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# Brands in the Consumers' Hands

How Brand Image and Functions Change for Open-Source Brands

by

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# Abstract

The research problem originates within the concept of co-creation where traditional roles of organisations and consumers start to shift. Thereby, the issue of who actually controls brand images arises. Consequently, it is unclear how consumers perceive brands that are no longer controlled or even created by organisations. This study investigates how consumer-dominant logic influences brand image and changes brand functions of open-source brands. A multiple case study research studying two established open-source brands, YouTube and Wikipedia, is chosen to generate in-depth understanding about consumers' perceptions. In accordance, nine semi-structured interviews with consumers are conducted. The main findings illuminate a clear separation of organisations, contributors and consumers, and the technological setting as greatly impacting brand image of open-source brands. In addition, it is identified how traditional brand functions are challenged and which new functions are formed. Overall, the study concludes that traditional marketing theory requires revision to be applicable to emerging business logics.

**Keywords:** Brand image, brand functions, open-source brands, co-creation, value, consumer-dominant logic

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# 1 Introduction

## 1.1 Background

Today, emerging technological innovations and consumer empowerment challenge the relationship between organisations and consumers. The evolution of Information Technology has brought a global community with great geographical distances closer together and diminished the distance between organisations and their customers (Bhalla, 2010). Development of IT has laid ground for a change in production, coordination, aggregation and distribution of products and services (Zwass, 2010). Efficient technological tools provide base for easy and effective integration of customers in a company's design and development phases (Nambisan & Nambisan, 2008). Entirely new business models developed and integration as well as close collaboration with customers have become an integrated part to businesses processes.

A shift in underlying business logic has brought along a shift in value creation from the organisation to the consumer. The traditional product-dominant-logic (PDL) where transaction is based on exchange has been re-evaluated. According to PDL, value is inherent to products created by the organisation. Thus, product features provide value to the receiving consumers. The new business thinking is usually based on service-dominant-logic (SDL) where offerings are co-created with consumers and every product is regarded as service delivery mechanism. According to SDL, organisations are no longer solely creating value by creating products but consumers are creating value by using products and deriving individual value depending on their own perception and experience. Basically, with SDL, product provision is no longer viewed as focus of economic exchange but service provision. Service in this case meaning the application of resources or customer-determined benefit like the application of certain skills to create value (Vargo & Lusch, 2004). To avoid confusion and allow clear distinction between service as a good and service as a logic, we use the term offering comprising products and services as goods throughout this thesis paper, unless we explicitly refer to service goods. Some scholars developed SDL even further by introducing consumer-dominant-logic (CDL), - here the consumer is at the centre of value creation, processing delivery as well as exchange of intangible assets (Anker, et al., 2015). As a result of emerging SDL and CDL, the more specific concept of value co-creation is now introduced as naturally occurring in the society. This shift in organisation and consumer relationship in terms of value creation challenges traditional power and control dynamics of value creation.

The collective behaviour of individuals around the globe to share knowledge, services and alike is the essence of Co-creation (Zwass, 2010). Co-creation is driven by a consumer economy with a need to exert value out of technical, social and cultural knowledge, which was until today believed to be outside of production (Zwick, et al., 2008). Furthermore, the

concept of co-creation evolves into theory and practice entailing a rise of new business models. Enright describes this as ‘open-source movement in marketing’ (2006, p. 10), which has its origin in software development with open codes accessible and editable by anybody. The open-source concept developed, building on the belief that the collective can generate a greater and better outcome than a closed separate entity (Bhalla, 2010). The co-creation concept empowered consumers in the branding context as well. Pitt et al. define open-source offerings as ‘products, services and ideas for which the intellectual input of the inventors and producers is non-proprietary in nature’ (2006, p. 116). By now consumers outside organisations as well as managers within organisations are involved in the creation process of products, services and overall brands (Ind, et al., 2013). Haarhoff and Kleyn (2012) describe different levels of co-creational activities between consumers and organisations and subsequently different levels of open-source brands. Some organisations involve customers in terms of promotion, such as Coca-Cola or MasterCard. In the course of the ‘Share a Coke’ campaign, consumers are asked to create a Coca-Cola commercial from their Facebook photos and share a virtual coke. In the same manner, MasterCard offered consumers to create an advertisement via a provided website for their ‘priceless’ campaign. MasterCard finally decided which one of the consumer-created advertisements to run on television (Enright, 2006). Other organisations such as Nike establish a deeper collaboration by integrating consumers into their product design phase. However, all of the above keep control of final production and required decisions. Other organisations are engaged in such a high level of co-creational activities that they are neither in charge of design, development or delivery of the offering. A well-known brand truly building on the open-source concept is Wikipedia. Not only that its content is provided by contributors outside to the actual organisation, but also their internal strategy is open-sourced. A formulation of the strategy was opened up for public by the non-profit foundation Wikimedia operating Wikipedia. Public contributions were collected and summarized to a coherent business strategy by Wikimedia (Newstead & Lanzerotti, 2010). The implication that value is created together with consumers is more natural to service goods. The consumer has always played a vital role within the service sector and contributed to the final success of services (Ordanini & Pasini, 2008), because production and consumption is inseparable in the case of services in contrast to physical products (Lovelock & Wirtz, 2004). With co-creation and great technological development to follow, consumers outgrow their role of pure consumption (Bhalla, 2010, p. 10) and gain great influence on final physical products. In sum, driving away from traditional marketing approach which sees marketing as decision-making activity (Kotler, 2011; Shaw, 1912), brands are no longer viewed as closed entities.

A brand has been and is still viewed as one of a company’s most valuable intangible assets (Keller & Lehmann, 2006). Building a strong brand therefore entails several financial benefits for companies and social, experiential and economic benefits for consumers (Melin, 2002). In this context, marketing is viewed as ‘mono-directional’, specifically targeting certain consumer segments (Anker, et al., 2015) and determining different brand functions. In addition to certain functions, a brand carries a certain promise about an offering’s quality and attributes. Vital to success of a firm is delivering on its brand promise. This brand promise is created and needs to be managed by the organisation to subsequently manage perceptions and expectations of the consumer about the brand, its product or service and its consumer value (Aaker, 2004). These perceptions and expectations constitute an overall brand image in the

consumer's mind (Keller, 1993). Several scholars have differing views on what brand image actually is and how it is created (Kay, 2006; Keller, 1993; Levy, 1978; Newman 1957). Some definitions of brand image focus on consumer's perception of the product, some on brand's messages and meanings, some on consumer's reflections and others on consumers' attitude, emotion and opinion about the brand (Zhang, 2015). Overall, traditional marketing agrees, that the organisation and its marketing programs are seen to have the power to create an aspired brand image in the consumer's mind (Keller, 1993). Keller (2008) writes that the process of brand building should develop from clear understanding of the brand, what it stands for, what it represents and how it should be positioned. Keller (2008) adds to say that brand managers should aim to create distinct brand meaning targeting consumer's perception. However, co-creation literature proposes that brand image is actually individually constructed by consumers and their interpretation is part of the brand co-creation process (Rindell & Strandvik, 2010).

## 1.2 Problem Discussion

The mainstream marketing theories (Aaker, 2004; Kapferer, 2012; Keller, 1993) are often based on a static view of the world, regardless whether these are discussed in terms of monetary transactions or branding. Additionally, companies are regarded as the only ones having control and being in charge of attributing meaning to brands (Romaniuk & Sharp, 2003). While mainstream marketing literature works in PDL where brand managers have all the power, market reality has changed with the rise of the sharing economy. In accordance with the basic principles of sharing knowledge and skills to create a greater outcome of the sharing economy, SDL includes consumers as co-creators of value. However, Grönroos and Voima (2013) challenge SDL and co-creation. Following CDL, organisations are not required to be in any direct interaction with consumers in order to create value for consumers (Grönroos & Voima, 2013). In addition, Rindell and Strandvik (2010) note that consumers create closed networks of communication where organisations may or may not be involved depending on its consumers' decision. This means that consumers are completely independent and possibly owning control over brands. Subjectively created brand meaning can naturally not be facilitated by the official, organisational brand universe. As a consequence, mainstream marketing theories referring to organisations as providers or facilitators are no longer applicable or at least up to be challenged (Rindell & Strandvik, 2010; Grönroos & Voima, 2013). CDL supports the view that consumers create value independently from providers and take the role of brand builders (Anker, et al., 2015). Therefore, the traditional perception that the brand can be built by organisations alone is possibly all wrong in today's marketplace.

A potential conflict between consumer-dominant logic and the traditional marketing theories building on the view to actively build, control and manage a brand was identified. Open-source brands are largely controlled by consumers rather than brand managers. As pointed out by the different examples of Coca-Cola, Mastercard and Wikipedia, open-source brands can be open-sourced in different dimension. Pitt et al. (2006) define four different dimensions that can be fulfilled by open-source brands to different extents: physics, text, experience or meaning. Co-creation and the open-source movement have been researched from different

angles. Most research conducted adopt organisation's perspective and aim to illuminate how to best leverage co-creation for organisational benefits. Thus, these researchers study business models of such enterprises with a focus on sharing economy (Chang, et al., 2015; Posen, 2015) or a change in relationships and interaction between firms and consumers (Ind, et al, 2013; Payne, et al., 2009). Few studies focusing on consumers' perspective are Hennig-Thurau, et al. (2004) that studied consumers' motivation to engage in online Word-of-Mouth and Ind, et al. (2013) that researched the outcome of co-creation on the consumer's side, explicitly assessing the influence of co-creation on brand intimacy and relationships.

Overall, Edvardsson et al. (2005) imply that CDL is an emerging phenomenon lacking insight but relevant for the future of marketing practice as well as theory. Bhalla adds to it by stating that 'the business function that most enables companies to understand customers is marketing' (2010, p. 5). Thus, insight into consumers' perception of brands and their perceived value is crucial to create effective marketing activities. In addition to that, it is important to close a gap in research regarding the impact of co-creation and the open-source movement in the area of branding, namely the creation of a strong brand image fulfilling crucial functions for consumers.

### 1.3 Research Purpose

Our ambition is to analyse consumers' perception of open-source brands in order to understand whether or how consumer-dominant logic has changed brand image and subsequently brand functions.

Our object of study therefore comprises consumers' views, attitudes and feelings towards open-source brands. We want to contribute to current literature by illuminating consumers' perception of open-sourced brands. We aim to provide explanatory results of how consumer's perception of open-sourced brands is today as well as provide reflection on potential changes in traditional brand functions.

### 1.4 Research Questions

The research purpose is two-fold, thus provides two research questions, which are aimed to be answered.

*1: How does brand image of open-source brands differ from brand image of closed-source brands?*

Our first research question aims to understand how consumers' perception of brands has changed due to an increased influence of consumers over the actual offering within the overall open-source movement.

*2: How does the nature of open-source brands change 'traditional' functions of a brand?*

Our second research question aims to understand whether traditional functions of a brand heavily stemming on an organisation taking control and responsibility over an offering, are challenged by the increase in consumers' influence.

## 1.5 Outline of the Thesis

The thesis will be structured as follows. First, we will provide an overview of existing literature on the different concepts of co-creation and open-source brands, constituting one part of the theoretical framework, as well as brand image and brand functions, constituting the second part of the theoretical framework. Second, a methodology part will describe research approach, strategy and design. Third, we will present and analyse the empirical data on the basis of our theoretical framework. Fourth, we will discuss our findings, providing ground to answer our research questions, as well as draw final conclusions and answers to our research questions. The thesis will close with final managerial and theoretical implications as well as suggestions for further research.

## 2 Theoretical Review

*In the following theoretical review, we provide a detailed overview of relevant theory on co-creation including definitions and differing views as well as the entailed change of company-consumer relationship. Here, the important concept of value creation will be introduced, since it is crucial to determine and understand power dynamics within the marketplace. This will be followed by an overview of the nature of newly emerged open-source brands. The part will be finalized with an overview on brand image and functions, compromising traditional view on how companies create and manage brand image in the consumer's mind. As a result, all of these concepts will be combined and presented in a theoretical framework (chapter 2.4).*

### 2.1 Co-Creation

There are several authors defining co-creation and studying it from different perspectives (Galvagno & Dalli, 2014; Prahalad & Ramaswamy, 2004; Vargo & Lush, 2008). Galvagno and Dalli define co-creation as ‘the joint, collaborative, concurrent, peer-like process of producing new value, both materially and symbolically’ (2014, p. 644). Zwass (2010) discusses producers and consumers as valuable marketplace partners working together. Broader definition characterises the concept as value creation by consumers, whereby Vargo and Lusch (2008) view co-creation as the concept where companies and consumers create value through interaction. In the past defined as only involving company’s customers now the understanding evolved towards individual consumers who are actually able to take their own initiative and independently create value (Anker et al., 2015; Payne et al., 2008). Generally, collaboration and interaction through different phases of development, design and production create value for consumers as well as organisations. Whereby value is rather general, concrete benefits from co-creation are improved consumption and usage experience (Payne, et al., 2008; Prahalad & Ramaswamy, 2004) as well as enhanced innovations (Gentile, et al., 2007).

Several scholars have researched value co-creation and emphasised a changed role of consumers. From the nineties consumers start to be discussed as having both, the role of consumer as well as producer. Normann and Ramírez (1993) develop this idea stating that the goal of business should not be only to produce value for customers but to use them so that value can be co-created. Postmodernism has pushed the traditional boundaries of the consumer role even further as consumers are regarded to be fully active players (Normann & Ramírez, 1993). Generally, firms are encouraged to consider consumers as a capacity in value production. In the later stages, some scholars study co-creation as part of the viable system approach (Barile & Polese, 2010; Nenonen & Storbacka, 2010). This refers to business behaviour in the context of interactions with different actors. Supposedly, it is closely related

to co-creation and network studies. However, the most impactful change in economics literature is appointed to service-dominant-logic paradigm (Rettinger, 2013). Here the consumer starts being seen as a co-creator of value in every single transaction. In addition to that, service is the main aspect of value creation (Vargo & Lusch, 2004).

### 2.1.1 Value Creation

Value is an important concept defined alongside co-creation. Co-creation itself is also defined as the value creating process (Grönroos & Voima, 2013). Important to recognize is, what provides value, by whom value is created as well as where. Therefore, the following paragraphs provide an overview of traditional and emerging views of the source of value, the creator of value as well as the sphere of creation.

Traditional view on marketing sees business offerings as the source of value. Consumer needs are analysed and then certain products are designed for them to be accepted or rejected. Basically the value lies within a physical product or its price. Tangibility of the offering is the core of transaction and marketing. The view that value is created through product attributes follows the so-called product-dominant-logic (PDL). Any product has a set of features that delivers value to consumers during consumption. A few scholars note that transaction of products, referring to it as value-in-exchange, is a one-way process where consumers are regarded a resource to be acted on (Rettinger, 2013; Smith, 1776). This is usually done by generalising the consumer segment or the whole market and promoting, distributing or marketing to them (Prahalad & Ramaswamy, 2004; Rettinger, 2013). Thereby, value is defined by producers in one-way communication to passive consumers (Anker, et al., 2015). The thought of co-creation and simultaneous new concepts of marketing, involving service marketing and brand relationships, have encouraged scholars to re-evaluate the product-centric approach and mainstream marketing theory altogether (Payne et al., 2008; Vargo, et al., 2008). A focus on value exchange or delivery now evolved into the value-in-use concept. This is particularly evident for offerings of the services sector. Though, the service-dominant-logic is not meant to be solely applicable to services, rather it is meant to acknowledge the experience of the offering through the consumer and to the experience attributed value. Traditional view of value-in-exchange for a long time has overshadowed emerging concepts such as value co-creation and value-in-use (Leroy, et al., 2013; Vargo et al., 2008). Therefore, definitions of the later still lack specificity and the concepts are not clearly defined. However, the emerged value-in-use concept encouraged Prahalad and Ramaswamy (2004) to develop the idea of value being embedded in individual experience rather than product features. This thinking follows Vargo and Lusch's (2004) concept of a service-dominant-logic (SDL), where the consumer is integral to the value creation process. According to Grönroos & Voima (2013), value-in-use is created during consumption when consumers are able to extract value out of products using individual experiences and logic. Value-in-use is built by consumers over time and then connected to the particular situation. Thus the ultimate source of value is consumer's perception stemming from individual experiences (Grönroos & Voima, 2013). Value thereby constitutes of emotional, environmental, ethical and social benefits rather than just functional or economic advantages. Scholars illustrate the complexity of value by discussing how one person can perceive mere holiday planning as valuable and another needs

to build new memories during the trip for value to be extracted (Grönroos & Voima, 2013; Voima et al., 2010).

Following PDL, value is inherent to offerings created by organisations. Thus creators of value are ultimately organisations. In the case of SDL, value is co-created by consumers and organisations through a common encounter (Anker, et al., 2015). Thus companies cannot create value by themselves, meaning that they can only provide pre-requisites for the consumer to create value during consumption (Merz, et al., 2009). SDL implies that no value is created until the offering is used. In other words, consumer's experience and perception determine the value of co-creation (Vargo, et al., 2008). Grönroos (2008) argues that consumers are the ones to create value while firms take on a supporting role. Additionally, consumers are part of the firm's resource capability that needs to be used in order to create value (Nenonen & Storbacka, 2010). Evolving from SDL some co-creation scholars argue for the idea that customers are completely independent and organisations are not required to be part of the value creation process (Anker, et al., 2015). This view of empowered and independent consumers is the recently emerged consumer-dominant logic (CDL). Here, value can actually arise without interacting with a business provider. Moreover, brands are open-sourced by different stakeholders and value arises in a highly individual and contextual encounter between different consumers independently from organisational agents (Anker, et al., 2015). The actual offering is provided by consumers themselves. Prahalad and Ramaswamy (2004) also approve the view of active consumers and like Payne et al. (2008) study it as part of the consumer experience and consumer-brand relationships. Active consumers can be valued based on the extent to which individuals put effort, knowledge or preference to the offering's production or delivery. CDL proposes that consumers are always at least co-creators of value and no value can be extracted until the offering is used.

When discussing co-creation process Grönroos & Voima (2013) identified three elements; provider, joint and consumer sphere. In provider's sphere, organisations create offerings for consumers, thereby facilitate value creation by consumers and in joint sphere interaction between both allows organisations to act as co-creators of value (Grönroos & Voima, 2013). Consumer's sphere is closed for organisations and value can only be created and extracted by consumers (Grönroos & Voima, 2013). Payne et al. (2008) also developed a similar framework describing a value creating process, a supplier value creating process as well as an encounter process.

Based on the same main idea, both studies highlight the importance of both stakeholders, organisation as well as customers, the processes they are involved in and the interaction between them. A key aspect is that in terms of co-creation both parties join into one environment where they can easily share ideas or be active in each other's actions. Consequently, by learning, being involved or coordinating each other, value is co-created in a two-way process rather than one-way firm controlled action. Overall in the course of co-creation, customers have a lot more power and consumer's sphere becomes essential part of value creation (Grönroos, 2008; Prahalad & Ramaswamy, 2004; Vargo & Lush, 2004; Voima et al., 2010).



## 2.1.2 Consumer-Dominant Logic & Marketing

The above stated changes in source and creator sphere of value creation challenge the traditional brand management view that consumers' perceptions and accordingly brand image can be created and managed by corporations. Evolution of value creation and the underlying business logic impacts marketing in a way that it has to change the way it acts upon or with the consumer. Grönroos (2008) points out that when moving from PDL to SDL or CDL, interaction becomes a key aspect of marketing practices. Accordingly, marketing may build on interaction and the opportunity to support consumers in their value creation (Grönroos, 2008). Gruen and Hofstetter (2010) point out that application of SDL has a great impact on the way organisations operate. Because of its crucial role to define and create value, organisations are required to integrate consumers in their offering creation (Gruen & Hofstetter, 2010). In addition, a change in roles for value creation, entails a shift in power dimensions in a sense that consumers are creating value individually and without the organisation. This not only impacts marketing in terms of interaction with consumers and sales processes but also internal processes of initially building, developing and maintaining a brand. Prahalad and Ramaswamy (2004) develop this knowledge and build on SDL to call brand an experience. In contrast, most publications still focus on organisations as initiators of co-creation. Until now, brand building view assumes that brands are controlled by organisations and that they can be strategically managed (Park, et al., 1986). Even though, Keller and Lehmann (2006) point out that organisations move towards creation of very emotional experiences with techniques such as Guerilla-Marketing. This still implies that a brand is static and can be fully controlled by organisations. Payne, et al. (2009) go on to develop a branding concept in the context of co-creation. Here consumers start having a defined role but organisations still owe the power of planning branding activities. Consumers are regarded as being invited to join the process (Vargo & Lusch, 2004), whereby CDL sees the firm as co-creator and undertaking a supporting act in consumer's creation of value (Grönroos, 2008).

## 2.2 Open-Source Brands

The formerly mentioned development of open-source brands and the rise of the sharing economy changed the scene and had great impact on consistency and coherence of brand images for companies. The open-source branding concept originated in the eighties in the software industry. The open-source paradigm builds on online communities and at the same time benefits from but also results in a will of the community to improve the initial offering (Chakrabarti, et al., 2007; Freeman & Chapman, 2009). Pitt, et al. (2006) contributed to the knowledge of open-source branding by identifying four types of sources that make a brand open-sourced (See figure 1). The first dimension refers to *Meaning* which consumers attribute to brands. In contrast, this meaning is considered provided by organisations for closed brands. Second dimension involves *Experiences* of a brand; these can be fully created by customers or to some extent shaped by the producers (Haarhoff & Kleyn, 2012). One example is driving a car. Look, feel and sound of driving a specific car or brand is crucial. Some car manufacturer aim at creating a unique user experience with e.g. the sound of locking the car. However, this

dimension has been acknowledged to be highly influenced and determined by individual consumers even for closed-source brands. Creating an experience for an open-source brand would be individual or collective. Meaning that consumers coming together at making music, art or even social events becomes an open-source experience. Third dimension is *Codes or Texts* and it makes consumers authors by giving them power to create. Codes and texts are usually studied to understand consumers' motivation in open-source software projects (Nov, 2007). The most obvious example would include consumer generated entries in the encyclopaedia Wikipedia (Haarhoff & Kleyn, 2012). Fourth and final dimension according to Pitt, et al. (2006) is a *physical* source; the extent to which customers produce a physical product. For example, consumers' influence on the design of Nike sneakers or contribution towards the look of YouTube and Facebook, - offerings that's final looks are to a great extent determined by consumers. The framework of *Meaning, Experiences, Texts* and *Physics*, as sources - separately or combined – is a first model to identify open-sourced brands and differentiate them from closed-source brands (Pitt, et al., 2006).

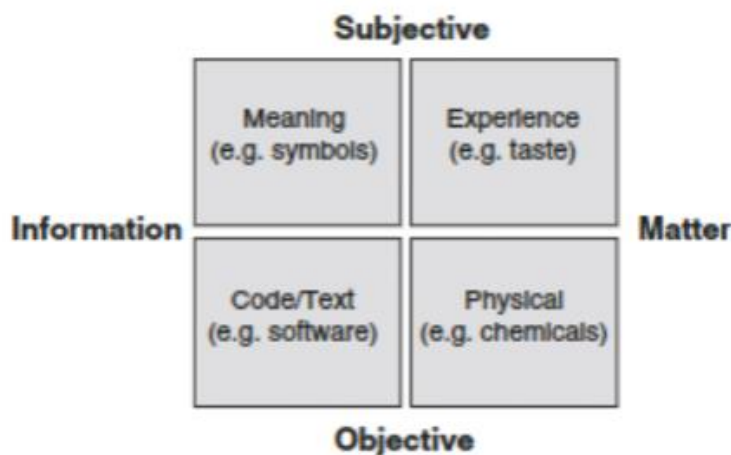


Figure 1. Typology of Sources (Source: Pitt et al., 2006)

The framework has been used to once again study brands from the firm's perspective and to measure various brand personality aspects (Haarhoff & Kleyn, 2012). The findings support the view of independent customers having control over brand meaning. However, literature does not study online open-source brands sufficiently. Haarhoff and Kleyn (2012) claim that no comprehensive literature studied online open-source brands even though they themselves managed to identify at least fifty-eight brands that can be classified open-source brands. Freeman and Chapman (2009), also add that many companies are reluctant to open-source branding as the possibility that consumers can create negative messages exists. They indicate that companies should interact with the consumers online and respond to negative content. This supports CDL where brand image is co-created by consumers but organisation still can make attempts to encourage interaction (Rindell & Strandvik, 2010).

### 2.2.1 Brand Ownership

Rise of open-source brands blurred the lines between organisations and customers and raised questions that scholars are still trying to answer. One of them is how brand managers are supposed to communicate brand messages when most of them are created by consumers (Haarhoff & Kleyn, 2012). By ‘systematically empowering’ consumers, companies have shifted power over offerings to consumers (Fuchs, et al., 2010, p. 65). Subsequently, consumers have equal or possibly greater power to define the brand and gain a certain ownership of the brand. Ownership of brands can be either psychological or legal and can comprise tangible or intangible goods (Chang, et al., 2015). Accordingly, Chang, et al. define brand ownership as ‘psychological state in which people feel possessive of a brand and as if they have control over the brand’ (Chang, et al., 2015, p. 595). This feeling of ownership is based on a close bond to or emotional investment in the brand (Chang, et al., 2015). The fact that consumers involve themselves into creation and development of an offering ultimately leads to a closer bond between the brand and the consumer as well as a feeling of control over offerings and brands (Fuchs, et al., 2010). This again is ground on which consumers build commitment towards a brand (Ind, et al., 2013). Besides positive economic effects of a greater willingness to pay for an identical product and a reduced risk that final offerings and brands do not match consumer preferences, it is undeniable that companies give up a certain amount of power over their offerings and brands (Fuchs, et al., 2010).

Ind, et al. (2013) point out how co-creation can contribute to the self-expressive function of a brand. They describe an effect of feeling to create something beyond their limited capabilities as consumer and be part of something bigger than mere reception and consumption of a brand (Ind, et al., 2013). Similarly, Pitt, et al. (2006) introduce a concept of personal symbolic capital. Consumers gain symbolic capital when contributing to a community without receiving or even demanding a monetary compensation (Pitt, et al., 2006). Chakrabarti, et al. (2007) describe an evolution from pure community products to open-source brands in terms of relationship quality. They state that a shift in ownership of brands to consumers, gives consumers a strong feeling of commitment. As a result strong and loyal brand communities emerge (Chakrabarti, et al., 2007).

### 2.2.2 Consumer Trust

Open-source brands face several more issues different to traditional brands that are controlled by organisations solely. De Laat (2014) points to the aspect of trust, which is challenged when full and open access to the organisation’s offering is granted for everyone. Trust as a concept is – across different disciplines and viewpoints – perceived as crucially important for human relationships and behaviour. Trust is particularly important in branding theory and practice because it represents a bond between consumers and companies as well as consumers and brands (Baser, et al., 2015). Trust is even more important in the online marketplace. Positive effects of trusted brands are a reduced perception of risk and increased brand loyalty (Baser, et al., 2015). Offerings purchased online enhance a wide time gap between purchase and consumption, thus increase perceived risk and uncertainty on consumer’s side (Kim, et al., 2012). Trustworthy internet vendors have a crucial role to compensate this increased risk and

facilitate consumers' purchase (Corbitt, et al., 2003; Kim, et al., 2012). Some scholars however point out, that consumers are usually the ones individually forming the perception of trust based on the overall look of the website as well as attitudes and prior usage experiences (Corbitt et al., 2003; Kim et al., 2012).

Within online environment, different open-source brands engage with consumers to different extents, with *sharing* being at the lower end of power over the offering and *co-creation* being at the maximum gain of control for the contributor. The greater the extent of co-creation, the greater the risk of low quality or vandalism caused by some consumers. Open-source brands, such as Wikipedia, ask for two crucial capabilities from their contributing consumers, namely willingness and ability to provide proper and truthful content (de Laat, 2014). Open-source brands such as Wikipedia build on different mechanism, technical as well as psychological to compensate the lack of control over quality and to foster trust. This is crucial to not erode and gradually corrupt the brand (de Laat, 2014). Technical control mechanism include for example limited editability for entries and monitoring mechanisms executed by algorithms as well as users (de Laat, 2014). Psychological control mechanism build on the concept of symbolic capital as mentioned by Pitt, et al. (2006). The fact that consumers benefit symbolically and psychologically from contributing to a greater good, entails 'a continuous loop of quality' (Chakrabarti, et al., 2007, p. 952) based on contributions and feedback from these consumers.

## 2.3 Brand Image

Already in the 1950s, Newman (1957) describes a concept of brand image that comprises associations with a certain brand in consumer's mind. In the early 1990s, Keller elaborates this concept further in the context of brand equity (1993). Again, brand image is described as "a set of associations linked to the brand that consumers hold in memory" (Keller, 1993, p. 2), whereby Levy (1978) describes brand image rather broadly as overall impression about a brand or product, which includes recognition and attitude toward it. Additionally, Kotler (2000) specifies brand image to be defined by the set of beliefs, attitudes and impressions that a person has over an offering. Brand image has been analysed and conceptualised in several ways. Newman describes different dimensions of brand image; functional, psychological, social and economic (1957). Clustered differently but covering similar aspects as Kotler (2000), Levy (1978) and Newman (1957), is Keller's distinction of brand dimensions. Keller distinguishes between three different kinds of associations that all constitute the image of a brand that consumers hold in mind. Firstly, brand image comprises attributes, product-related as well as non-product-related attributes. Product-related attributes are inherent to the offering, whereby non-product-related attributes are extrinsic to the product and form a part of the consumption, such as price, appearance and pictured image of usage and user. Secondly, brand image contains benefits that the consumer individually and personally attributes to the brand. These differ between functional, experiential and symbolic benefits. Functional benefits refer mainly to benefits derived from an offering's function satisfying a basic need. Experiential benefits refer to experienced feelings while consumption and symbolic benefits refer to underlying associations and meanings connected to the offering that satisfy social

needs, such as social approval or self-expression. Thirdly, brand image includes brand attitudes describing the overall attitude towards the brand following the consumer's evaluation of the brand (Keller, 1993). Keller's brand image conceptualization is of crucial importance, since later research has mainly studied brand image in relation to Keller's work (Cho, 2011; Park, 2009). Nevertheless, some researchers find it difficult to code brand image as Keller's typology does not offer enough brand image categories (Brucks, 1986; Korchia, 2004). Korchia's typology of brand image includes fifteen different classifications including specific aspects such as celebrity endorsement or distribution. Brand image is also measured using Malhotra's (1981) scale. It provides companies with benefits and weaknesses of the brand as well as consumers' perspective aligned with self-image concept.

According to Keller, primary source for brand image are product-related attributes, since these constitute the ultimate understanding of the product or service for the consumer (Keller, 1993). This is particularly challenging for service brands as well as open-source brands, because they are marked by intangibility and great variability. Thereby, consumers experience a high amount of uncertainty about quality and service attributes before actually consuming the offering (Leischnig, et al., 2012). Secondary source for brand associations are beliefs about the brand that have been created by the consumer through direct experience or through information from the brand's marketing or third-parties, including Word-of-Mouth (Keller, 1993). Keller points to marketing programs to establish a strong, favourable and unique brand image (1993). He refers to Levitt (1960), who again stresses the point of consistency and coherence of brand image (Keller, 1993).

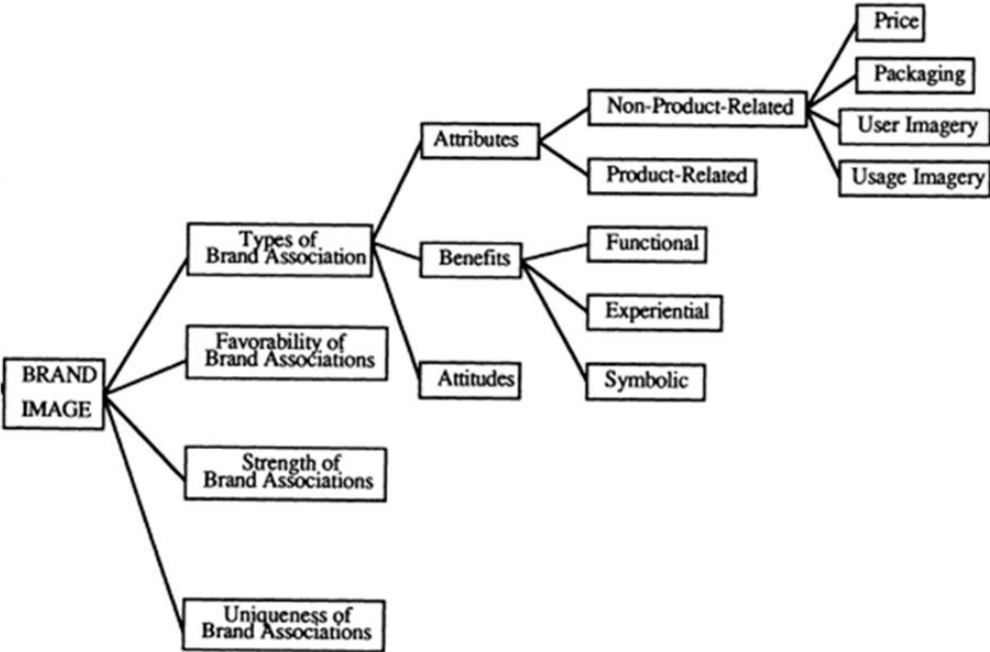


Figure 2. Brand Image (Source: Keller, 1993)

### 2.3.1 Brand Functions

The more favourable, the more unique and the stronger brand associations are and with them a brand image is, the more tied is the consumer to a brand (Keller, 1993). Strong brands have a clear perception amongst consumers and are often considered timeless (Melin, 2002; Sommers, 1964). This means, brands are stable and carry a number of functions which are accommodated to make consumers' purchase decision easier as well as ultimately create value for firms (Leisching, 2012; Melin, 2002). Brand image is of particular importance for marketing because it influences consumers' reaction to marketing activities and has significant impact on consumers' decision making processes (Keller, 1993) and its purchase intention (Aghekyan-Simonian, et al., 2012; Melin, 2002). Kay (2006) states that strong corporate brands are very consistent and distinctive in nature with image affecting consumers' expectations and overall lifestyle. Other advantages of having a strong brand image include differentiation from competitors, loyalty and brand equity (Aaker, 1991; Keller, 1993; Sondoh, et al., 2007)

For organisations, the traditional providers, brands fulfill several important functions. A brand differentiates an organisation and its products or services from competition and provides credibility to keep its brand promise to the consumers (Aaker, 2004; Wu, 2015). Moreover, it increases brand loyalty and brand equity which lead to great benefits for organisation (Gill & Dawra, 2010; Zhang, 2015). This results in the economic advantages of higher margins and higher price elasticity for a brand with a strong brand image compared to those with a weaker brand image (Keller, 1993; Sondoh, et al., 2007). Brand image has been also agreed to have a positive effect on firm's pricing, promotion and advertising (Keller, 1993). Particularly relevant for Marketing is knowledge of and about the brand image held in consumers' mind because it has a strong effect on reactions to marketing activities of promotion and advertising (Keller, 1993). Moreover, organisations benefit, because brands provide differentiation and credibility for the organisation's offering (Aaker, 2004) and prevent products from substitution (Sullivan, 1998). Frameworks for brand managers often emphasise positioning strategy as a way to communicate brand image and achieve differentiation. Park, et al. (1986) suggest to look into external and internal environments and strategically base management decisions on the knowledge consumers already have about a brand. This then will make it easier for a company to maintain brand image and prolong brand's life cycle. Opposing to that, co-creation literature does not view brand image as needed or even possible to be managed and rather proposes it is crafted by consumers and organisations together in order to suit the needs and perceptions of both (van Dijk, et al., 2014). According to Padgett and Allen (1997), even when the researchers study brand image from consumers' perspective they usually discuss provider-defined brand attributes rather than individual meanings created by consumers.

On the consumer side, brand image serves different functions. A consumer benefits from established brands, because they function as information carrier, providing information about the product's or service's relative position compared to competition, as well as catalyst in the decision making process, allowing the consumer to orientate within new product categories or alike (Melin, 2002) and reduce search cost (Chakrabarti, et al., 2007). Brands do this because they 'identify and differentiate a company's offering' to consumers (Keller & Lehmann, 2006). Mostly mentioned brands' functions in literature include brands as guarantee and risk

reducers. A brand carries a certain promise about quality and attributes of its offering. If strong and unique brand images are deeply anchored in consumer's minds, these reduce perceived risk on a lack of quality (Aghekyan-Simonian, et al., 2012; Leischnig, et al., 2012; Melin, 2002) as well as social, economic and psychological risks (Melin, 2002; Chakrabarti, et al. 2007). Also, some scholars research brand image in relation to self-image function highlighting the importance of symbolic meaning that the brand image carries. By symbolic meaning, Sung and Choi (2010) mean that brands provide social and cultural values as well as utilitarian beliefs. Shields and Heineken elaborate on the power of meaning of brands and their advertisement over the self-definition of consumers (2002). Consumers often seem to choose brands in order to show status, belong to the group or follow popular trends (Mocanu, 2013). In addition, (Mocanu, 2013) adds self-expressive and impression management aspects. The symbolic meaning has also been studied in the context of brand-customer relationships (Mocanu, 2013; Sung & Choi, 2010).

In sum, brand functions for consumers provide ground for ultimate purchase of an offering. Thus they constitute the reason why organisations heavily invest in marketing and branding activities to build up brands with strong functions and a strong promise.

### 2.3.2 Creation of Brand Meaning

Rindell and Strandvik (2010) established a framework introducing four different ways how brands are equipped with meaning. According to their extent of change and the control attributed to organisations or consumers, brands can either be built or renovated or can emerge or evolve. Challenging the traditional branding perspective, Rindell and Strandvik (2010) propose brand emergence and brand evolution as the most suitable when describing the contemporary marketplace of open-source brands. Both perspectives recognise consumers as active contributors to brand meaning. Regarding open-source brands, branding activities delivered by the organisation are visible and what consumers perceive is evolving over time and is subjective in nature. Therefore, a new approach to creation of brand image drives away from Keller's (1993) view of the brand building. In line with traditional brand building are the perspectives of brand building and brand renovation explained by Rindell and Strandvik (2010). Both perspectives follow an understanding that organisations are driving and determining brand meaning. These perspectives assign only a passive role to consumers (Rindell & Strandvik, 2010). Rindell and Strandvik state, that due to nowadays evolving market and consumers' brand image construction, it is no longer the organisation as initial and leading creator of a brand image, but the consumer who becomes an active creator (2010). Thus, brand image evolves or emerges driven by consumers (Rindell & Strandvik, 2010). This challenges the power of corporate messages and meanings in creating a brand image by the traditional view on brand image. Romaniuk and Sharp (2003) say that companies that are able to create brand image advantages are able to create purchase intention. Brand evolution is driving consumers to constantly construct and reconstruct brand image, possibly changing the core functions of the brand and making it uncontrollable for companies to manage (Rindell & Strandvik, 2010). At the same time, marketers benefit from open-sourcing, because consumer generated messages and meaning provide proof of their brand image (Muniz & Schau, 2007). Not many researchers addressed how consumers perceive co-created brands but one study

showed improved uniqueness, innovation and overall attractiveness on co-created products when compared to the ones that are not. In addition to that, the findings emphasised previously initiated importance of emotional branding as ‘soft’ concept of branding and brand image (van Dijk, et al., 2014).

## 2.4 Theoretical Framework

For our research, we build on the above stated concepts of co-creation and open-source brands as well as of brand image, brand functions and brand meaning to firstly, establish a train of thought that guides the field research, and secondly, to facilitate the drawing of connections, dependencies and links between the two fields of co-creation and brand image.

The theoretical framework illustrated below has two functions relating to the conducted literature review as suggested by Easterby-Smith, et al. (2012). Firstly, the different concepts outlined in our literature review are summarized and put into context. Secondly, potential interdependencies and relations represented by dotted lines are identified as yet unknown in the context of open-source brands (Easterby-Smith, et al., 2012).

To answer the first research question, how brand image differs from traditional closed-source brands to open-source brands, the different associations of brand image will be evaluated in the light of open-source aspects. As elaborated, the development of open-source brands has been facilitated by technological development entailing changes in organisational models and processes. Moreover, it was accompanied by changes in brand ownership as well as brand building processes. Impact of these changes on open-source brand image will be analysed within this study.

The second question circles around the concrete functions of brands. Since traditional brands fulfil several functions for consumers, it will be illuminated if and how far traditional brand functions for consumers are still fulfilled by open-source brands. In order to answer the second research question, traditional brand functions will be reviewed in the light of open-source aspects, including accompanying changes and developments.



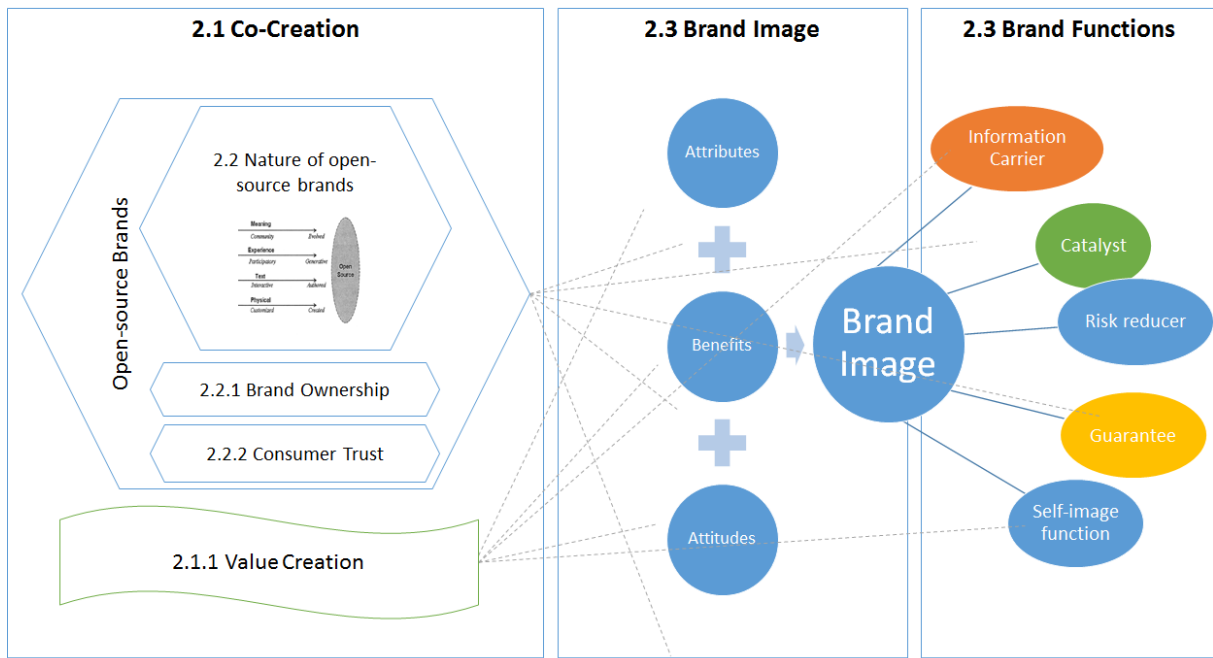


Figure 3. Theoretical Framework

## 3 Methodology

*In the following methodology part, methodological choices will be argued for by referring to theory and reflecting on the initial purpose of the study. It will be followed by a critical examination of validity as well as reliability of this research.*

Our ambition is to analyse consumers' perception of open-source brands in order to understand if or how consumer-dominant logic has changed brand image and brand functions. When studying brand perception our focus lies within understanding consumers' views, attitudes and feelings that are extracted from the culturally and socially constructed world. In order to do this we conducted exploratory research. To start with, exploratory research is applicable when a phenomenon is not yet fully investigated and developed, thus lacks structure and specification (Saunders, et al., 2009). Open-source branding is a new phenomenon that developed from heterogeneous concepts in the wide context of co-creation and we aim to contribute to more concrete understanding of this phenomenon. In addition to that, we study open-source brands specifically in the context of brand image theory, which is also broad in scope. Thus, studying these broad concepts in a structured research is not possible, making an exploratory research a convenient choice. Moreover, Robson (2002) noted that exploratory research is beneficial when a phenomenon needs to be evaluated in new light. Since our research questions focus on brand image and brand functions of open-source brands, this again guided our research to be exploratory in nature. Overall, exploratory research seemed to best incorporate our aim and guide all of the stages in the study design.

### 3.1 Research Approach

To determine the strategy of the research it is essential to choose the approach to guide the process. A strategy often discussed in between the two classical concepts of deduction and induction, is abduction. Saunders, et al. (2009) suggest that a research often combines both an inductive and a deductive approach. As a result, in abduction new concepts, theories or patterns emerge in a form of unexpected empirical evidence. The process is dynamic, constantly combining theory and data - "going back and forward" (Bryman & Bell, 2011, p. 13) during the research process. Analysis starts when some data is collected, researchers then reflect upon the results and go on to gather what other theories could contribute towards the next stages of data collection. An abductive approach is flexible and valuable when interpreting new insights which can be essential to the final outcome. It is very useful when implemented to find patterns or not easily identifiable concepts (Timmermans & Tavory, 2012).

In this research, an abductive approach will be implemented allowing greater flexibility and adaptability in the empirical data gathering and analysis. As the study focuses on complex and

broad concepts, the necessity to be able to adapt the research process, arises. Abduction is known to contribute towards more insightful findings that evidently shape research outcome (Bryman & Bell, 2011). As an important aspect, we aimed to adopt a flexible approach, allowing us to gain new insights while at the same time narrow our focus as our research progresses. As a result, new empirical data influenced the aim and direction of our study. For instance, the focus shifted from incorporating contributing consumers as well as mere consumers involved in the open-source paradigm to only mere consumers. Firstly, deductive reasoning was used to create a theoretical tool to base the research on. Next, data was collected and theory was reviewed to improve accuracy in the later stages of empirical data collection. Our chosen research process followed a suggestion made by Timmerman and Tavory (2012) where existing concepts are explained through deduction, in this research through deduction of a theoretical framework at the end of literature review, and then inductively confirmed through empirical analysis. Overall, abductive reasoning gave required room for interpretation and freedom during the interviews and throughout the research process.

## 3.2 Research Strategy

Quantitative research strategy was not considered suitable for the present study. It highlights quantification in data analysis and collection which most often determines the research approach to be based on deduction and incorporation of natural scientific models (Bryman & Bell, 2011). This research follows abduction and is not based on scientific models. Additionally, the main criticism within quantitative research strategy lies in its static nature and representation of reality as not constantly evolving (Bryman & Bell, 2011). Our research purpose requires to understand and study individual perceptions of brands. We do not aim to provide statistical connections between variables, rather identify relevant variables for brand image and brand functions of open-source brands. Therefore, numerical data would not offer any relevant insights when aiming to achieve our set aim or answering questions about perceptions.

To be able to fulfil the set aim of the research, qualitative research strategy will be used. The exploratory nature of our research is supported by implementing qualitative strategy. Qualitative research strategy emphasises words over numbers in the data collection and analysis. It aims to investigate information through close interaction with respondents. This research project aims to understand and not to measure the phenomenon, thus a rich amount of data gained from a qualitative research strategy is of particular importance (Bryman & Bell, 2015). This rich amount of data is meant to provide contextual and deep insight. Because brand image is defined as perception in the consumer's' mind, a qualitative research strategy is most suitable to examine this perception.

## 3.3 Research Design

### 3.3.1 Case Study Research Design

Upon the chosen qualitative research strategy, we decided to structure research design in order to organise research process and to select appropriate data collection methods. Several research designs are usually considered before choosing one. Bryman and Bell (2011) introduces experimental, cross-sectional, longitudinal, case study and comparative design options.

The basic case study design enables intensive and detailed study of a single organisation, group or individual. The findings usually provide further understanding and new theoretical insights to the set research objectives. In addition to that, case study design is beneficial when studying a research objective with complex nature and unique features. Even when few cases are studied, it can work as a means to understand broader issues and challenge previously formed generalisations (Bryman & Bell, 2011; Mills et al., 2010). According to Yin a case study design should be considered when 'the focus of the study is to answer *how* and *why* questions' (cited by Baxter & Jack, 2008, p. 545). We have chosen case study design as appropriate and suitable, because the aim of the present research is to understand how the consumers formulate brand perception so that more knowledge on the complex phenomenon is gained. Moreover, Yin argues that case study design is the right choice 'when behaviour of those involved in the study cannot be manipulated' (cited by Baxter & Jack, 2008, p. 545). In our research, consumers are viewed as individuals with their own knowledge, understanding and experiences and this is where the main research questions about branding emerge. Therefore, manipulating participants of the study would be contradicting to the set aim of the research and overall the idea behind consumer-dominant-logic guiding the process. Moreover, case study design is often used together with abductive reasoning giving researchers flexibility to adapt theoretical factors to data (Alvesson & Sköldbberg, 2009).

### 3.3.2 Multiple Case Study

Mills et al. (2010) note three main categories of case study designs - intrinsic, instrumental and collective. Intrinsic design is usually adopted when researchers are guided by the interest in the case itself. On the contrary, in instrumental design, the case comes secondary and the main focus lies within the phenomenon being studied. As a collective case study usually involves multiple cases, it often is difficult to distinguish between intrinsic or instrumental. The evidence extracted from a multiple case study is considered more reliable and robust (Yin, 2009). Therefore, we chose collective case study design and studied two different cases. Also, a multiple case study allowed us to compare, contrast and draw new theoretical reflections. Multiple case study design is usually considered most beneficial when trying to contribute or create new theoretical concepts as well as add a wide number of different insights to findings. Furthermore, it improves generalisation and helps to avoid criticism (Yin, 2009). As noted by Stake (1995), researchers can study few cases but still be mostly

interested in the phenomenon being researched. In line with the set purpose our research focuses less on the complexity of the specific cases but primarily explores the phenomenon.

### 3.3.3 Case Selection & Backgrounds

In order to gain in-depth understanding of the phenomenon being studied, two brands were used as cases. The chosen brands are Wikipedia and YouTube as they clearly represent the theoretical aspects of open-source brands and brand image. Yin (2009), refers to cases as an interest to the researchers and an opportunity to learn. Further, the aspect of uniqueness comes into play as researchers are encouraged to understand the complexity of the objects and avoid generalising. A case study is not chosen for generalisation purposes, however, multiple case study design improves generalisation and makes the findings more credible.

Wikipedia was chosen as the first case due to two crucial aspects required to offer valuable results for our research. Firstly, Wikipedia is an open-source brand and scores high when evaluated according to a rating scale developed by Pitt, et al. (2006). Other open-source brands would be Apache, Firefox, Linux or Open Office. However, these did not fulfil the second important aspect for our study of being well-known by consumers across all ages and all working fields. They are widely unknown to consumers not familiar with software and IT industry, which would inhibit accessibility to interview respondents providing relevant information.

Wikipedia is an open-source encyclopaedia founded in 2001 by Jimmy Wales and Larry Sanger. It is accessible free of charge for any user through the online domain [wikipedia.org](http://wikipedia.org). Wikipedia 'constitutes the Internet's largest and most popular general reference work' (Wikipedia.org, 2016). It is ranked number 7 of most popular websites globally (ABC News, 2015). Rights for the domain are owned by Wikimedia Foundation, a non-profit organisation headquartered in San Francisco. From its foundation in 2001 until today, it grew to having approximately 280 employees. Wikimedia is depending on donations and grants (Wikipedia.org, 2016).

Content is however solely provided voluntarily by users. Users can contribute anonymously, with a pseudonym or with providing their real name. In the face of vandalism, Wikipedia established certain restrictions, so that only registered contributors can edit content. This is however only partly applied and mainly to highly vandalized articles. As of today, there are almost 70.000 active contributors and more than 38.000.000 articles across 292 languages (Wikipedia.org, 2016).

In the absence of rigid access restrictions, Wikipedia has established five basic principles that should guide contributions. Firstly, Wikipedia is an encyclopaedia in contrast to a newspaper or dictionary. Secondly, Wikipedia aims to provide an objective view on information. Thirdly, anyone can edit Wikipedia entries. Fourthly, respect needs to be shown for all contributors. And lastly, there are no stable rules, only guidelines that can be adapted over time. All content is allowed as long as it does not violate copyright restrictions and is verifiable by reliable sources (Wikipedia.org, 2016).

The second chosen case is YouTube, once again based on Pitt's et al. (2006) open-source evaluation. Further, choosing YouTube as an additional case to Wikipedia helped us to understand similarities and differences between the cases while studying each of it separately and then combining the findings. The combination of both helped us to predict potential similar or contrasting results initiated by existing theory, as discussed by Baxter & Jack (2008). Moreover, it supports findings by tying similar findings to the nature of open-source brands. The offering of both of the brands is quite similar when it comes to intangibility and involvement of consumers. Hence, it worked together when helping respondents to understand the nature of open-source brands and stimulate insightful deliberation about each of it separately and together. Besides, the fact that they have a large base of users helps to pick suitable candidates for interviewing and avoid empirical bias.

YouTube even surpasses Wikipedia in the ranking of most visited websites 2015 and occupies rank number 3 (ABC News, 2015). YouTube with the slogan 'broadcast yourself' was founded by three PayPal employees in 2005 and acquired by Google in 2006 for 1.65 billion dollars (NBC News, 2006). It is a distribution platform allowing private as well as business parties to share user-created content globally (Youtube.com, 2016). It now has over a billion users, which constitute one third of all people on the internet. YouTube runs in over eighty countries and can be accessed in over seventy different languages, covering 95% of the world's internet population (Youtube.com, 2016). The global video sharing website operates through multi-channel networks which enable the organisation to act as an intermediary between users and other stakeholders such as advertisers.

By now, YouTube has developed towards a brand. To ensure a consistent appearance and guide proper use of YouTube as a brand, YouTube provides guidance on how to incorporate the logo in content or how to refer to an individual YouTube channel (Youtube.com, 2016). YouTube has been recognised as an outstanding example of the new type of economy encouraging collaboration and recognising outside talent (Mueller, 2014).

### 3.3.4 Data Source

Within the given time frame, we needed to gain secondary and primary data. Prior to gaining empirical data, we conducted a literature review. Firstly, this literature review served to provide familiarity with existing literature and gave us ground to build our research on (Easterby-Smith, et al., 2012). Secondary sources helped us to identify the current understanding of the phenomenon of co-creation, open-source brands, brand image and brand functions. It provided us with ground to develop a theoretical framework including important concepts, perspectives and aspects within these research areas. These were in particular the concepts of value creation, trust and brand ownership. Additionally, relevant research and information of companies and brands served to identify suitable cases. This framework in combination with the specification of the cases served to build an interview guide covering all important aspects of the phenomenon being studied.

The collection of empirical data was selected in relation to the specific research questions and purpose. Primary data was collected since the chosen research strategy was qualitative in nature with an exploratory purpose. The object of study included perceptions, attitudes and

feelings of consumers towards a brand, demanding a deeper insight in individuals and their specific reasoning. The rather abstract phenomenon of open-source branding required interview respondents to take time to understand and explain their perceptions and feelings, because definite understanding and awareness of them was not yet completely given. Moreover, to be able to observe feelings and attitudes that revealed themselves in reactions such as reluctance, surprise or insecurity, we needed to have visual contact while gathering primary data. Therefore, even when distance calls were made, visual contact was enabled by videos. The requirements of time and visual contact lead to the decision to conduct semi-structured interviews.

### 3.4 Data Collection Method

#### 3.4.1 Semi-Structured Interviews

Upon the selected qualitative research strategy and case study design, semi-structured interviews have been chosen as a method for the research. In qualitative cases seeking a number of perceptions is advisable (Stake, 1995). Furthermore, it provides in-depth information and flexibility. Bryman and Bell (2011) note that the method is beneficial when picking the most relevant data and structuring interviews based on the direction and the way conversations with respondents develop. As in the present study we try to understand the way each participant interprets reality with no pre-determined beliefs.

The field research comprises nine semi-structured interviews. The interviewing process followed the earlier prepared interview guide. The focus of the first half of the interview was placed on the impact of open-sourcing on brand image, while the focus of the second half of the interview was placed on specific traditional functions of brands and how these have changed. Even though the question themes were predetermined, the wording and sequence remained flexible (Bryman & Bell, 2011). In addition, opportunities to ask follow up questions was important due to the emerging topics being examined, which were giving in the course of the interviews.

#### 3.4.2 Operationalisation

*Table 1. Operationalisation of Factors*

Concept	Theory	Operational Purpose
2.1.	Co-Creation	Questions about people’s current view and knowledge on co-creation. This will provide context for their answering the question and provide base for interpreting their answers.

2.1.2	Value Creation	Open Questions aiming to gain opinion on topic of value creation, consumer's role and subsequently brands. This should also offer some first insight into perception and expectations of roles and responsibilities.
2.2.	Open-Source Brands	Questions about people's current view and knowledge on open-sourced brands. This will provide context for their answering the question and provide base for interpreting their answers.
2.2.1	Brand Ownership	Open Questions aiming to gain opinion on topic of change in power and control over offerings and subsequently brands.
2.2.2	Consumer Trust	Open Questions aiming to gain opinion on consumers' feeling of trust towards the offering, brand and organisation.
2.3	Brand Image	Open Questions aiming to gain insight into sources for brand image, namely greatest influence on overall perception, benefits, associations attitude and feelings toward the brand.
2.3.1	Brand Functions	Questions about People's current perception of open-sourced brands, specifically in terms of traditional functions as risk reducer, guarantee, information carrier, catalyst and image creator.
2.3.2	Creation of Brand Meaning	Questions about People's perception who is actually in charge of equipping brands with meaning, what do they perceive as meaningful brands and how brands are build up in general.

### 3.5 Sampling

The selection process of the participants was based on non-probability sampling. The limitation of such sampling technique is that it does not represent the entire population (Bryman & Bell, 2011). However, if the study is not aiming at generalising findings, the



limitation becomes irrelevant. This is the case in the present research as the aim is to explore the phenomenon and offer new, valuable insights. Researchers did not consider age, sex or regional variables as those are not significant to the study sample. The present study focuses on consumers that are familiar with global, well-known co-created brands excluding demographic and psychographic considerations. In order to interview people who have an opinion about Wikipedia and YouTube we used convenience sampling technique. Based on our judgement people who are moderate or heavy users of the internet and often use online open-source brands were picked to be interviewed.

*Table 2. Conducted Interviews*

No.	Informant, Age	Nationality	Where	When	Length (min)
1	Consumer, 25	German	Consumer's residence	April 26th, 2016	34
2	Consumer, 24	Lithuanian	Skype Interview	April 26th, 2016	39
3	Consumer, 45	German	Consumer's residence	April 26th, 2016	45
4	Consumer, 28	Lithuanian	Skype Interview	April 26th, 2016	40
5	Consumer, 25	British	Skype Interview	April 27th, 2016	41
6	Consumer, 66	German	Skype Interview	April 29th, 2016	37
7	Consumer, 30	Lithuanian	Skype Interview	May 5th, 2016	29
8	Consumer, 24	Swedish	Consumer's residence	May 7th, 2016	32
9	Consumer, 24	Danish	Skype interview	May 10th, 2016	40

## 3.6 Data Analysis

To fulfil the purpose of the study we have developed a theoretical framework that shows potential connections among the different theoretical concepts. It serves as a guideline for the interview guide as well as a foundation to draw logical conclusions to answer research questions. As guideline for interviews the theoretical framework assured that all integral aspects of theory were covered and data was properly attributed to the different theoretical concepts. This fostered understanding and interpretation of interdependencies among concepts and finally the link between open-source brands and brand image theory. Influence of changes regarding value creation, brand ownership and consumer trust have been identified. This helped to identify how and why brand image has changed and which brand functions are still fulfilled by open-source brands and which not. Additionally, the framework provided structure when categorising empirical data and finding the link between different variables and concepts.

The coding process involved transcription of data followed by multiple reads. We started with reading to get an overall meaning of the gathered data, followed by reading with the study purpose in mind and finally taking notes to identify distinct concepts and topics (Bryman & Bell, 2011). Coding the data based on keywords, while taking notes and colour coordinating relevant information helped to recognise patterns and reduce the amount of unnecessary information. When making sense of data we created charts, illustrations and other sorts of creative clues. These were helpful when putting different concepts and identified themes into one concrete meaning and relation. As a consequence, the focus of the study was more clearly defined. All themes were checked upon the interview guide and finally analysed against the theoretical framework. As a result, concrete answers to our research questions as well as additional findings were identified.

Presentation and analysis of empirical data in the light of previous literature were combined in one chapter. We believe that this combination allowed us to firstly, place our findings in the context of existing findings, secondly, create an argumentative flow and thirdly, reduce risk of repetition. The section was clearly structured according to our two research questions. Within this structure was a substructure following the detailed concepts illuminated in the literature review. This allowed a suitable incorporation of empirical data into given concepts and allowed the studied phenomena of brand image and brand functions to remain at the focus of the research. We believe that combination of empirical presentation and analysis enhanced the study accordingly to the set aim and allowed a more interesting read building on a more complete picture of our research in relation to the wider context.

## 3.7 Validity & Reliability

To ensure that the proposed research design and strategy are trustworthy we need to assess it. While validity and reliability are commonly employed in quantitative studies they are widely questioned as to being relative in qualitative (Bryman & Bell, 2011). According to Yin

(2009), when implementing case study design, the more the research can be generalised the more it is considered valid. Therefore, the choice to use analytical generalisation (Yin, 2010) as additional quality criteria for our research was made.

Validity defines the extent to which the set object is measured, analysed or identified as intended by the researcher (Bryman & Bell, 2011). In qualitative studies it often means conclusions and whether they represent reality. *External validity* can basically assess how general the thesis results are. Bryman and Bell (2011) go on to call it *transferability* meaning thick description or how findings of the study can relate to other contexts. Thick descriptions are described as rich accounts of the specific setting and culture. However, this research aims to generalise to theory, therefore, contributing to analytical generalisation as described by Yin (2010) in contrast to statistical. Rather than focusing on studied population we applied our findings to theory. The current study examines an emerging phenomenon which can be developed and adjusted to different contexts and cases. Based on the existing literature we derived a claim that brand image and brand functions have changed in the context of open-source brands. Drawing from Keller's (1993) image theory we identified attributes, benefits and attitudes to be studied and combined it with brand functions described by several scholars (Chakrabarti, et al., 2007, Melin, 2002). Our claim is not grounded on the cases being studied but the reviewed literature. Yin (2010) states that primarily studying phenomenon rather than only focusing on a unique case helps to apply it in future research. In our research, cases were used as the most recognised representation of the open-source brands easily understandable to regular consumers. Even though just two cases were picked to base our research on, the broadness of the theory actually required more specific settings for it to be understood. We drew upon studies by Pitt, et al. (2006), Rindell and Strandvik (2010) and Anker, et al. (2015). The fact that Anker, et al. (2015) also used cases for the base of their research, increases generalisation of our research (Yin, 2010).

*Internal validity* is the match between observations and theoretical frameworks. Bryman and Bell (2011) also call it *credibility* in the qualitative setting. This means that collected findings are relatable to participants and their meaning of reality. To achieve credibility, we submitted conclusions of our research to individuals who were interviewed throughout the process. This way their point of view was not reshaped, misunderstood or presented inaccurately. In addition to that, interview respondents were informed about the recording of the interview so that truthful information is extracted. Further, in relation to Bryman and Bell's (2011) thinking in order to protect integrity of the participants and enhance credibility, ethical matters had to be addressed. The identity of participants in the study was not disclosed, gathered information was strictly for the purposes of academic research and the protocol of how academic qualitative research needs to be conducted was followed throughout.

Generally, regarding reliability the emphasis lies within measuring variables and stability of the research. This is contradicting to qualitative nature where the external world is viewed as constantly evolving with data not being measured. *External reliability* describes how easily the study can be replicated. Considering that the present research is qualitative the external reliability for the study has to be considered low. Mainly because qualitative studies are very difficult, if not completely impossible, to replicate (Bryman & Bell, 2011). Nonetheless, every attempt has been made in order to collect valid data and study it in accordance to existing theory. As noted before, the fact that we focused on applying a phenomenon to

theory increases applicability, and our theoretical framework can also be beneficial when trying to replicate the study. *Internal reliability* refers to whether we as authors agree on the interpretation of the study. In the present study, interviews were transcribed by ourselves, which gave us a chance to reassess empirical material. Additionally, analysis of data was conducted together increasing the internal reliability.

Bryman and Bell (2011) suggest to consider *dependability* as parallel factor to reliability in qualitative studies. This refers to the collection of certain records throughout the process and modification which occurs naturally. In our research, we have created a strict schedule with predetermined progress. At each stage the initial work was backed up and reworked so that each research phase was transparent. Work was spread over weeks and days making the research stable in terms of its design.

### 3.8 Summary of Methodological Choices

Table 3. Summary of Methodological Choices

<p><b>Research Approach</b></p> <p>Abductive Approach</p>
<p><b>Research Strategy</b></p> <p>Qualitative Strategy</p>
<p><b>Research Design</b></p> <p>Case Study</p>
<p><b>Data Source</b></p> <p>Primary Data (Main Source)</p> <p>Secondary Data</p>
<p><b>Data Collection Method</b></p> <p>Semi-Structured Interviews</p>
<p><b>Sampling</b></p> <p>Non-Probability Sampling</p>

Convenience Sampling

**Method for Data Analysis**

Analytical Tool

Coding

**Quality Criteria**

Internal and External Validity

- Transferability
- Credibility
- Analytical Generalisation

Internal and External Reliability

- Dependability

## 4 Empirical Data & Analysis

*Open-source brands are different from closed-source brands in nature as elaborated in 2.2. Thereby a consistent brand image and accordingly, the building process of a strong, favorable brand image in consumers' mind is challenged. To lay ground for an evaluation of brand image and brand functions, we will determine the effect of changes in nature of open-source brands and phenomena along with the development of open-source brands. Support or refutation will be extracted from our conducted interviews. Thus, presentation of empirical data and analysis are combined in one section.*

### 4.1 How Does the Nature of Open-Source Brands Change Brand Image?

As pointed out in our literature review, central to co-creation is the concept of value creation. The heart of interactions between consumers and organisations is marked by a value exchange in a common encounter; this is described by literature, such as Galvagno and Dalli (2014) and Prahalad and Ramaswamy (2004). Our empirics show that in consumer's mind, the traditional concept of supply and demand is still seen as vital to any interaction between organisations and consumers within the marketplace.

*The supply and demand concept is at the core of how I see relationships between consumers and organisations. [...] (Consumer 4)*

In addition, consumers see organisations in the driver's seat to deliver on their brand promises. Organisations' effort circle around consumer expectations.

*[...] Offering valuable products that fulfil consumers' expectations. (Consumer 4)*

*Consumers are still at the centre of everything and businesses adapt to make profit. (Consumer 2)*

Along with a shift from closed-source brands to open-source brands, a shift in organisation's role in the value creation process is observed. Nonetheless, the organisation is still perceived to be essential to value creation.

*That is a new business model, where a provider provides an offering to a consumer segment for which it is relevant. In the end, you always need someone to put it in context. Putting something in the right context is a crucial part of value creation I believe. (Consumer 3)*

This underlying perception of the differing roles of consumers and organisations is important to acknowledge, when further evaluating the brand image in the light of open-source branding.

#### 4.1.1 Impact of Open-Source Aspects on Attributes of Brand Image

As primary source for consumers' brand perceptions, Keller (1993) names attributes, namely product-related attributes, as internal and integral to the actual offering. Our empirics show that due to the introduction of contributing consumers as already pointed out by Chakrabarti, et al. (2007), other aspects emerge in open-source brands. The change in ownership from organisations to contributors is visible to consumers.

*Because everyone can author content, it's a portfolio of knowledge from all parts of the world, which is unique and great. This is why I use it as a platform, it's like an encyclopaedia but not just written by the chosen few, but the world (Consumer 9)*

As Fuchs et al. (2010) explain, organisations have handed control of offerings and brands over to consumers. Our empirics, show that this also raises certain issues. A perceived uncertainty about who controls the brand raises issues about quality. Within our conducted interviews as well as in theory (de Laat, 2014), quality is a crucial attribute discussed in relation to brand image. Delivering promised quality contributes to a strong, favourable brand image and in this course to brand experience (Leischnig, et al., 2012). Closed-source brands have been perceived to carry a certain promise about quality, explicitly mentioned was the brand Mercedes.

*[...] even nowadays you say 'Oh that is the Mercedes among the hairdryers' ... this stands for high quality. (Consumer 3)*

*[Mercedes]...Qualitatively, reliable cars. (Consumer 6)*

*Mercedes is a leader amongst the competition. (Consumer 7)*

In contrast, consumers of open-source brands question quality of the brands. In the cases of Wikipedia and YouTube, entries created and edited by contributors are agreed to be highly inconsistent in quality.

*Well, [...] if it is super specific, then again it is mostly correct because someone has read about it or has reviewed it. I mean, if they are really specific topics. But if it is a rather general entry than it is often not so good in quality. (Consumer 1)*

*Of course this also means that not everything put on YouTube is a good quality content or that you definitely find exactly what you need. (Consumer 7)*

As de Laat (2014) points out that a lack of quality is closely linked with a lack of control over content. But quality is important, because it contributes to trust towards brands (de Laat,

2014). Our empirical data support de Laat's (2014) conclusion. Moreover, our interview respondents described a lack of quality attributable to a perceived absence of a constant organisational body and a lack of assurance of quality given by institutions.

*[...] it is always different. There is maybe another community tomorrow creating a different offering than yesterday. With closed-source brands [...] you get what they promise, but who knows how the next Linux release will be? (Consumer 3)*

*I want to believe that he [author of the entry on Wikipedia] is a professional but I am not sure. Actually I don't fully know about the quality checks of the content and maybe this is why there is not a 100% trust here. (Consumer 4)*

Next to product-related attributes, non-product-related attributes external to the offering but relating to consumption are also challenged by a lack of consistency. Open-source brands carry a great amount of opacity for many consumers. Our interviews show conflicting views on what actually constitutes the brand or offering and what role the organisation plays.

*Information provider and just Wikipedia. The author behind it [...] somehow vanishes within that organisation. (Consumer 1)*

*I see a community of consumers. The organisation only provides the platform and tools. (Consumer 6)*

*To be honest I'm not sure what it is now, whether it's 100% user generated or whether it is a bit more peer reviewed. (Consumer 9)*

Organisational processes of growing open-source brands are not understood and subsequently not trusted, despite the fact that information is publicly accessible.

*I do use Wikipedia a lot, but I always ask myself, who is actually behind it. Lots of donations are asked for but nobody really knows what happens with it. By now Wikipedia is so huge, nobody really knows who is doing what there. [...] You see, with increasing size, my distrust and scepticism grows. Because with the size, the ability to manipulate and misuse increases. (Consumer 3)*

*Negative aspect [of Wikipedia] is that some information is manipulated, - people are paid to put it online. I guess this is due to lack of authorisations. (Consumer 5)*

In line with CDL and open-source branding paradigm, our empirics show a shift in the relationship between consumers and organisations. Anker, et al. (2015), explain that brands are open-sourced in a highly contextual encounter between consumers. Consumer's sphere becomes an essential part of value creation (Anker, et al., 2015). But our empirics show that consumers lack familiarity with and understanding of this concept when reflecting on the way open-source brands operate. Hence, the structure and process of creation of open-source brands appear non-transparent compared to those of closed-source brands.



*I am not fully sure how it works but I will need to check after this interview.  
(Consumer 2)*

*This is because you do not know the organisation behind it. You do not even know, which kind of structure it has. Whether it is traded on the stock market or not. (Consumer 6)*

*So, I definitely understand the reasoning behind it [closed-source brands] but with Wikipedia I am probably not one of those people who would just go and write something. (Consumer 5)*

The more understanding of processes, mechanisms and people, the more trusted open-source brands become.

*Basically what I want to say is, if I understand how it works, the reason why people get behind the idea, their intention, then I trust it and like it.  
(Consumer 5)*

Extraction of organisations as influencing factor, naturally leaves another new influencing factor constituted by the ones actually creating the offering; the contributors. Usually literature refers to these consumers as co-creators of value (Anker et al., 2015; Grönroos, 2008; Vargo & Lusch, 2004). Contributors are separate from organisations behind open-source brands because both are co-creating the offering. The proposed evolution by Chakrabarti, et al. (2007), describing a stronger brand relationship between consumers and open-source brands, does not include mere consumers that are not contributing, according to our empirical data. Introduction of other consumers as contributors increases perceived insecurity. Contributors are mainly unknown and with them their intention to contribute. Interview respondents described a certain suspicion about the intention behind contribution and ability for contribution.

*I feel like anyone can put it and information might be biased. I am just careful as what is the interest behind writing the piece, especially if it is political, etc. (Consumer 5)*

*I believe there are some idealists behind it and that it is actually quite risky to enter information in Wikipedia, because you gain the power to influence other people. That's always the way with information. You can influence other people with knowledge. Knowledge is the greatest weapon in the world. (Consumer 3)*

*[I do not trust it] simply because I know that information might not be written by a credible person. (Consumer 4)*

This is clearly different to closed-source brands and consumers' perception of for-profit organisations. Familiarity and clarity with for-profit or non-profit concepts of organisations ensures consumers about a brand's reason to exist and operate. Once the consumer also becomes a creator, the main intention is blurred. Our empirical data does not prove, that mere motivation to express oneself and contribute to something, as described by Ind, et al. (2013), generates more value or higher quality. The nature of open-source brands being built on a

reciprocal will to improve a common good (Chakrabarti, et al., 2007) is not perceived as strong enough to ensure quality and diminish suspicion. Consumers rather appear to be in doubt when it comes to contributors' expertise and professionalism.

*Anybody can write anything wrong. (Consumer 1)*

*I want to believe that he is a professional but I am not sure. (Consumer 4)*

When discussing Wikipedia specifically, respondents even attribute a lack of quality to the very nature of open-source brands, namely consumers being creators.

*I understand that I could contribute too. As a result, I also question professionalism and quality of the offering. (Consumer 2)*

De Laat (2014) brought this to attention when referring to an ability and willingness to contribute proper and true content as crucial for building up trust in open-source brands. Only one interview respondent represented an exception with assigning a natural protective mechanism inherent to contributors nurturing quality of open-source offerings.

*[...] if you would not know anything, you would not contribute anything. The human being is rather cautious, especially if you can be tracked down. Me personally, this risk [of low expertise or false facts] is rather low. (Consumer 6)*

That builds on a rather cautious attitude of contributors, describing that reputation and potential damage to reputation might prevent from low quality. This again, supports technical and psychological control mechanisms such as described by de Laat (2014) and Chakrabarti, et al. (2007).

But also familiarity and confidence in usage with technology appears to play a vital role for trust in open-source brands.

*I think, that regarding all online companies and brands, trust actually increases, because oneself increases trust while using the internet more commonly. Back in the days, when these companies grew and it started to become more popular, oneself felt rather 'uh, I don't know about it...' but nowadays, there is more being done that it becomes safer. [...] it is just not 100 % perfect, the internet. (Consumer 1)*

*On the positive side, people know more and more how to use it, people used it as a normal encyclopaedia [like a book] but obviously internet is a different thing [and you have to be more cautious]. (Consumer 5)*

In addition to an overall recognition of the internet's importance today, digital presence appears to be crucial for open-source brands.

*If bmw doesn't have a user-friendly digital presence it won't be good for them but it would not be the end of the world because it's a well-established brand. If YouTube doesn't, then that's a serious problem. (Consumer 9)*

So far, technology is widely acknowledged as underlying driver for co-creation and open-source brands (Bhalla, 2010; Zwass, 2010; Nambisan & Nambisan, 2008) but is neglected as influencing factor of brand image.

#### 4.1.2 Impact of Open-Source Aspects on Benefits of Brand Image

In contrast to a negative impact of open-source aspects on product- and non-product-related attributes of a brand image, consumers described functional benefits as overall positive. Applied to Wikipedia, a basic need was to fill a certain lack of knowledge.

*The function of Wikipedia is much more important than the look of it [...] It is a modern encyclopaedia version, offering concentrated information.*  
(Consumer 2)

Moreover, Consumers described great experiential benefits. In accordance with Keller's (1993) initial description, these occur during consumption and appear to be mainly rooted in technological possibilities.

*... it's handy. It's fast... it's easily accessible. Anybody can handle and access it.* (Consumer 1)

*Benefits such as accessibility, quantity of information, information in different languages, broad spectrum of the information.* (Consumer 4)

In addition, while inconsistency is a negative aspect in terms of quality it is also linked to the ability to rapidly develop and adapt to the changing environment. Inconsistency, due to a constant mode of editing is closely related to flexibility as a functional benefit.

*Definitely that the platform is a massive, fast development. For example, I google information that is very current and Wikipedia already has something to offer.* (Consumer 5)

*I think it makes them more flexible, they are very close to consumers. Probably they can quickly adapt and react to the changing environment.*  
(Consumer 2)

Moreover, consumers described a certain closeness to the brand as well as a positive experience rooted in satisfaction of their individual needs. According to SDL, experiences that consumers extract from the brand is considered the most important influencer when shaping the brand image as discussed by Prahalad and Ramaswamy (2004) and Payne, et al. (2009). Whereby according to CDL, scholars described value to be mainly rooted in individuality and consumers' perception during consumption (Anker, et al., 2015). During our interviews, consumers supported the later claim by mainly seeing value as individually perceived. This resulted in the demand for offerings following their individual needs.

*I believe, open-source brands have a closeness to consumers that most closed-source brands lack of. Nowadays all companies aspire to offer a consumer-personalized experience.* (Consumer 3)

*But I imagine, you have a very heterogeneous demand among consumers. Some need it highly functional, some rather simple. However, I believe the more flexibility and the greater possibilities consumers are offered, the more demand for exactly this offering increases, because it is actually useful and efficient. (Consumer 6)*

*Every choice is really just as good depending on individual preferences. (Consumer 5)*

Our empirics support Chang, et al. (2015) in a way that consumers see their own power to define the brand themselves stemming from their individual experience. This follows the view of Pitt, et al. (2006), attributing organisations only an initiating role of creating experience or even no role when brand experience is fully formed by consumers alone. The extent to which experience is individually constructed varies but is always recognised by consumers when determining a positive brand image and long lasting relationship between consumers and a brand. Our empirics also support Rettinger (2013), describing the value-in-use concept where value is extracted only when the offering is used. Moreover, they support Grönroos & Voima's (2013) statement, that value is created through purely individual experiences during consumption.

*However, after using the offering, the brand does not play such a big role as I have my own opinion and perception about brands or products [...] Once I have used a brand I create my own opinion which is very difficult to change. (Consumer 2)*

*If it works for me after using it, I guess the relationship is going to last. However, so many times I got a good initial impression and then was disappointed and left with kind of negative image of a brand. (Consumer 5)*

Pitt, et al. (2006) introduce the concept of symbolic capital, entailing self-identification, happiness and satisfaction tied to open-source brands. However, this feeling was not proven to be found with mere consumers, but were assumed by those to be prevalent among contributors.

*A certain amount of self-satisfaction is part of it. I think, people are happy if they can contribute to it in some way. (Consumer 6)*

*These are the people for whom YouTube is the place to share their abilities, make money or simply to get noticed. (Consumer 7)*

Once again technology played a role in the change of consumers' perception. Consumers felt symbolic benefits were extracted by using social media where brands involved consumers. Galvagno and Dalli (2014) note symbolic aspects as a valuable outcome of the co-creation process. Our empirical data showed that it helped the respondents to feel part of the brand creation process.

*I think I am involved with certain brands that I am an advocate of. Some brands I feel close to, I recommend them to people on social media and in person. (Consumer 5)*

*When you ask me about consumer's role, I am simply thinking about all of those brands active on social media. (Consumer 2)*

#### 4.1.3 Impact of Open-Source Aspects on Attitude of Brand Image

The overall attitude towards open-source brands seems to be mainly determined by a lack of transparency and consistency. As noted before, the concept of open-source brands carries a certain suspicion due to opacity of roles and processes among our respondents.

*I think, [co-creation] makes it more complex and less transparent. You cannot even say, good brand or bad brand. [...] And it is more an alibi and that marketing pushes the message that this brand is created by consumers and grown by consumers. [...] They tell me, I have built this brand so that I keep on liking and buying it, but one day I see through this marketing blur [...] and then I feel refused by the brand, because they are no longer build by me but are huge brands. (Consumer 3)*

Traditionally strong brands build trust, stability and differentiation (Kay, 2006). However, this is not the case in open-source-brands.

*Main difference is that you feel you can trust closed-source brands more. (Consumer 7)*

*Because again like Wiki, YouTube is user generated content, so I wouldn't completely rely on it. (Consumer 9)*

Earlier described weakened brand attributes decrease overall perception of trust in open-source brands. Yet the concept of trust is of crucial importance, facilitating a bond between consumers and brands (Baser, et al., 2015). Our empirical data shows that trust is mostly facilitated through time and usage.

*Actually, I grew up with these certain brands myself and there is nothing else or comparable for me. (Consumer 1)*

In the face of technological development and the open-source movement, trust in open-source brands also grew over time.

*Actually it grew over time. When I was back at school, everybody said you cannot use Wikipedia at all; it is super bad and offers low quality. And now at university, to some extent lecturers even use Wikipedia. And here I think, that is somehow a development. [...] I actually think, that regarding all online companies and brands, trust actually increases, because oneself increases trust while using it more commonly. [...] nowadays, there is also more being done that it becomes safer. (Consumer 1)*

Even if Consumers say, they do not trust open-source brands due to non-transparent processes, they find themselves trusting them over time and usage:

*I see myself searching via google and then looking through the Wikipedia entry and then I would need to check the references. But this last step, I skip by now. Meaning that I do trust them by now somehow. I trust the ones that compile the information from other information provider. (Consumer 3)*

*I wouldn't completely rely on it [...] I did a macroeconomics course last summer and used YouTube for tutorials to understand concepts and theories [...] So, I got extra help and knowledge from other economics professors who had put up videos for their students. (Consumer 9)*

Despite a rather negative attitude described by our interview respondents, frequent usage was prevalent among all respondents.

*Often. If you might take an average, it will probably be daily. (Consumer 1)*

*[ I used it] very much. Almost daily. (Consumer 3)*

*Sometimes it does not fulfil my expectations but I continue to use it. This probably means that I am positive about Wikipedia (Consumer 2)*

*Very often. Several times a week. (Consumer 6)*

This supports the claim by Payne, et al. (2008) that co-creation is heavily based on consumer experience and value is less derived from product features themselves. Consumption experience was overall described as useful and positive.

## 4.2 Brand Building

Highly influential and crucial in coining a certain brand image is the message and meaning a brand is loaded with. Traditionally, several scholars attribute a controlling and managing role to organisations when it comes to creating brand meaning (Keller, 1993; Park, et al., 1986). Respondents of our interviews also still see organisations in charge of broadcasting brands and their meaning. This is in line with Freeman and Chapman (2009) stating that organisations still have a crucial role to react to and interact with consumers, even if consumers are now at the core of open-source brand creation.

*I believe, a brand is built up by a corporation. [...] even if consumers provide a certain association with brands, the Marketing department has the task to reinforce this image. In the end, the company is responsible for the brand image. (Consumer 3)*

*Marketing determines popularity, so based on the marketing that I get from the organisation I shape my own opinion. (Consumer 4)*

Consumers still attribute a crucial role to Marketing and Advertising when it comes to creating and shaping certain meaning of brands.

*I am well aware that I am very much influenced by Marketing. Advertising has still a huge impact, I believe (Consumer 1)*

*Subjectively, I do not listen what others say at all. It is all my individually attributed value and entirely own picture of how it is. But this is most certainly not true. [...] I believe, I am a victim of very efficient subconscious marketing that gives me the feeling that I am actively participating in the process of setting trends. (Consumer 3)*

*It influences me a lot. I agree that most of us are victims of advertising even if we do not always admit it. (Consumer 4)*

Additionally, despite the awareness of marketing's strong influence, consumers expect brands to address and satisfy their needs.

*Probably I am talking about when consumers are not only consuming the product but are closer to the idea and the whole lifestyle. (Consumer 2)*

*For example, I try to be environmentally conscious so every brand that helps me to live that way will be my choice. (Consumer 5)*

*I am the one benefitting from the knowledge provided. The organisation does not profit from that knowledge provided. (Consumer 6)*

Empirics support co-creation view that brand image is crafted by consumers and organisations together (van Dijk, et al., 2014). Consumers nowadays feel highly integrated in developing brand messages because they see themselves at the heart of organisation's activities. Organisations are asked to circle around them and satisfy their needs.

*Simply put, all business is shaped around me, trying to satisfy me and my needs. (Consumer 2)*

*This overall development reflects supplier's responses to incorporate consumers' feedback and wishes. And this is the only chance for organisations to stay relevant. Technology is there and can support consumers and organisations in their doing. But organisations have to observe and reply to consumer wishes and use technology to achieve this in their own interest. (Consumer 6)*

As discussed by Haarhoff and Kleyn (2012), this blurs the line between organisations and consumers. This also proves implication of SDL for marketing developed by Vargo and Lusch (2004). Consumers feel equal to organisations and see brand development as collaborative process rather than one way stream. Also, this means that SDL holds the ground and is recognised by consumers. Organisations are seen as the ones inviting consumers to co-create the brand and initiate the image that can be conveyed (Vargo & Lusch, 2004).

*Basically I see it as friendship when you are introduced to someone and then the relationship either develops or not. (Consumer 5)*

*Basically consumers themselves can shape Wikipedia, take initiative and improve quality. (Consumer 2)*

*I think I am involved with certain brands that I am an advocate of. With some brands I feel close to them, I recommend them to people on my social media and in person. (Consumer 4)*

However, within the open-source movement, Pitt, et al. (2006) describe that creating a message and a brand promise is entirely up to the community. Thus, the actual meaning of a brand is provided by consumers. Consumers provide information about their perceptions, beliefs and wishes while interacting with different media. Our empirical data supports this belief to some extent. Mostly, our empirics support Rindell and Strandvik's (2010) concept of *brand emergence*.

*I think, it is increasingly bi-directional. In my childhood it was a one-way street. I remember, that each brand contained a clear message and it was clear, that the brand was built up with that meaning though broadcasting and sending out messages. I believe, nowadays, Marketing is increasingly bi-directional, meaning that it is way more important verify a brand with the feedback that the market provides. [...]hypes no longer develop in a closed office room of a Marketer. They do develop based on consumers' opinions and become more complex, There is a much stronger dialogue. (Consumer 3)*

Only the underlying process to gain insight into consumers' opinion, which constitutes ground to target consumers effectively, has changed. Our empirics show, that organisations are believed to formulate messages based on consumer needs, wants and wishes that are already provided by means of individual online broadcasting via social media. This supports the view that organisations take a role of an 'active listener' as stated by Ind, et al. (2013, p. 7).

*I think, these market surveys are simply no longer conducted, because consumers do provide information about what they want in many different ways. Online, in some way... (Consumer 3)*

*Organisations increasingly work based on social network to integrate feedback of suppliers and customers. Besides, I somehow associate cooperative creation with it, referring to incorporation of client feedback, end-user perspective into development of programs with the overall goal to create a user-friendly product. (Consumer 6)*

This understanding is in line with Muniz and Schau (2007) suggesting that open sourcing provide consumer insight naturally.



## 4.3 How Does the Nature of Open-Source Brands Change Brand Functions?

*In the following, we elaborate how a change from closed-source brands to open-source brands influences functions of brands. Emphasis will be placed on examination of brand functions for consumers in contrast to brand functions for contributors or organisations. This will be achieved through review of brand functions for consumers that were recognised in literature and have not been applied to the open-source branding concept so far.*

### **Information Carrier**

Traditionally, the information carrier function of a brand helps consumers to choose the appropriate product based on associations with the different brands in their mind (Keller, 1993).

*Brand identifies the product, encourages some sort of positive or negative associations. Basically it attracts me I guess. More specifically, it guides me when considering the price, quality elements. It accommodates my choice, informs and shapes expectations. (Consumer 4)*

Like closed-source brands, open-source brands help consumers to identify the offering and recall certain associations. When discussing Wikipedia, consumers quickly recognise what it stands for.

*Immediate information, in a nutshell. (Consumer 5)*

*Concentrated information. Modern encyclopaedia version. (Consumer 2)*

Newman (1957) establishes social, functional, psychological and economic dimensions that consumers attribute towards a brand. Wikipedia evokes specific associations about its offering, mostly functional, thus still occupies a certain place in the “brandscape” (Melin, 2002, p. 111).

*... it's handy. It's fast... it's easily accessible. Anybody can handle and access it. (Consumer 1)*

*Benefits such as accessibility, quantity of information, information in different languages, broad spectrum of the information. (Consumer 4)*

Moreover, empirics show that information about open-source brands is absorbed through experiences. In accordance with the concept of value-in-use (Prahalad & Ramaswamy, 2004), information proves to be embedded in individual experiences rather than the product itself. Anker, et al. (2015) link it with open-source brands stating that value arises in highly individual context and independent from organisation. This view is supported by our interviewee's opinion.

*However, after using the offering, the brand does not play such a big role as I have my own opinion and perception about brands or products [...]*

*Once I have tried a brand I create my own opinion which is very difficult to change. (Consumer 2)*

## **Seal of Guarantee**

Traditionally the guarantee function of a brand assures consumers of a constant quality (Aaker, 2004; Melin, 2002). The separation of organisations from contributors entails a change in offering's origin of open-source brands compared to closed-source brands. Creators of texts, physics, meaning and experience (Pitt, et al., 2006) are now fellow consumers and no longer organisations.

*Wikipedia is made of people sharing their knowledge. (Consumer 9)*

*An online place for online videos, Youtube is a community. (Consumer 8)*

Chang, et al., (2015) discuss it in terms of brand ownership where consumers are seen as equal or having greater control over brands. In their paper, the findings show that control over brands makes consumers more possessive and emotionally committed. Our empirics do not support this claim, but show that the shift in brand ownership results in a lack of trust and weakened guarantee function .

*Main difference is that you feel you can trust closed-source brands more, there is some sort of quality guarantee. With open-source brands users create the offering, therefore there is a lack of consistency and unfortunately not always the quality you expect. (Consumer 7)*

Also depending on the nature of the topic, some information is perceived as more reliable than other. In addition to a natural variance in quality of open-source offerings, there are issues of vandalism. De Laat (2014) states that with the greater extent of co-creation the possibility of vandalism and low-quality rises, referring to the shift in roles and responsibilities from organisations to contributors. In the case of open-source brands there are fewer controlling mechanism, rather contributors take on this task as part of brand creation process (Rindell & Strandvik, 2010). This difference in nature of open-source brands entails an ambiguous effect on the guarantee function of a brand. Downside is that information is not constant and quality is varying.

*Sometimes I doubt the quality of the content and professionalism of the content creators. (Consumer 2)*

On the other hand, our empirics show that an upside of open-source brands is, that they provide a relatively up-to-date information. This leads to open-source brands being recognised by respondents for its flexibility and accessibility.

*Open-source brands may have lower prices and might be more flexible. (Consumer 6)*

*Definitely that the platform is a massive, fast development. For example, I google for information that is very current and Wikipedia already has something to offer. (Consumer 5)*

Keller (1993) and Levitt (1960) state that a strong brand image can be established through consistent communication. It creates expectations among consumers as well as a promise to receive offerings of consistent nature. It also proves to be important for respondents when drawing a difference between closed- and open-source brands.

*With open-source you are not that interested in what you are getting. If you are satisfied that is enough. With closed-source brands the expectations are higher, you want to get a good quality offering and you choose more carefully. Picking particular product or brand that you have noticed in media and that left a good impression on you. (Consumer 7)*

*Business works to satisfy consumers whether it is by providing a good quality product or by convincing potential customers the offering is good. Consumer has the right to choose. (Consumer 4)*

As noted by Rindell and Strandvik (2010) in their concept of *brand emergence*, brand image evolves and changes are fostered by consumers. Open-source brands are accessible to communities of contributors for edits and developments and contributors are a community that is changing. While this fluid community is constantly editing the offering, the offering as well becomes constantly changing. As a result, our empirics show that open-source brands are no longer equipped with a promise and organisations are no longer taking on responsibility in different matters.

*There is maybe another community tomorrow, creating a different offering than yesterday. With closed-source brands [...] you get what they promise, but who knows how the next Linux release will be? (Consumer 3)*

*Legal issues are actually not relevant for open-source brands, because anybody can do anything with it. In the end, nobody takes responsibility for that. In the case of closed-source brands, this is very different. (Consumer 6)*

Previously introduced respondents' concerns about inconsistency in quality challenges the overall guarantee function. The fact that open-source brands can no longer be strategically managed by organisations alone (Pralhad & Ramaswamy, 2004) decreases quality but brings up other potential benefits not related to guarantee function.

## **Catalyst**

By being a catalyst, a brand helps to facilitate consumer's decision making process and orientation among different choices (Melin, 2002; Chakrabarti, et al.2007). When discussing traditional closed-source brands respondents agree that strong, popular brands are usually their choice.

*Oh and when I go to the shop and there are two alternatives I will choose the more advertised one. For example, when choosing the washing powder I will never choose the unknown one. (Consumer 4)*

*The function of the brand for me is to associate the company with the product and group of people that use it. (Consumer 8)*

Melin (2002) discusses the catalyst function as facilitator for decision making, - once consumers have decided on the product, a brand helps to choose. Just like closed-source brands, open-source brands help consumers to orientate when choosing between different open-source offerings as well as between open-source and closed-source brands. For example, Wikipedia and Youtube are often chosen as suitable platforms for general or basic information.

*Also, if I look for information related to authors, history, cities I maybe look for Wikipedia but if it is about new technology obviously I will trust other sources. Actually, I search for general information on Wikipedia, not specific. (Consumer 4)*

*It really depends on what you are looking for, if I am looking for something general I am very confident I find it on Youtube, if something specific I am guessing the chances are still good but probably lower. (Consumer 8)*

In contrast, other specified encyclopedias are chosen over Wikipedia when the field of information is clearly defined or expertise and assurance of quality is required.

*There is PubMed. Here are all publications from the field of biology, medicine and all natural sciences. [...] because experts write the articles and whatever is published there, is state of the art science. And the one researching this specific topic is most likely the one that knows most about it. [...] what I find there is the 'latest knowledge' so to say. (Consumer 1)*

*Depends on what information I need, depends on the source, too. If I am writing an academic paper I choose books, academic articles, closed databases. (Consumer 7)*

Moreover, Wikipedia carries the characteristic of data being up-to-date, resulting in functional and experiential benefits. In the decision making process of choosing between closed-source brands and open-source brands, these benefits play an important role when facilitating the decision. Applied to Wikipedia, consumers are looking for easy and fast information.

*... it's handy. It's fast... it's easily accessible. Anybody can handle and access it. (Consumer 1)*

*Benefits such as accessibility, quantity of information, information in different languages, broad spectrum of the information. (Consumer 4)*

*It is a great tool for basic information [...] but obviously for more in-depth knowledge people know it is not the source you should be looking at. (Consumer 5)*

*Not really confident, it's for more general purposes. (Consumer 2)*

Referring to closed-source brands, it is often a positioning strategy that differentiates brands from competitors and helps consumers to orientate (Aaker, 2004), while in open-source brands differentiation stems from its nature, namely consumers' meaning, experiences, texts and physics (Pitt, et al., 2006). As noted before, adaptability of texts and individual

experiences of the offering seemed to particularly elevate catalyst function in open-source brands.

*Easy and quick access to large amount of information. Also, Youtube doesn't have competitors or at least I am not so aware of them. (Consumer 7)*

*It offers what it's saying - encyclopedia [...] It is a very smart system in many ways, user generated, grows very fast. If you search for something very specific and it's not there you can contribute yourself. So, you get a lot of very passionate people who are interested in different things, are all from different parts from the world and create content for free. (Consumer 8)*

## **Risk Reducer**

Our empirical data shows that by choosing a well-known brand consumers reduce uncertainty about attributes and benefits of the received offering and brand as well as broader social and psychological risks. This is the brand providing the function of a risk reducer as described in literature (Aghekyan-Simonian, et al., 2012; Leischnig, et al., 2012; Melin, 2002; Chakrabarti, et al., 2007).

*A popular brand is always my choice, it seems like a safer one (Consumer 4)*

*Brands cannot afford to not deliver the promised performance. I think for the brand; it is very important. (Consumer 1)*

Due to the introduction of contributors as content creators and the subsequent variance of the offering, uncertainty is inherent to open-source brands to a certain extent. However, our interview respondents seem to be willing to accept this uncertainty.

*Well, you are aware what you are up for with Wikipedia. You know what you can expect. (Consumer 1)*

In traditional organisations risk reduction function is performed by organisations mainly (Melin, 2002). In contrast, empirics show that in open-source brands consumers rely on other consumers and the extent to which a brand is used.

*Popularity and I probably don't know any other encyclopaedias that are so accessible. (Consumer 4)*

*Wikipedia is usually the highest ranked option for information. (Consumer 2)*

*You can legitimate this in different ways. One way of gaining legitimacy is through other consumers.[...] They basically convey the message 'this product is not fooling you, because this product is developed by other consumers like you'. (Consumer 3)*

Empirics show that open-source brands are very functional and therefore, they are only loosely linked to economic, social or physical aspects of risk reduction discussed by Melin

(2002) or Chakrabarti, et al. (2007). While closed-source internet brands usually try to reduce perceived uncertainty and risk through the look and design of their websites (Corbitt, et al., 2003), open-source brands seem to aim at functionality and usability rather than emotional risk reduction as described by our interview respondents.

*Never thought about the design of Youtube but it gives the impression that it is very straightforward, you do not need much understanding, it's very intuitive so to speak. (Consumer 8)*

*It is very simple, not something you would pay attention. It tells me that the function of Wikipedia is much more important than the look of it. (Consumer 2)*

*Design makes it easy to use. (Consumer 7)*

## **Image Creator**

Our Interview respondents did not assign a strong image to the brand itself, neither did they attribute a consistent image of a particular consumer to it.

*It is very simplistic; the branding seems hidden. The information is at the centre of it. (Consumer 5)*

*I think more about the content, convenience of using it but not more than that. (Consumer 8)*

The following quote clearly illustrates the difference between open- and closed-source brands' perception.

*Mercedes has a typical user whereas everyone uses Youtube. So, the brand associations vary immensely. I would associate a Mercedes with someone who's middle class/ upper depending on the model, and with those users come a whole variety of brand values and associations [associated with Mercedes].(Consumer 9)*

Our empirics show that with open-source paradigm, consumers undertake the role of individually attributing meaning to the brand and therefore clear attributes that are associated with the brand are open to interpretation. In sum, this makes brand meaning less objective and more subjective, which supports SDL and CDL perspectives in which consumers are seen as co-creating brand meaning (Payne et al., 2008; Vargo, et al., 2008).

Additionally, our empirics show that rational evaluation of the brand influenced critical perception of open-source brands and therefore excluded brand's function as an image creator (Melin, 2002). Hardly any of our respondents discussed open-source brands as having self-image function, thereby denied Shields and Heinecken's (2002) elaboration on how brands also carry self-definition of consumers.

*I see myself as a regular consumer. (Consumer 4)*

*I can use it because I am bored or excited. Youtube doesn't give me a particular feeling. (Consumer 8)*

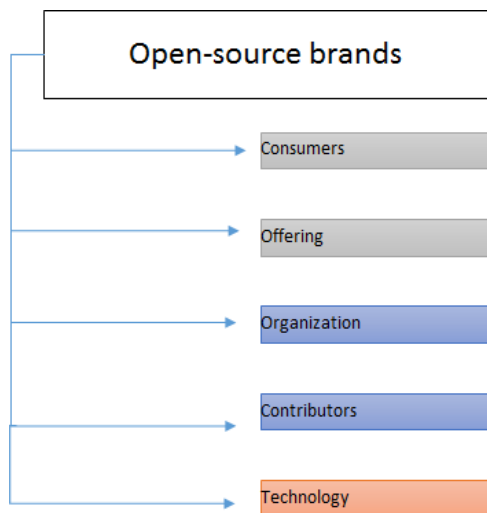
Only one respondent discussed the more symbolic self-image function when using Wikipedia.

*I feel that I am learning something new, developing, basically just adding to my basic knowledge. (Consumer 2)*

# 5 Findings & Discussion

*The following chapter highlights and discusses the main findings drawing from the previously presented empirical analysis.*

Two findings from our research are crucial for the brand image of open-source brands. Firstly, the separation of producers (contributors) and providers (organisations) subsequent to the shift in brand ownership had great influence over the resulting brand image. Secondly, the crucial role of technology facilitating fast and convenient usage played a major role regarding benefits and overall attitude contributing to a brand image. These two findings (Finding 1 and Finding 2) are illustrated in Figure 4 and their impact on brand image will be elaborated and illustrated in the following paragraphs.



*Figure 4. Organisation, Contributors and Technology as Three Separate Influencing Factors for Open-Source Brands*

## 5.1 Finding 1. Separation of Contributors from Organisations

Our empirics showed, that the separation of organisations from the offering creation process, entailed confusion about the actual role of the organisation. It was widely acknowledged that the organisation was required to provide the offering to consumers as it operates the technical platforms and tools, but the form and operating model of the organisation was unknown and nurtured suspicion and distrust. Since consumers inevitable face the logo of Wikipedia or YouTube when accessing the actual offering, we identified the organisation as non-product-



related attribute for open-source brand image. The fact that information about and processes of the organisation are open and publicly accessible does not compensate for perceived opacity. Opacity and lack of clarity about organisations' structure and processes diminish strength, uniqueness and clarity of attributes relevant for both studied open-source brands. Openness proves to be not synonymous with transparency. Therewith, the organisation has a negative influence as non-product-related attribute as illustrated by the green arrow pointing from organisation to non-product-related attributes of brand image in figure 5. At the same time the organisation has a negative impact on the attitude contributing to brand image as illustrated by the red arrow pointing from organisation to attitude in figure 5.

The fact that consumers are empowered to be contributors shifts responsibility from organisations to contributors. Contributors as separate entity and actually content-creating entity are widely unknown to consumers. In addition to Keller's user image (1993), we introduce the term contributor image. This study is the first to our knowledge to add contributors to Keller's (1993) framework and therefore, make it more applicable to open-source brands. The image of contributors has a great impact on perceived trustworthiness of open-source brands. Contributor image challenges brand image with a lack of clarity about creator's intention and ability to create a high quality offering. This study has shown that contributors are not perceived to take responsibility for qualitative, true content such as organisations of closed-source brands do. Control mechanism as pointed out by de Laat (2014) and Chakrabarti, et al. (2007) apparently fall short to compensate suspicion among consumers nurturing a negative attitude. Whereby theory states that open access for changes and edits of offerings positively influences consumer's perception of these offerings by establishing a closer bond (Chang, et al., 2015) or an increased commitment (Ind, et al., 2013), our findings contradict these statements for mere consumers. However, that might be different for contributors but evaluation of their perception is out of scope for this research. The most likely explanation of the negative finding is that within the separation of organisations, contributors and offerings, responsibility is unattributable. The negative impact of unknown intentions of contributor and lack of responsibility is illustrated by the red arrow pointing to overall attitude of open-source brand image in figure 5.

Closely linked with the introduction of contributors as content-creators is a perceived lack of quality of the offering. Whereby closed-source brands are perceived to carry a strong brand promise about quality, open-source brands were mainly doubted in their quality due to a perceived absence of control mechanism and brand promises. A shift in brand ownership entails a perceived variance and inconsistency. Lack of quality or inconsistent quality directly affects the offering by affecting product-related attributes. This greatly challenges the traditional understanding that a strong, favourable brand image is built on consistent usage and delivery of the offering (Levitt, 1960). The negative impact of contributor's image on offerings' quality is illustrated by the orange arrow in figure 5 leading to the product-related attribute of open-source brand image.

In sum, open-source brand image is characterized by a variance of product-related attributes. Our findings mainly show a negative impact on attributes and attitude towards trustworthiness and quality of open-source brands. These results are in agreement with consumer trust studies highlighting the issue of quality when co-creation is present within online environment (Chakrabarti, et al. 2007; de Laat, 2014).

Though, our study adds that usage proves open-source brands to be perceived highly positive. Both brands examined during the research proved to be used very often and fulfilled consumer needs, such as provision of knowledge in the case of Wikipedia and provision of entertainment as well as knowledge in the case of YouTube. This overall positive reception of both brands is important to acknowledge when theoretical and practical implications are derived. A potential conclusion is, that importance of brands and determination of brands over subsequent consumption is weakened. This study reinforces the recommendation made by previous scholars (Payne et al., 2008; Prahalad & Ramaswamy, 2004) that aiming to create an experience along with consumption rather than focussing on product improvement might be right after all.

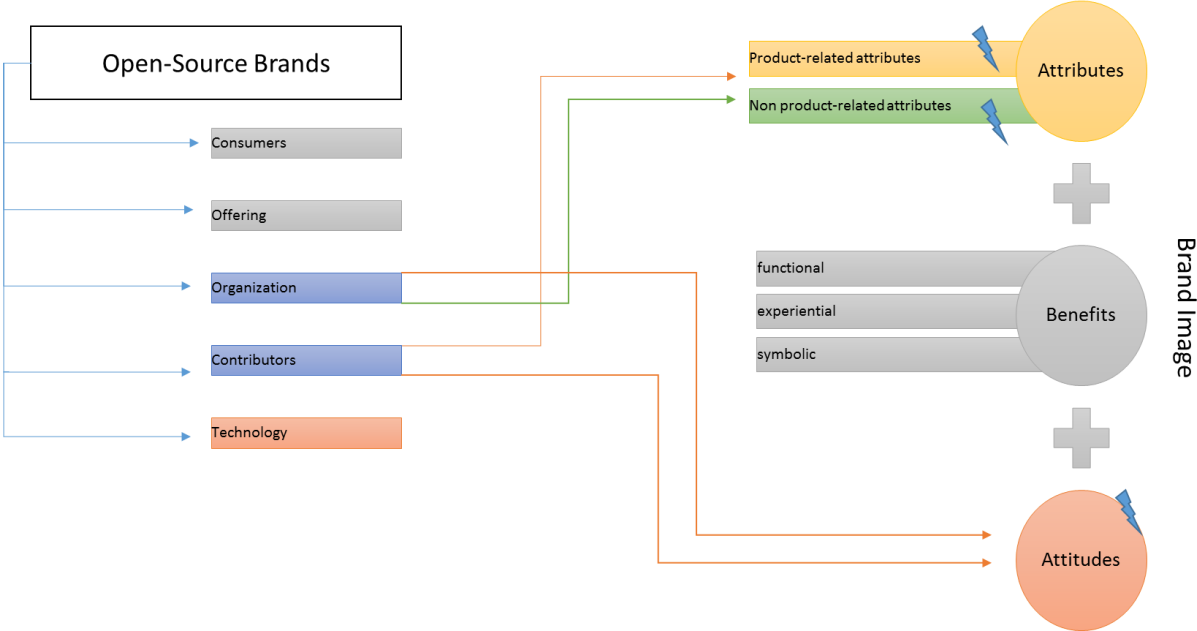


Figure 5. Impact of Organisations and Contributors on Open-Source Brand Image

## 5.2 Finding 2. Technology as Determinant of Brand Image

In the course of open-source branding, technological development needs to be noticed as determinant of brand image because it is inherent to open-source brands and strongly influences consumers’ perception. Only by means of technology, today’s necessity to make open-source offerings accessible to contributors and consumers can be fulfilled. As it forms a part of the consumption process and strongly influences usage and appearance of the brand itself, technology proves to be a non-product-related attribute. Traditional non-product-related attributes were price and packaging (Keller, 1993). Today websites and servers, which enable access and usage of open-source offerings, greatly influence open-source brand image. These

non-product-related attributes have a positive effect on some attributes constituting part of the overall brand image as illustrated by the yellow arrow pointing from technology to non-product-related attributes in figure 6. In contrast, individual familiarity and attitude towards technology and internet has a highly varying impact on brand image. Our empirics show that familiarity with open-source brands follows individual familiarity with usage of technology and internet, which nurtured overall distrust. Thereby it negatively influenced attitude of open-source brand image. But our empirics also point out that time and usage have a great impact on familiarity. Subsequently, we conclude that trust in open-source brands and their offerings increases over time and a negative impact grounded in a cautious negative attitude towards technology diminishes over time. The current effect is illustrated with a red arrow pointing from technology to attitude in figure 6.

Despite a negative attitude rooted in distrust and suspicion towards technology, easy and fast accessibility and usage from anywhere impacts brand image positively. Great functionality and the fact that data is up-to-date, generate great functional and experiential benefits as illustrated by the green arrows pointing from technology to benefits in figure 6. In sum, technology has a two-fold effect on overall brand image, whereby the negative impact might diminish and the positive impact might increase over time.

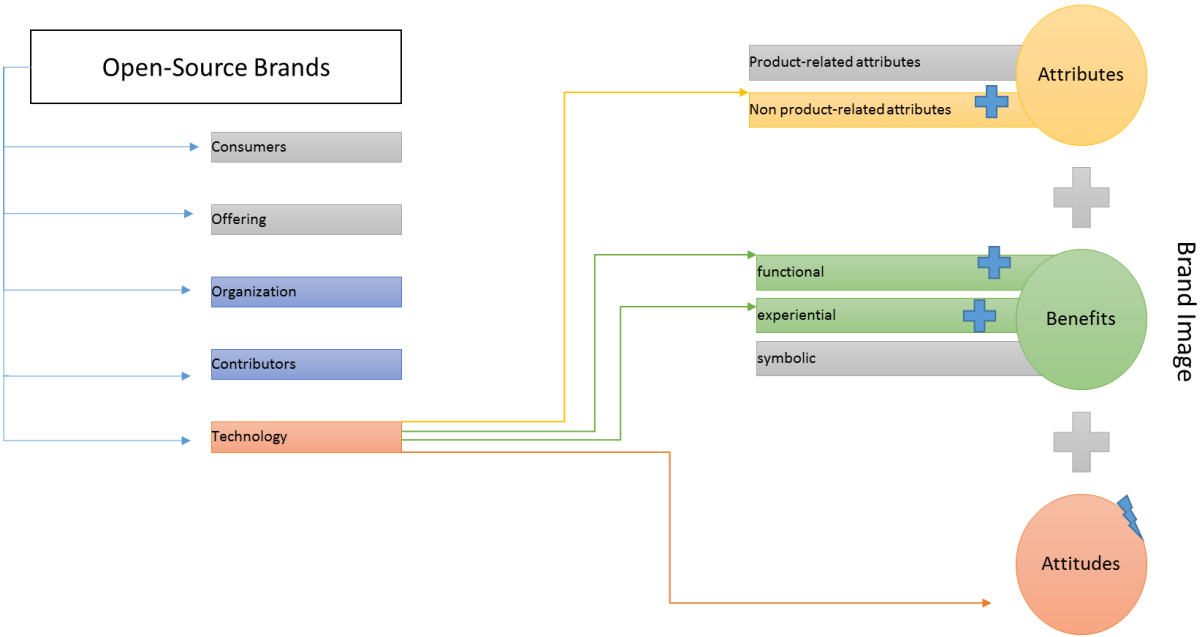


Figure 6. Impact of Technology on Open-Source Brand Image

### 5.3 *Finding 3.* Organisation's Role in the Creation of Brand Messages

Our first two findings require us to review the process of building marketing messages. Traditionally, Keller points to marketing programs to establish a strong, favourable and unique brand image (1993). But as pointed out in the introduction, brand managers face a challenge to manage brands and control brand creation with ever less control. Clearly the finding that organisations are separated from the offering and the creation process, support rising significance of this problem. Our study provides us with relevant and unexpected insights on how consumers see their roles and what they expect from organisations.

Our findings are most in line with what Rindell and Strandvik (2010) term *brand emergence*. To elaborate on the different roles of organisations and consumers and a subsequent process of creating brands, we distinguish intangible, individual brand meaning from formal, consistent marketing messages. Consumers provide information about their perceptions, beliefs and wishes while interacting with different media. Organisations and consumers are equal parties collaborating with an open exchange of ideas building ground for an appreciated brand and brand message. Still, organisations are seen and asked to be in charge of ultimate formulation of brand messages. Our empirical data clearly shows, that consumers are willing to participate in the process of brand creation but attribute the responsibility for actually broadcasting these co-created messages in the hands of organisations. It might thereby represent a compromise between traditional views such as stated Keller and Lehmann, that 'Brands are made. Not born' (2006, p. 751), and those of scholars, such as Pitt, et al. (2006), that see brands entirely build in consumer's mind. We conclude that organisations build on a large amount of information voluntarily provided by consumers and convert them into brand messages. Still of vital importance in the context of open-source brands is that organisations interact with consumers and that quite extensively.

### 5.4 *Finding 4.* Traditional Brand Functions are Challenged by Open-Source Brands

Since the empirical insights prove that perception of brands in consumer minds change in the context of open-source brands, the risk of traditional brand functions being challenged rises. Not all functions of information carrier, seal of guarantee, catalyst, risk reducer and image creator are necessarily fulfilled by closed-source brands either, or not all to the same extent (Melin, 2002). Brand managers used to decide what functions a brand carries. In contrast, the nature of open-source brands itself determines which functions are applicable to open-source brands.

The current study found that information carrier function is still very relevant for consumers of open-source brands and is also fulfilled by open-source brands. Traditionally, the information carrier function of a brand helps consumers to choose the appropriate product

according to their needs. This still holds true for open-source brands, since consumers store several associations with the different open-source brands in their mind. Interview respondents mainly stored aspects such as fast and easily accessible in their mind. As a result, product-related attributes are not as important as formerly stated by Keller (1993). Instead, the emphasis lies within benefits grounded in usage and individual experiences as cultivated by CDL and SDL (Anker, et al., 2015; Prahalad & Ramaswamy, 2004).

Traditional strong brands are considered timeless (Melin 2002; Sommers, 1964), different from competitors and stable (Aaker, 2004; Wu, 2015). On the contrary, variance is integral to open-source brands as it is rooted in their heterogeneous and constantly changing offerings, the separation of organisations and contributors and a lack of consistent marketing. All of these aspects weaken the guarantee function in a traditional sense. For example, if variance of quality is inherent to open-source brands due to a constantly changing content and an absence of control mechanisms, a brand cannot function as seal of guarantee for consistent quality. Moreover, responsibility shifts from organisations to contributors entailing a shift of the origin of content and credibility. Under these circumstances, a lack of active and coordinated, coherent marketing and a resulting absence of brand promises negatively impacts the guarantee function of the brand.

In line with Melin's (2002) initial definition of catalyst function, open-source brands still help consumers to accommodate their decision making process. Noteworthy is that consumers mainly build on functional benefits perceived from open-source brands facilitating their decision. Wikipedia occupies a well-defined and relatively consistent place in consumers' mind in relation to other brands, whereby YouTube differs in its use among consumers, e.g. entertainment or education. Both positions, however, stem from the individual offering. To generalize this, position and therewith the catalyst function of open-source brands mainly follows the offering and its functional aspects rather than positioning strategies by organisations.

For the brand to reduce risk it has to lower uncertainty in economic, social or physical nature (Melin, 2002). The issue with open-source brands lies in the fact that a community of contributors constitute the brand and can at any time change or adapt the offering. Thus uncertainty is integral to the nature of open-source brands to a large extent. Moreover, the separation of organisations from the actual offering creation entails a lack of brand promise as already elaborated. Therewith, the brand is no longer providing a stable promise to the consumer. Even though this might prohibit an open-source brand to provide the function of risk reduction, consumers seem to accept a larger degree of uncertainty due to functional benefits of time efficiency and low search cost.

The image creator function becomes more complicated in open-source brands. Traditionally organisations assigned social, cultural and self-expressive beliefs to a brand in the form of a consistent brand meaning. These beliefs constitute a symbolic meaning and value of a brand, ultimately nurturing a strong user and usage image. Due to a lack of consistent brand meaning because of a separated organisation, a brand promise and therewith a strong image function is absent to open-source brands. In contrast to Ind, et al's. (2013) conclusion, the study demonstrates that brands involving consumers do not necessarily enhance their self-expressive function. However, a strong symbolic image may be true when it comes to

contributor's image which requires further studying and is out of scope in the present research. In sum, this results in the process where consumers are individually creating meaning - potentially a wide number of different inconsistent meanings and subsequent user and usage images. Generally, Melin (2002) recognises that image creator function is very important for high-end, luxury brands. Open-source brands are in nature accessible to everyone and therefore distant to the idea of exclusivity. A strong image creator function of users or usage is therefore absent to open-source brands.

To conclude, even when the way and extent to which open-source brands provide the function of an information carrier and catalyst functions these functions are still relevant and applicable. In the meantime, functions of being a seal of guarantee, risk reducer and image creator are challenged and hardly able to be fulfilled due to the changed nature of open-source brands.

## 5.5 *Finding 5. New Functions of Social Integrity and Canvas*

As a result of our empirical research, we identified additional phenomena accompanying open-source brands. In comparison to closed-source brands being introduced by organisations aiming at profits, open-source brands are grounded in a community of contributors and consumers. Therefore, the reason for an open-source brand to exist or to be created naturally changes. An open-source brand is no longer built on authority or expertise but on other consumers' will for it to exist.

*Wikipedia is made of people sharing their knowledge. (Consumer 9)*

*An online place for online videos, YouTube is a community. (Consumer 8)*

Existence of open-source brands stems from a mere willingness of contributors to share and improve, which appears to be different from closed-source brands. Our finding suggests that the community of consumers justifies existence and proves purpose of the brand for consumers. It could be conceivably hypothesised that social integrity is closely related to the traditional function of risk reduction. However, the traditional function of risk reduction refers to economic, social or physical risks for the individual consumer. The function of social integrity goes beyond the reduction of risk. In contrast to the saying 'the business of business is business', open-source brands inherently promise 'the business of our business is to provide consumers with value'. Thus, the function of social integrity assures the consumers of an offering that aims to provide benefits, in a functional and experiential way, for consumers. The fact that a brand stems from a community of contributors and not from a corporation, assures that the creators do not aim at profit generation but at a mere value for consumers outside of a corporate economic dimension.

*The function of Wikipedia is much more important than the look of it  
(Consumer 2)*

*I am the one benefitting from the knowledge provided. The organisation does not profit from that knowledge provided. (Consumer 6)*

This idea of social integrity is closely linked to the overall development of social responsibility and it is not limited to open-source brands. For example, the car manufacturer Audi introduced an app for its four-wheel drive Quattro, that allows other car drivers stuck in the snow to contact an Audi SUV. The nearest Audi SUV driver can then drive to the stuck car and help out (McQuarrie, 2015). This example illustrates social integrity provided by Audi that stems from a dimension which is actually open-source. Similar to the nature of open-source, Audi provides the connecting platform for a community of car drivers, but Audi drivers then actually provide the service of rescue to mere consumers. This example also shows how the provision of services by a community of Audi consumers, taking the role of contributors in a wider sense, goes beyond the function of risk reduction but offers a functional benefit for the consumer. Whereby also closed-source brands leverage this function, social integrity is an integral function of open-source brands due to the fact that it stems from a community of contributors.

Grounded in the aspect that open-source brands naturally lack consistent marketing messages due to a separate organisation, the brand provides the function of a canvas for consumers to create their own meaning and to attribute individual values. Individual creation of meaning enables consumers to fit the brand in their individual constructs of values, depending on their beliefs and preferences.

*Every choice is really just as good depending on individual preferences. (Consumer 5)*

In the context of open-source, organisations take the role of a moderator, that is able to influence, strengthen or weaken a brand meaning. This has been touched upon in CDL where empowerment of customers was discussed as a result of and reason behind co-creation (Anker, et al., 2015; Rindell & Strandvik, 2010). Our empirics show that it is integral to the nature of open-source brands as organisations are separated from the origin of the offering. Instead of organisations sending brand meanings to consumers, consumers are now empowered to choose and attribute meaning to brands which aligns with their own individual values. Different emotional or rational reasons drive brand meaning for each individual consumer. Therewith, consumers have the power to create brand meaning themselves and position brands according to their individual preferences, lifestyles and values. A brand thus provides the function of a canvas, allowing consumers to paint it differently whenever they use it.

A clear distinction needs to be made to finding 3. Consumers are integrated in the process of creating marketing messages and organisations broadcast these messages afterwards. This describes a change in brand building in general and refers to concrete messages. In contrast, brand meaning is intangible and solely created in consumer's mind. Brand meaning can follow strong, compelling marketing messages, but does not necessarily have to.

# 5.6 Theoretical Framework of Open-Source Brands

Overall, the findings have illuminated the concepts of brand image and brand functions in the context of open-source brands. The theoretical framework set out at the start (figure 3) contributed throughout the research process as a guide to assess changes in nature of open-source brands and their influence on brand image and brand functions. An overview is provided in figure 7.

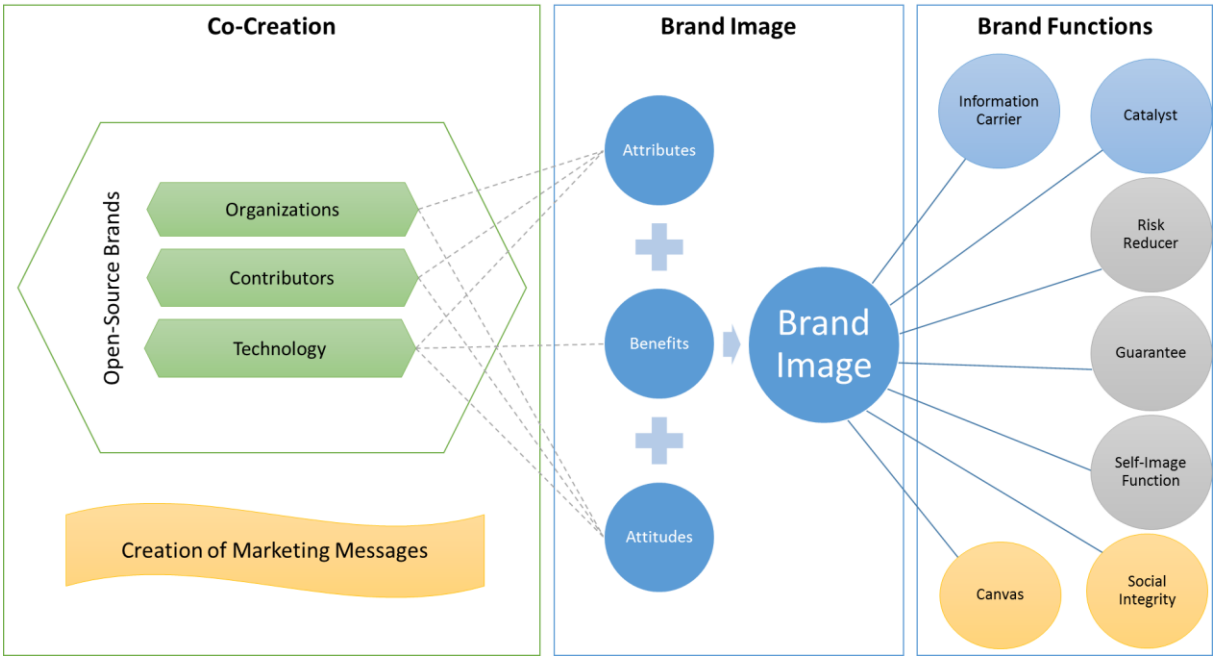


Figure 7. Theoretical Framework of Open-Source Brand Image and Functions



# 6 Conclusion & Implications

## 6.1 Research Objective

This research aimed to analyse consumers' perception of open-source brands in order to understand if and how consumer-dominant logic has changed brand image and functions. We have discussed five major findings from this study in the previous chapter. Whereby the first two findings provide an answer to our first research question;

*1: How does brand image of open-source brands differ from brand image of closed-source brands?*

Our first finding describes the separation of organisations from contributors as inevitable in the creation of open-source brands. The introduction of unknown contributors entails a perceived lack of quality of the actual offering caused by an absence of control mechanism and suspicion towards contributors' abilities and intentions. Together with an opacity of the organisational role, structure and processes, this change diminishes strength, clarity and uniqueness of open-source brand image. Our second finding identifies technology as a two-fold influence on brand image. Due to an increase in functional and experiential benefits, brand image of open-source brands benefits from high functionality compared to closed-source brand image. Whereby a decrease in trust negatively impacts overall attitude towards open-source brands.

Our third finding shows that consumers see organisations in an influential but moderating role when creating brand messages for open-source brands. This finding provides useful insight to support effective marketing activities to build up strong open-source brands in spite of reduced organisational control.

Finding four and finding five contribute to existing concepts of brand functions and answer our second research question.

*2: How does the nature of open-source brands change 'traditional' functions of a brand?*

Our fourth finding clearly shows that traditional brand functions such as seal of guarantee, risk reducer and image creator are not fulfilled by open-source brands due to inherent and inevitable inconsistency and variance of the actual offering as well as an absence of organisational responsibility and brand promise. Moreover, the image creator function is diminished mainly due to a lack of brand promise and an absence of consistent symbolic meaning. Strength and consistency of a user image is thereby barely possible; functionality dominates symbolic meaning. Yet, open-source brands still function as a catalyst and information carrier for consumers in their decision making process. This is determined by

consumers attributing clear associations and a definite position among other brands to open-source brands. Our fifth finding has extended existing theory of brand functions by illuminating effects of social integrity and canvas integral to open-source brands. Both effects are caused by the fact that open-source brands are constituted to a large extent by fellow consumers. Therewith, this community of contributors provides open-source brands with the ability to function as social integrity for consumers, by assuring that consumers' benefits are at the heart of the brand instead of economic profits for organisations. In addition, due to the absence of a consistent brand promise, open-source brands provide the function of a canvas to consumers. Consumers individually attribute meaning to open-source brands, thereby open-source brands allow consumers to create individual value and fit the brand into their individual belief system.

## 6.2 Theoretical Contribution

Our first theoretical contribution suggests that constitution of brand image conceptualised by former scholars (Keller, 1993; Kotler, 2000; Levy, 1978; Newman, 1957) still holds true for open-source brands but needs to be extended to fully capture the complexity of open-source branding. Recognition of organisations separate from contributors and acknowledgement of technology as all-accompanying influence is vital to determine constitution of open-source brand image. The influence of organisations forming only a part of consumption and the impact of the newly introduced contributor's image are significant and require recognition.

Our third finding contributes to the previous studies of SDL and CDL by providing insight into consumer's perception. The fact consumers assign themselves increased power in spite of organisation's strong influence adds to the current understanding of consumers' active role. Consumers become more than co-creators but main constructors of brands by providing information about preferences, wishes and needs. Thereby our research clearly supports Pitt, et al (2006), Grönroos (2008) and Grönroos and Voima (2013) attributing consumers the main role in value creation. Our third finding also supports the view that brand building literature has to incorporate consumers as active party as proposed by Rindell and Strandvik (2010). However, our findings also show that consumers still expect organisations to create the final brand message and to react and interact with consumers. Thus organisations should not be completely excluded, partially contradicting claims of CDL when organisations are excluded entirely. In addition, our fifth finding adds to theory by clearly showing consumers' ability to individually attribute meaning to open-source brands. This also leaves open-source brand image more subjective in nature.

Our fourth and fifth finding considerably contributes to existing theory of brand functions. Our study shows that brand functions elaborated by Melin (2002) are mainly still relevant in open-source context. However, our study revealed two new functions that are provided by open-source brands. Our study is the first to our knowledge that explicitly focused on open-source brand functions for mere consumers instead of contributors. Chakrabarti, et al. (2007), Ind, et al. (2013) and Pitt, et al. (2006) describe functions that open-source brands provide to contributors, such as a self-expressive function or the ability to tie contributors closer to a

brand by letting them be part of the creation process. In addition, our research provides knowledge about functions of social integrity and canvas that open-source brands provide to mere consumers. These functions are rooted in the fact that open-source brands stem from a community of contributing consumers and the ability to individually attribute meaning to open-source brands because of a less prevalent organisation.

Overall, our research proposed a new theoretical framework combining traditional theory of brand image and functions with emerging open-source concepts. Our findings add to close an identified gap between a new emerging phenomenon and traditional branding concepts, contributing to further applicability of these concepts.

### 6.3 Managerial Implications

Our research provides findings with practical relevance. In the cases of Wikipedia and YouTube, the brands adopt images purely based on functionality amongst consumers. Managers of the two should pay close attention to what attributes could be assigned to their offerings. While consumers assign attributes to product brands more naturally, intangibility and complexity of online open-source brands make association of consistent and strong attributes more complicated. Both brands benefit from strong functional and experiential benefits and should build on these as strengths to reinforce strong brand associations in consumers' mind. In addition to that, it is important to pay attention to the brand functions that were weakened due to the perceived lack of organisational control. Guarantee, risk reducer and image creator functions were greatly challenged due to a lack of consistency and lack of knowledge about business operations behind open-source brands. This could be improved if both organisations would communicate the way they operate more clearly as well as establish clear marketing messages focusing on transparency. This might increase perception of quality and trust.

In general, open-source brands could also follow specific suggestions discussed above. First and foremost, open-source strengths of flexibility and being up-to-date can serve as stable foundation to create a strong brand image. However, positioning among open-source brands needs to be accomplished by paying significant attention to an offering's attributes and consumers' attitude towards the offering and the brand. Moreover, an emphasis on transparent operations should be incorporated. Openness does not equal transparency; As an implication drawn from the lack of transparency, organisations should place great attention on transparency and do not expect openness to be sufficient. Finally, emerged functions of social integrity and canvas should be included in brands' marketing. Open-source brands are created by consumers and provide the function of social integrity. Therefore, marketing activities should aim to support a strong contributor community and consumer base which stand as advocates for the legitimate brand. The function of a canvas, which results from the absence of a strong consistent brand meaning, should not threaten organisations. Organisations should see it as a chance to offer greater variance and individuality of meaning.

Our findings also contribute to general branding theory including closed-source brands. With traditional brands trying to incorporate consumers in their value, brand or offering creation, a lot can be learned from open-source branding. While open-source brands are created by consumers, it also means that they are difficult or almost impossible to control. Rather than segmenting the audience and aiming at one-way interaction, marketing should be open to consumers, and organisations should not be reluctant to consumers shaping their brand image through active involvement. Generally, brand building and overall management should incorporate more flexible approaches. Understanding that open-source brands as well as any brand including consumers constantly evolve and change, is essential. With an increased awareness and also expectation of consumers to be included in the brand creation process, exclusion of the same is no longer an option for any brand. In addition, stemming from the ability and wish of consumers to individually attribute meaning, communication and advertising should focus on simplicity and reduction of visuals and words to work against the saturation and provide the consumer with greater room for interpretation.

## 6.4 Limitations & Future Research

The research has employed qualitative research strategy. Due to the nature of our study being an empirical study, we provide a rich amount of data describing the constitution of brand image as well as functionality of open-source brands. An analytical study would add to this knowledge by examining our findings and suggested framework, thereby proving causalities and statistical generalisability. Due to time restrictions, we limited our research to only two cases studies, which allowed us to assess two open-source brands and their functions. YouTube and Wikipedia were appropriate cases to be studied as they rejected traditional PDL and confirmed predetermined arguments about consumer power integral to CDL and SDL. Still, further research is required to employ a bigger sample. So far open-source brand image proves to follow the open-source offering. Thus studying a larger number of cases varying in the nature of the offering would help to improve understanding and prove applicability of the developed theoretical framework of open-source brand image and functions.

The findings from the case studies challenged established theory of brand image and brand function. We proved that the way people perceive open-source brands differs from closed-source brands, making it an interesting theoretical area for future research. Findings from our study could be applied by researchers developing co-creation theory into marketing and consumer studies. While we have applied consumer perspective, our findings lay ground for further investigation from organisation's perspective, introducing a strategic view of how brand image and functions are likely to be managed when involving consumers. In addition to that, studies focusing on contributors' role in open-source brands would be beneficial in better understanding the separation between organisations and contributors. This would be of great use to illuminate how to best manage perception of organisations as well as the arising contributor's image.

We believe to have pointed out that valuable brands such as YouTube and Wikipedia have a strong appearance even though they neglect aspects such as meaningfulness and legal and

competitive protection and defence. Further research on how brand equity is built up even though control over and influence of marketing activities are challenged, is an interesting future research area in the wider context of open-source branding. Future assessment of open-source brands in different industries and categories would add to the general understanding and applicability of open-source branding.

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