other products throughout his lifetime, just as his father had done.	After many great family adventures the car developed a major fault. He fixed it to the surprise and pleasure of his family and neighbours.		
Incident Narrative	He worked with his father to repair the machine.	He bonded with it as soon as he drove it home.		
Thing Narrative	The washing machine wasn't working when he took possession of it.	The car is rugged and comfortable, with a sense of adventure.		

## 2.3 Jungian Archetypes: exploring idealised personality traits

A person's wellbeing is likely to be influenced by the degree to which their life narrative matches their ideal view of themselves (Dolan, 2014). Jung developed personality archetypes by which people define themselves. These have been summarised and updated by a number of sources in the fields of branding and marketing such as Mark and Pearson (2001). We used these archetypes as a convenient framework to identify the personality traits emerging from these immersion studies, and in what ways the products studied resonated with the idealised personality traits of the person recounting the narrative.

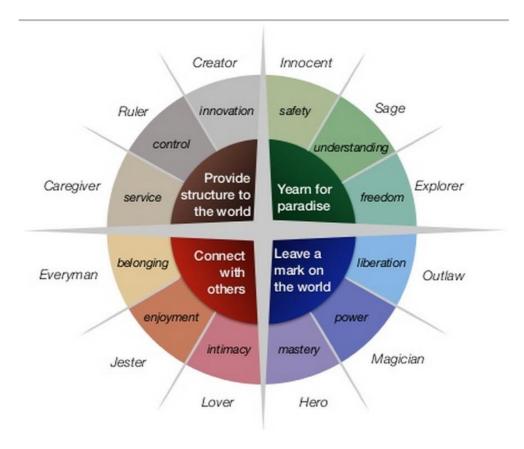


Figure 5. Universal human desires and their associated archetypes. (Hean, 2014)

Table 6. Jungian Archetypes (adapted from Mark and Pearson 2001)

Archetype	Goal	Strategy
Innocent	Safety and happiness	Doing things in the right way
Sage	Truth and wisdom	Seek information and reflect
Explorer	Authenticity	Exploring the world and exploring new things
Outlaw	Disrupt and shock	Challenge what is wrong in society
Magician	Make dreams come true	Develop vision and live it
Hero	Courage and mastery	Develop strength and competence
Lover	Intimacy and sensual pleasure	Become more attractive in every way
Jester	Have fun and lighten the world	Play, joke and be funny
Everyman	Belong and fit in	Develop ordinary values and common touch
Caregiver	Help and protect others	Do things for others
Ruler	Safety and happiness	Take responsibility and exert leadership
Creator	Innovation and creativity	Use imagination, skill and creativity

Despite the limitations of the immersion studies, some clear character archetypes emerged in relation to these product choices. However, we shouldn't lose sight of the limitations as individuals have characters that are multifaceted, that may span ordinals or diagonals.

KH: Caregiver, Innocent.

PJ: Ruler, Jester

SG: Outlaw, Sage

AB: Hero

### 3. Discussion and Further Research

The four-level model offers the potential to understand how characteristics of a product can work their way up from the lowest 'thing' level through the 'incident' and 'story' levels until they potentially impact on a person's life narrative. This gives a lens for understanding why a product impacts positively or negatively on someone's wellbeing. When looked at in conjunction with the archetypes this enables us to form a deeper understanding of users and to understand why their experiences with products resonated with their personality. The table below identifies a property of each of the products in the case studies and its effect on the user's quality of experience.

Table 7. Product properties and their contribution to narrative

Product	Property	Contribution to Narrative
Washing Machine (KH)	Dangerous	Threatening her children's wellbeing
Car (KH)	Practicality	Taking care of her family
Kettle (PJ)	Sophisticated	Was able to show his good taste during the buying process
Car (PJ)	High-Status	Failed to contribute to the humorous narrative he enjoys with vehicles
Kettle (SG)	Cheap	Demonstrated frugality
Car (SG)	Low status	Didn't violate her and her friends' values
Washing Machine (AB)	Repairable (although not easily)	Was able to demonstrate prowess in repairing it
Car (AB)	Interesting	Formed a bond and kept it long-term

Strictly speaking, these are not actually properties of the products but of the interaction between the product and the person. For example, the Zanussi washing machine was repairable for AB, but that doesn't mean it would be repairable for the rest of us. Similarly, the Sainsbury's kettle was sophisticated in PJ's eyes, but that doesn't mean that others would have seen it in the same way. One avenue of future work is to look at whether there are common patterns linking properties and life narratives.

The emergent design framework from this study will enable us to ask and answer new design questions relating to a product or services contribution to subjective wellbeing. For example:

- 1. Intelligent Guesses People who drive people carriers are innocent caregivers.
- 2. Product Analysis Who are these products currently designed for? Jesters or Rulers?
- 3. *Identifying Gaps in the Market* a particular brand might not have any products in its range for Jesters, for example.
- 4. Innovation What does a 'Heroes' train service look like?

However, given the overriding importance of life narrative and the significance of personality traits it is clear that better approaches to eliciting them is needed. Furthermore, recognition that life narratives can be both real and/or ideal, emergent, overt and covert, is necessary. Are there effective ways to systematize personality traits to inform this framework? For example: do we all have elements of a different vision of paradise?; Do we all wish to leave a mark on the world but in different ways?; Are our connections with others differently characterized and do we wish to structure the world in different ways?; do we have one trait from each quadrant? Our ongoing work requires identifying appropriate methods to enable this.

## References

- Bianchina Panoramica 1970, 2016. Retrieved from
- http://www.autobelle.it/annunci/vendo\_bianchina\_panoramica\_1970\_vibo\_valentia\_187974.php Bordwell, D., 1985. Narration in the Fiction Film. Univ of Wisconsin Press.
- Briggs, P., Blythe, M., Vines, J., Lindsay, S., Dunphy, P., Nicholson, J., Green, D., Kitson, J., Monk, A., Olivier, P., 2012. Invisible design: exploring insights and ideas through ambiguous film scenarios, in: Proceedings of the Designing Interactive Systems Conference. pp. 534–543.
- Bruner, J., 1991. The narrative construction of reality. Critical inquiry 18, 1–21.
- Csikszentmihalyi, M., Halton, E., 1981. The Meaning of Things: Domestic Symbols and the Self. Cambridge University Press.
- Dolan, P., 2014. Happiness by Design: Change What You Do, Not How You Think. Avery Pub Group, New York, New York.
- Grimaldi, S., Fokkinga, S., Ocnarescu, I., 2013. Narratives in Design: A Study of the Types, Applications and Functions of Narratives in Design Practice, in: Proceedings of the 6th International Conference on Designing Pleasurable Products and Interfaces, DPPI '13. ACM, New York, NY, USA, pp. 201–210. doi:10.1145/2513506.2513528
- Hean, E. (2014). Archetype Overview with brand examples & character compass. Retrieved from: http://www.slideshare.net/EmilyBennett/archetype-overview-from-the-hero-and-the-outlaw
- Hotpoint WML520P, n.d. Retrieved from https://www.amazon.co.uk/Hotpoint-WML520P-Aquarius-Washing-Machine/dp/B0042U0IE2
- Jordan, P.W., 2000. Designing Pleasurable Products: An Introduction to the New Human Factors. Taylor & Francis, London.
- Mark, M., Pearson, C.S., 2001. The Hero and the Outlaw: Building Extraordinary Brands Through the Power of Archetypes. McGraw-Hill Professional, New York.
- McCarthy, J., Wright, P., 2010. Experience-centered design designers, users, and communities in dialogue. Morgan & Claypool, [San Rafael, Calif.?].
- Miller, D., 2008. The Comfort of Things, 1st Edition. ed. Polity Press.
- Mihnea, R., 2015. Audi Shows 2015 Q7 in New Tofana White Color. Retrieved from http://www.autoevolution.com/news/audi-shows-2015-q7-in-new-tofana-white-color-reveals-obsession-with-mountains-91389.html
- Netcarshow.com, 2008. Renault Clio Estate. Retrieved from https://www.netcarshow.com/renault/2008-clio\_estate/1600x1200/wallpaper\_08.htm
- Sacks, O.W., 1998. The man who mistook his wife for a hat and other clinical tales. Simon & Schuster, New York.
- Wright, P., McCarthy, J., 2008. Empathy and experience in HCI, in: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, CHI '08. ACM, New York, NY, USA, pp. 637–646. doi:10.1145/1357054.1357156

Young, K., Saver, J.L., 2001. The neurology of narrative. SubStance 30, 72–84.

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