Why Customers intend to Co-create on Facebook
In the case of Customer Engagement

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Abstract-- **Co-creation on Facebook became more important for companies and customers since Co-creation improves value for both parties. This study explores why people intend to Co-create on Facebook. Drawing upon the Use and Gratification Theory to explain people's intention for Co-creation in this thesis. This theory explains people's behaviour with the expectancy of satisfaction or reward for their actions such as Co-creation efforts.**

While this theory has been used to explain Co-creation in other studies, there is no research to our knowledge that focused on emotional attachment to companies. This emotional attachment is expressed as Customer Engagement in this study. Additionally, this study explores possible underlying reasons why people would want to start to Co-create, instead of understanding why people that already do so.

The survey was conducted in Europe asking people about expected Benefits, Customer Engagement and their intention to Co-create on Facebook. Remarkably, results showed that Customer Engagement is the most important predictor for the intention to Co-create instead of user gratification. Within gratification though, Hedonic Benefits explains most of the influence of gratification towards the intention to Co-create by itself.

People are more motivated by emotional attachment, meaning and concern or intrinsic motivation than Extrinsic motivation in terms of gratification. In the end, people's intention to Co-create on Facebook increases when they find the experience with the company and its products meaningful and of concern to them and when they expect a pleasurable experience.

Keywords-- **Social Media, Facebook, Customer Engagement, Consumer Engagement, Co-creation, Value Creation, Use and Gratification Theory**

I. INTRODUCTION

Co-creation leads to a unique value for customers, resulting in a personal experience and therefore worthwhile for customers to do so (Cova, Dalli, & Zwick, 2011). They point out that this also means that companies can receive premium prices for their products and Co-creation means higher profits. Grönroos and Voima (2013) point out that Co-creation can make the customer better off in some way and this means that companies can earn more through providing a better service.

People have various reasons to engage with companies such as better usage of products or entertainment. Noteworthy is the desire or need of customers for an emotional attachment or engagement to a company (Brodie, Ilic, Juric, & Hollebeek,

2013). Customer Engagement is similar to the willingness to Co-create. People search for better ways to use a product, any sort of entertainment and again an emotional attachment or relationship (Brodie, Hollebeek, Jurić, & Ilić, 2011). Co-creation results in a higher value of a product or service for people and this can be of benefit to companies too. For this, companies can use Facebook to connect with customers and start to Co-create with them.

Overall, people expect some kind of benefit from engaging and Co-creating on Facebook (Lee & Kim, 2018; Nambisan & Baron, 2009). For this, the theory of the Use and Gratification Theory can explain what benefits people expect and act accordingly (Lee & Kim, 2018; Muntinga, Moorman, & Smit, 2011; Nambisan & Baron, 2009; Phua, Jin, & Kim, 2017). In general, this theory explains users' behaviour by using four different kind of benefits people expect: Cognitive Benefits, Social Benefits, Personal Benefits and Hedonic Benefits.

However, this theory does not include a need or possible influence of Customer Engagement. Customer Engagement is like an emotional attachment or relationship towards a company that may be of influence for users' intention to Co-crate, but is not included in the Use and Gratification Theory.

One previous study by Lee and Kim (2018) did explore Co-creation on Social Media, but this study was limited to South-Korea and people that already took part in Co-creation. Next to that, their study did not include Customer Engagement, which may be of importance for Co-creation as well. Nambisan and Baron (2009) did include Customer Engagement. However, it was also among people that already took part in Co-creation activities. Furthermore, both studies focused on other Social Media channels than Facebook.

Therefore, the main aim of this research is to understand why people want to start with Co-creation. For this, Customer Engagement that includes emotional attachment which may be important next to Perceived Benefits. The goal of this study is to provide a statistically tested model of predictors and their effects on the intention to Co-create on Facebook. This leads to the following main questions and sub questions of this research:

Why would customers take part in Co-creation on company pages on Facebook?

- What is the influence of the concept of User Gratification for the intention for Co-creation on Facebook?

- To what extent does the concept of Customer Engagement influence the intention for Co-creation on Facebook?

- What underlying dimensions exist in people's attitude to User Gratification and Engagement? (Question added during Data analysis)

- What factors predict the intention for Co-creation on Facebook?

This research examines Facebook users' intention to Co-create. This thesis explores people's willingness to help or aid a company that is present on Facebook. Consequently, this study focuses on Perceived Benefits and Customer Engagement.

The remainder of this thesis is structured as follows. First, this research shows a systematic literature review regarding to Co-creation on Facebook, the Use and Gratification Theory and existing researches which explain Co-creation with that theory and then Customer Engagement is added to that to form the conceptual model of this thesis.

Following that, this study explains the research methods including the data analysis approach. The results section is presenting the outcome of multi linear regression. Subsequently, the answers to the above questions are presented, after which the implications are discussed. Finally, the limitations are explained and future research is discussed.

II. SYSTEMATIC LITERATURE REVIEW

This part of the thesis examines existing literature on relevant subjects. For more details and the methodology of the systematic literature review see Appendix B. The results can be found in Appendix A which combines all subjects together.

The review starts with Co-creation on Facebook to explain what Co-creation and Facebook are. After this, the Use and Gratification Theory with existing studies are outlined and reviewed in how they explain Co-creation. Thereafter, Customer Engagement is added as possible influential concept and the conceptual model is drawn.

A. Facebook

Facebook was founded by Mark Zuckerberg from Harvard University to connect with his fellow students in 2004 (Kaplan & Haenlein, 2010). Organizations can build a presence on Facebook since April 2006 and within two weeks over 4,000 organizations did so (Waters, Burnett, Lamm, & Lucas, 2009). Facebook allows organizations to contact and build relationships with the end-users of products and services and provide opportunities for companies to Co-create with customers.

Facebook is a Social Media platform known as a Social Networking Site (Kaplan & Haenlein, 2010). These sites are typified by giving users the ability to make personal profiles and extent social life by befriending others (Hennig-Thurau et al., 2010). Kietzmann, Hermkens, McCarthy and Silvestre

(2011) observed that people can meet, interact and form communities online. For businesses this means that customers can participate, interact and relate to them (Hanna, Rohm, & Crittenden, 2011; Huang & Benyoucef, 2013).

Because of this, Facebook allows customers to engage with companies (Waters et al., 2009). Liang, Ho, Li and Turban (2011) note that most information on Facebook comes from users and is often aimed at engaging and Co-creation. For this research Facebook is an appropriate site to study since it allows people to engage, relate to and Co-create with companies.

B. Co-Creation

Initially, firms were considered the creators of value, but now customers are (always) Co-creators of value (Kunz et al., 2017; Vargo & Lusch, 2004). Co-creation is always interactive, where customer and company meet to create value together (Cova et al., 2011; Grönroos & Voima, 2013). People can create more value like this, but they can do so with each other too (Brodie et al., 2011; Rathore, Ilavarasan, & Dwivedi, 2016). Relationship or engagement value stimulates Co-creation.

C. Facebook and Co-creation

Co-creation on Facebook can take many forms: purchase behaviour, advocacy, affective commitment (Turri & Smith, 2013) and posting comments for friends to see (Sorensen, Andrews, & Drennan, 2017). Both authors point out that doing so increases the value for both company and customer. Rolland and Parmentier (2014) note that users are always Co-creators since they put meaning to a post. People create relationships and communities on Facebook around companies and brands (Marbach, Lages, & Nunan, 2016; Turri & Smith, 2013).

Customers spread word-of-mouth and share experience to be part of a community (Hajli, 2014). The interactive nature of Facebook strengthens the relationship value and community (Turri & Smith, 2013), which stimulates relationships to become long-term and emotional (Rolland & Parmentier, 2014). This all results into large networks with a personal and social context, large of scale yet remarkably flat of structure (Hanna et al., 2011; Sorensen et al., 2017).

People participate in communities to experience altruistic value (Sorensen et al., 2017), or to experience a relationship or psychological state of mind towards the company (Marbach et al., 2016). Furthermore, they observed that people aim at six different goals when they Co-create with a company on Facebook: Social, Play, Efficiency, Excellence, Aesthetic and Altruistic. Co-creation on Facebook leads to (more) value, but this is not explained in depth (Hanna et al., 2011; Sorensen et al., 2017; Turri & Smith, 2013).

Facebook allows people to interact through personalized profiles and possibly interact with a company of their choosing. Co-creation can provide benefits for people and for a company and people may intent to Co-create when they expect something from it.

D. The Use and Gratification Theory

To understand why people would engage and/or Co-create on Facebook with a company, the Use and Gratification Theory is useful. Basically, people seek some sort of gratification for their actions (Lee & Kim, 2018; Muntinga et al., 2011; Nambisan & Baron, 2009; Phua et al., 2017). Although this theory is not always explicitly used, the idea of fulfilling goals and needs in regard to using Social Media, engaging and Co-creation is mentioned more often (Etgar, 2008; Payne et al., 2008; van Doorn et al., 2010).

Phua et al. (2017) explain why people use Social Networking Sites by using the Use and Gratification Theory. They explain people's actions by using the gratifications of Passing time, Showing Affection, Following Fashion, Sharing Problems, Demonstrating Sociability and Improving Social Knowledge. Facebook is particularly useful to Pass Time, Share Problems, Social Knowledge and Affection. Muntinga et al. (2011) looked into why people engage with brands on Social Media, using the Use and Gratification Theory for explanation of this engagement: people are motivated to do things, because of a kind of satisfaction afterwards. They determine three types of behaviour: Consuming, such as watching videos, Contributing, which includes likes and commenting and lastly, Creating, which includes making blogs or even videos about a company or brand.

Nambisan and Baron (2009) explain why people engage and Co-create from a motivational perspective expecting a kind of gratification from Co-creation on virtual customer environments. There are four motivations as a base for people's action that lead to perceived benefits for the people involved. This motivation of people improves engagement and Co-creation efforts which is explained in Table 1. However, these authors looked into what people that already Co-create on a virtual customer site expect from their actions.

Motivation and Gratification	Reason
Cognitive or Learning benefits	Being able to better use products and technologies
Social Integrative benefits	Sense of community and one's own social identity
Personal Integrative benefits	Sense of being able to do things, enhance own expertise and ability
Hedonic benefits	Pleasure and intellectual stimulants from participating in discussions and such

Table 1 Gratifications according to Nambisan and Baron (2009)

Lee and Kim (2018) explored why people intend to Continuously Co-create on corporate controlled Social Networking Sites such as Facebook and Twitter through a survey. They asked participants about their most important Co-creation activity, on the long-term and what they expected from their Co-creation. Lee and Kim use the Expectancy-value theory and additionally what value people derive from different Co-creation activities. These benefits include Cognitive, Social integrative (including Personal Integrative) and Hedonic benefits similar to the Use and Gratification theory. (Figure 1)
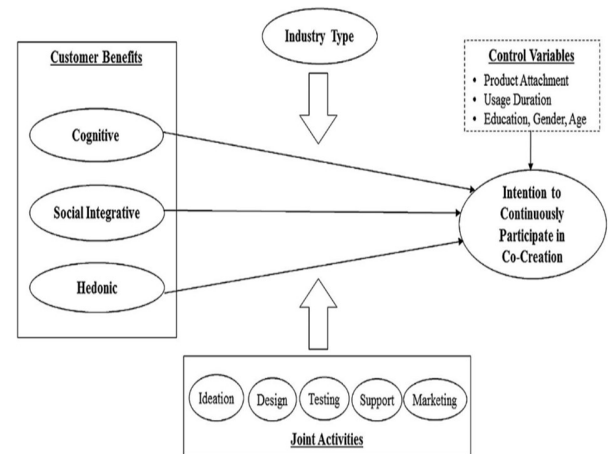

Figure 1 Research model of Lee and Kim (2018, p.681)

While Lee and Kim's (2018) study did include Facebook as place for Corporate Social Networking Sites, their study was not specific to Facebook itself or Social Media outside a corporate domain. Additionally, it is restricted to South Korea as Lee and Kim (2018) note as a limitation. Furthermore, they looked into long-term duration, instead of why people start to engage and Co-create. Additionally, their study is specific to a community created and primarily managed by a corporation.

III. CUSTOMER ENGAGEMENT AND CONCEPTUAL MODEL

This part explains what Customer Engagement is, the relevant underlying dimensions of this construct and adds it to the Use and Gratification Theory to explain Co-creation on Facebook in the conceptual model.

A. Customer Engagement

Customer Engagement is an emotional attachment, a bond or a psychological state of mind towards a firm (Brodie et al., 2013; Grönroos & Voima, 2013; Payne, Storbacka, & Frow, 2008; Schau, Muñiz, & Arnould, 2009). Other views look at Customer Engagement as a behavioural manifestation and something that is relational in nature (Brodie et al., 2011; Dolan, Conduit, Fahy, & Goodman, 2016; Kunz et al., 2017; Sashi, 2012; van Doorn et al., 2010). However, Customer Engagement is always a long term and interactive phenomenon between company and customer.

People may start to advocate or advertise on behalf of the company when they are engaged (Malthouse, Haenlein, Skiera, Wege, & Zhang, 2013). According to Brodie et al. (2011) Customer Engagement has different levels or states ranging from interaction, then participation and towards Co-creation itself as highest level. Kunz et al (2017) point out that people even start to collaborate in production when they are engaged.

As for the reasons of Customer Engagement, people have different desires they want to have fulfilled. First, people want to use a product better and experience more value-in-use (Brodie et al., 2013; Hoyer, Chandy, Dorotic, Krafft, & Singh, 2010; Payne et al., 2008; Sashi, 2012; van Doorn et al., 2010). Secondly, people aim at entertainment by interacting with companies and other people or gain advise from other people

(Brodie et al., 2013; Dolan et al., 2016). But more relevant here is the emotional or relationship value people expect from engaging with companies (Brodie et al., 2013; Palmatier, Dant, Grewal, & Evans, 2006; van Doorn et al., 2010).

B. Underlying dimensions of Customer Engagement

Customer Engagement is a very broad term in itself and often not well defined. However, this part explains the dimensions used in the survey (Appendix C) more in depth.

Importance, van Doorn et al. (2010) mention this to be connected to one's own identity and goals. While Nambisan and Baron (2009) mention perceived importance and product involvement here. Lee and Kim (2018) use importance in connection to the use of a product or service.

Relevance, Nambisan and Baron (2009) speak of relevance in connection to possible benefits, but does not give a definition of relevance in itself. Likewise, Lee and Kim (2018) do not define relevance of a product, but seem to connect this with the regular use or daily need of a product or service.

Meaning, Nambisan and Baron (2009) point out that meaning comes from long-term interactions with other community members. Sashi (2012) too points at long term interactions, but this is focussed on the company itself. However, Brodie et al. (2011) mention that meaning comes from a connection to work or daily life in the broadest sense.

Concern, again Lee and Kim (2018) use this in relation to the use of products and services, but offer no definition or explanation on how a product may concern someone. Nambisan and Baron (2009) mention concern in relation to product attachment, indicating an emotional reason.

Overall, it is unclear where these underlying dimensions really differ from one and other. Importance and Relevancy appear more connected to the use of a product or service itself. While Meaning is related to long-term relationships and Concern seems to be affectional.

C. Facebook and Customer Engagement

In order to understand where Facebook and Customer Engagement are related, overlap and possibly influence each other, this part reviews literature specifically on both subjects.

People look for relationships with others and communities on Facebook (Kietzmann et al., 2011), being able to receive information about friends and interests posted on profiles (Phua et al., 2017). Instead of just forming relationships with others, people connect and relate to a shared object such as a company as well (Kietzmann et al., 2011). Customers even aim to interact with and about companies nowadays (Hanna et al., 2011).

Engaging on Facebook allows participation in a community (Goh, Heng, & Lin, 2013) and provide opportunities for information and increased click-through rates (Aguirre, Mahr, Grewal, de Ruyter, & Wetzels, 2015). Facebook gives companies the ability to reach and connect to customers, but customers can reach them and each other too (Hanna et al., 2011).

People have various reasons to engage with companies, Muntinga et al. (2011) mention three key motivations: Consuming content, Contributing to content and Creating content itself. Overall, people seek a kind of gratification. Other motivations are mentioned by Phua et al. (2017) for Facebook: Socializing, Entertainment, Self-status and Information seeking are important. Which again provides a kind of gratification to people.

Facebook is a great place to engage with customers, customers even go on Facebook for this reason. However, people can now take the lead, influence each other more than marketeers ever could. People engage on Facebook for a kind of gratification, which is already explained further in the Use and Gratification part.

D. Customer Engagement and Co-creation

Customer Engagement and Co-creation are related to each other. While Co-creation may always be present, the active participation of Customer Engagement is not always there (Etgar, 2008; Payne et al., 2008). People start to actively Co-create when they become engaged to the company (Hanna et al., 2011; Jaakkola & Alexander, 2014; Nambisan, 2002; Payne et al., 2008; van Doorn et al., 2010). Customer Engagement goes beyond economical decision-making, it includes a relationship, emotional attachment and even a psychological state of mind towards the company (Hanna et al., 2011; Jaakkola & Alexander, 2014; Payne et al., 2008).

When people start to engage with a company, they start to advocate for the company. Next to that they generate, share and comment on content about the company (Brodie et al., 2011; Hanna et al., 2011; Jaakkola & Alexander, 2014; van Doorn et al., 2010). But even further, people start to Co-produce and Co-develop products with the company (Brodie et al., 2011; Etgar, 2008; Hanna et al., 2011; Jaakkola & Alexander, 2014).

People aim to have a relationship, which can be cognitive and goal-orientated or more importantly emotional and even affectional (Etgar, 2008; Jaakkola & Alexander, 2014; Payne et al., 2008). Nambisan and Baron (2009) explain people's motivation for this by drawing upon the Use and Gratification Theory explained already above.

E. Customer Engagement on Facebook towards Co-creation

Facebook gives people the ability to interact, connect and form relationships and form communities. People engage with a company to gain relationships and feel part of a community (Achen, 2017; Hanna et al., 2011; Huang & Chen, 2018). Westberg, Stavros, Smith, Munro and Argus (2018) add that the strength of the community influences how much engagement occurs. Furthermore, Marbach et al. (2016) observed that people relate to a focal object and that meaningful experiences with this build online communities. Huang and Chen (2018) point out that people engage to be part of a community and to start relationships.

Facebook provides great means of engaging with a company, but people do so for various reasons. People desire to engage with products (Achen, 2017) and seek information (Sorensen et al., 2017). People desire meaningful and better customer experiences (Marbach et al., 2016) or participation in a community (Huang & Chen, 2018; Westberg et al., 2018). And people expect a kind of benefit from their actions (Lee & Kim, 2018).

As people engage on Facebook, they start to share content,

comment on content and create their own content (Hanna et al., 2011; Sorensen et al., 2017; Westberg et al., 2018). People are actually providing marketing work for the company such as word-of-mouth (Hanna et al., 2011; Huang & Chen, 2018). Furthermore, people can provide support to others, test products or even help create them (Lee & Kim, 2018).

Appendix A shows an overview of the core articles, summarizing what is important for engaging on Facebook towards Co-creation. Additionally, that Appendix shows the Use and Gratification Theory to explain people's behaviour on Facebook. That theory was explained in the previous part and combined with Customer Engagement in the following conceptual model.

F. Conceptual model

From the Use and Gratification theory, the following conceptual model (Figure 2, bottom of this page) is drawn. People may be willing to Co-create when they expect benefits from that action. These benefits come from Cognitive, Social, Personal or Hedonic causes. Lee and Kim (2018) found that the control variables Usage duration, Education, Gender and Age were not significant and therefore left out in the survey of this study. They found that the control variable Product attachment is important, however, attachment is larger than a single product and can extend to a brand or a whole company. Therefore, Customer Engagement may be a better control variable then Product attachment as Customer Engagement extents to a whole company.

IV. METHODOLOGY AND HYPOTHESES

A structured literature review helps to find existing knowledge, theories and possible models. It helps to explore useful subjects, to design a research and define the problem and questions that will be answered (Bryman & Bell, 2015; Saunders, Lewis, Thornhill, Booij, & Verckens, 2011). Furthermore, a literature review helps to investigate what is known, where opportunities for research exist and what possible relationships there are between subjects (Wolfswinkel, Furtmueller, & Wilderom, 2013).

The logbook of the literature search in Appendix B explains all events concerning the structured literature search. First, Customer Relationship, Value Creation and Social Media were used. But with 56,668 references in the last decade, Social Media was too broad. Facebook was chosen to narrow the search down to a suitable platform for this research. Furthermore, Customer Relationship was replaced with Customer Engagement as a better topic and Value Creation with Co-creation to specify where companies and customers work together.

Eventually the keywords Facebook, Customer/Consumer* & Engag* and Cocreat* or Co-creat* have been used as single terms and all combinations between them. These terms were then filtered on the last decade for the most recent studies, filtered on Business as the context for this study and the filter Highly Cited was used to extract the most important articles from these. See Table 2 for an overview of the search results.

Keywords	Total references	After filters	Included
Customer Relationship (from this Customer Engagement)	18,966	16	8
Value Creation (eventually Co-creation)	22,722	83	8
Facebook	13,410	17	9
Facebook and Customer Engagement	328	8	6
Facebook and Co-creation	66	30	6
Co-creation and Customer Engagement	448	20	8
Facebook, Co-Creation and Customer Engagement	22	22	7 (+3 references with Use and Gratification Theory)

Table 2 Search results from Keywords on Web of Science

In order to collect data for this research a self-completion survey with Likert questions that allow reliability, precision and the correct scope was used (Spector, 1992). The questions in the survey for this study were designed based on Lee and Kim (2018) and Nambisan and Baron (2009) in order to ask people about their dispositions. (see Appendix C) The survey is then spread on Facebook, other Social Media networks and student email-lists.

In order to establish reliability and validity, Confirmatory Factor Analysis with an Oblique rotation is done to review the variables and their intended constructs. Oblique rotation works best for model testing as factors are expected to be correlated (Hair Jr, Black, Babin, & Anderson, 2014). Furthermore, these
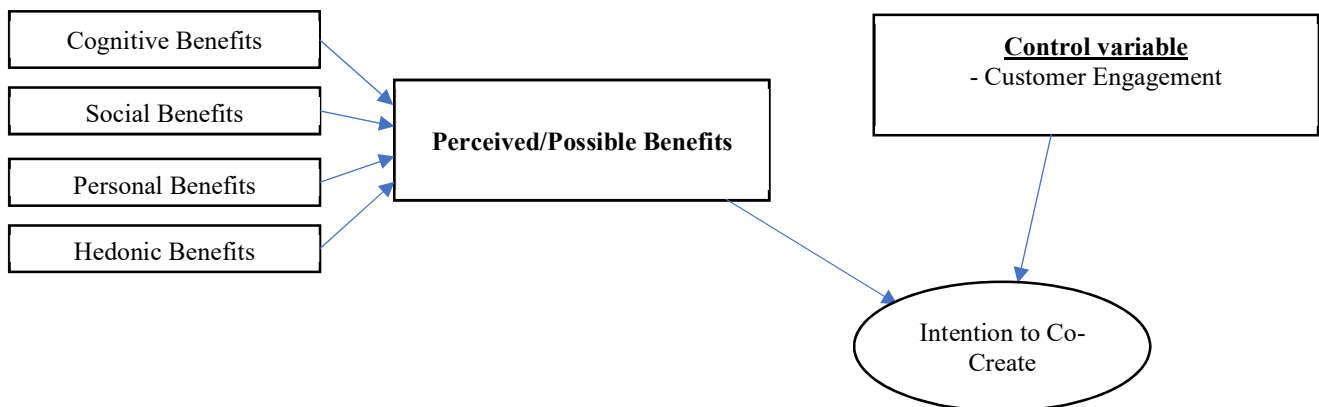

Figure 2 Conceptual Model

authors suggest that Cronbach's Alpha, Composite Reliability, Convergent Validity and Divergent Validity are necessary statistics to establish reliability and validity of the measurements before modelling. After this, single and multi linear regression are used to tests hypotheses and to build an appropriate model. These methods allow to see how constructs relate to one and another and allows to answer the main research question. After this, Cluster Analysis is explored as it may be possible to find groups within the data.

According to the Use and Gratification Theory, people expect certain benefits or values from their actions. The theory above suggests four different kinds of benefits, namely Cognitive, Social, Personal and Hedonic Benefits. Based on theory, as people expect more or higher Benefits from Co-creation on Facebook people will intend to Co-create more on Facebook. Additionally, Customer Engagement according to theory may influence or moderate the effect of Perceived Benefits towards the intention to Co-create on Facebook.

However, Customer Engagement may be a predictor for the intention to Co-create on Facebook in itself and therefore is expressed as a separate independent. From the use and Gratification Theory and Customer Engagement the following hypothesis are derived:

H1: Perceived Benefits increase the intention to Co-create.
- H1a: Perceived *Cognitive* Benefits increases the intention to Co-create.
- H1b: Perceived *Social* Benefits increases the intention to Co-create.
- H1c: Perceived *Personal* Benefits increases the intention to Co-create.
- H1d Perceived *Hedonic* Benefits increases the intention to Co-create.

H2: Customer Engagement mediates the relationship between Perceived Benefits and the intention to Co-create.
H3: Customer Engagement increases the intention to Co-create.

In order to test these hypotheses and the conceptual model, the next section explains how the data was collected.

V. DATA COLLECTION AND RESULTS

Data for this study has been collected through an online survey with Likert scales (see Appendix C) with questions based on Lee and Kim (2018) and Nambisan and Baron (2009). The survey was spread on Facebook, other Social Media platforms and available email lists such as student lists on Blackboard. The survey asks people about their attitudes on Cognitive, Social, Personal and Hedonic Benefits as well as Customer Engagement and their intention to Co-create as the theoretical model (Figure 2) suggests.

The survey was sent on the 31st of August 2018. Some reminders were sent during the time the survey was active and the survey closed on the morning of the 17th of September 2018 with a total of n=104 replies.

Data collected from the survey was imported in IBM SPSS 25 and analysed in order to construct and validate scale items to be used in linear regression modelling.

As this research has a theoretical model to test, a Confirmatory Factor analysis was conducted with an Oblique (direct Oblimin) rotation as factors are correlated. (see Table 3) Factors with a loading of 0.55 or greater are to be included for a sample size of 104. There are no cross-loading variables showing that all Factors are unique. (CB2; PB3, PB4; HB3; CE1, CE2 have been removed)

Factor analysis is used to verify if variables are indeed part of their intended constructs. This method looks into the patterns of how people answer questions and groups variables together. The results of factor analysis show which variables are connected to the same construct. This is useful here to verify the constructs themselves and what underlying dimensions are indeed relevant to a construct as Customer Engagement.

Hedonic Benefits show to consist of an Enjoyable and Relaxing time and Fun and Pleasure, while problem solving and idea generation are not part of this construct. While pleasure is indeed important for Hedonic Benefits, the intellectual part according to theory is not in this study.

For the Customer Engagement questions in particular, the removed questions were about Importance and Relevancy of the use of a product or service. The included questions were about Meaning and Concern regarding products and services from the company. According to the factor analysis, Customer Engagement here is linked to long-term interactions and an emotional attachment instead of the use of a product itself.

In order to reduce measurement error, represent multiple facets of a concept and to optimize for prediction, Summated Scores were created based on the results from the Factor Analysis. (Table 3) For these scales, reliability is verified using Cronbach's Alpha for item sets and Composite Reliability and after this Convergent Validity (Average Variance Extracted) in Table 4 (next page). Divergent Validity was established in order to verify that the constructs are indeed different as seen in Appendix D.

	Factor					
	1	2	3	4	5	6
CB Q1	0,105	-0,060	0,757	0,057	0,022	-0,115
CB Q3	0,063	0,086	0,756	-0,043	0,024	0,109
CB Q4	-0,088	0,006	0,784	-0,009	0,022	-0,096
SB Q1	0,006	0,936	-0,048	-0,019	-0,030	-0,039
SB Q2	0,070	0,728	0,050	0,037	0,176	-0,056
SB Q3	-0,016	0,599	0,188	-0,215	0,001	0,013
PB Q1	0,042	0,262	-0,037	0,078	0,718	-0,005
PB Q2	-0,008	-0,138	0,100	-0,116	0,901	-0,042
HB Q1	0,015	-0,040	-0,057	-0,967	0,056	-0,036
HB Q2	0,056	0,117	0,053	-0,781	-0,028	-0,036
CE Q3	0,063	0,054	0,127	-0,050	-0,019	-0,827
CE Q4	0,002	0,004	-0,036	-0,018	0,027	-0,854
CC Q1	0,915	-0,055	0,053	-0,043	0,027	0,037
CC Q2	0,963	0,063	-0,041	0,023	0,011	0,011
CC Q3	0,886	-0,015	0,012	-0,024	-0,042	-0,095

Table 3 Results Factor Analysis

Factor	Construct	Included questions	α >0,7	CR >0,7	AVE >0,5
1	Cognitive Benefits	CB_Q1 CB_Q3 CB_Q4	0,845	0,810	0,586
2	Social Benefits	SB_Q1 SB_Q2 SB_Q3	0,873	0,806	0,588
3	Hedonic Benefits	HB_Q1 HB_Q2	0,917	0,870	0,773
4	Co-creation	CC_Q1 CC_Q2 CC_Q3	0,954	0,945	0,851
5	Personal Benefits	PB_Q1 PB_Q2	0,836	0,796	0,664
6	Customer Engagement	CE_Q3 CE_Q4	0,896	0,828	0,706

Table 4 Reliability and AVE for each Factor

With the constructs verified, it is then necessary to assess whether (multiple) linear regression can be done. Sample size requirements include N>100 and preferably 15-20 observations per independent variable. These criteria are met. In addition, each scale needs to be normally distributed and this is shown to be so for all scales. Next to that the independents have to be correlated to the dependent the Intention to Co-create and this is shown to be.

Furthermore, this study analysed the four assumptions for linearity for each independent towards the dependent the Intention to Co-create existing out of: 1 Linearity of the phenomenon based on residual plot and plots of the independent towards the dependent itself. 2 Constant variance of error terms, using the residual plot and conducting Levene's tests in One-way ANOVA's. 3 Independence of error terms using the Durbin-Watson statistic. And lastly 4 Normality of error terms, using the Histogram and Normal Probability plot of residuals.

Examining these assumptions showed that Hedonic Benefits and Customer Engagement at first failed to achieve the second Constant Variance of Error Terms criterium. But after stabilizing the dependent variable with a natural logarithmic all assumptions are met for all variables.

After modelling, Cluster Analysis was considered to see if there is any sort of grouping present within the data as this may be useful for marketing purposes. Cluster Analysis shows how people relate to each other, making it possible to create archetypes of customers. For this reason, the nearest neighbour method is used to see if grouping occurs.

With the constructs showing reliability, validity and the assumptions for linear regression met, the hypotheses for each independent towards dependent is tested. (see Appendix D for SPSS output) The first part of the hypotheses is about the possible influence of the Perceived Benefits onto the intention to Co-create on Facebook. The second part about Customer Engagement as possible mediator or moderator and the third part about Customer Engagement as a separate predictor.

Table 5 shows that every Perceived Benefit has a statistically significant (p<0.001) influence on the intention to Co-create, meaning that gratification does matter for the intention to Co-create. Noteworthy is that Hedonics Benefits (0.502) and Cognitive Benefits (0.451) are the largest predictors. Social Benefits (0.380) and Personal Benefits (0.286) are smaller predictors of the intention to Co-create on Facebook.

Secondly, Customer Engagement does not function as a mediator or moderator. Using it as such does not result in statistical significance and additionally results in multicollinearity issues in modelling. However, Customer Engagement does have a statistically significant (p<0.001) influence on the intention to Co-create. Moreover, Customer Engagement shows to have the largest influence (0.539) on the intention to Co-create among the predictors.

Customer Engagement as possible control variable or mediator does not lead to better prediction and next to that it leads to multicollinearity issues. Multicollinearity here means that predictors with an interaction term predict each other instead of the intention to Co-create.

Using Customer Engagement as an independent predictor on its own instead of something that influence the effect of gratification, reveals Customer Engagement as a statistically significant predictor for the intention to Co-create. Since Customer Engagement does not work as mediator or control variable, but does work as a separate independent it was used as a predictor in modelling attempts.

H1 Perceived Benefits increase the intention to Co-create	Standardized Path coefficient (t-value)
- H1a Perceived *Cognitive* Benefits increases the intention to co-create.	0.451* (5.108)
- H1b Perceived *Social* Benefits increases the intention to co-create.	0.380* (4.154)
- H1c: Perceived *Personal* Benefits increases the intention to co-create.	0.286* (3.012)
- H1d Perceived *Hedonic* Benefits increases the intention to co-create.	0.502* (5.862)
H2 Customer Engagement mediates the relationships between Perceived Benefits and the intention to Co-create	Does not lead to significant influences and leads to multicollinearity issues in modelling
H3 Customer Engagement increases the intention to Co-create	0.539* (6.471)

Table 5 Hypotheses testing *p<0.001 (from Appendix D)

VI. ANALYSIS

A. Analysis method

First, trial and error with the Enter method in SPSS was done with all predictors. The Enter method uses predictors in the sequence as given by the researcher. Using the four Benefits and Customer Engagement as predictors (Appendix D) showed a lack of statistically significant betas and adjusted R squared for Personal and Social Benefits. In order to obtain a verified predictive model, it is necessary that all included predictors have a significant beta. Therefore, further trial and error has to be completed.

After removing the predictors with the least statistically significant beta's, Personal Benefits and Social Benefits, a new model with Customer Engagement, Cognitive Benefits and Hedonic Benefits was tried. Using these three predictors resulted in a model that showed Cognitive Benefits without a statistically significant beta with a p-value of only 0.055. (Appendix D) Hence, Cognitive Benefits was removed and a new model with Customer Engagement and Hedonic Benefits was tried. Customer Engagement and Hedonic Benefits as predictors showed a statistically significant model. Finally, Customer Engagement and Hedonic Benefits proof to be predictors of the intention to Co-create. Note that these two were the largest single predictors in the Table above.

However, this model may be the result of how predictors were added into the model and could bias the results in favour of the first predictor entered. To verify a predictive model, the Stepwise method is used to counteract any bias resulting from which sequence was used.

Since the Stepwise method in SPSS selects the most important predictor and adds predictors that have a statistically significant beta and increase the adjusted R squared for the model the sequence of entering does not matter anymore. With Stepwise, SPSS picked Customer Engagement as the first predictor and added Hedonic Benefits as second predictor. SPSS verifies the model derived through trial and error as explained above.

In order to further verify this model, a split sample of 60%:40% was created randomly by SPSS. Using the Enter method SPSS verified Customer Engagement and Hedonic Benefits as significant predictors for both groups. In addition, the Stepwise method was again used to verify if these predictors were selected automatically for each sample. However, the 60% sample selected Cognitive Benefits and Customer Engagement with the Stepwise method. But since the whole sample provides a better base for statistical testing than a partial sample and the Enter method did verify the above model this one is kept for the analysis model. Resulting in an analysis model that uses Customer Engagement and Hedonic Benefits as predictors for the intention to Co-create on Facebook.

B. Analysis model

Based on the above results Figure 3 shows the analysis model with the influence of each predictor on the intention to Co-create. While each separate benefit does predict some intention to Co-create, this model shows that Hedonic Benefits explains most of the effect perceived gratifications have on the intention to Co-create. Cognitive, Social and Personal benefits are not important in themselves to predict the intention to Co-create, perceived gratification is explained by Hedonic Benefits alone.

Customer Engagement is a larger predictor than Hedonic Benefits, note that the included questions for Customer Engagement were about Product Meaning and Product Concern, both very relevant for Customer Engagement. People that find a company and its products meaningful and of concern to them are motivated to Co-create more than gratification does. The questions about Hedonic Benefits were about an Enjoyable and Relaxing time and a Fun and Pleasurable experience. (See Appendix C for the survey itself) While people do not consider intellectual work pleasurable here. Enjoyment and Relaxation is the most important part though.

Note that the Factor Analysis in Table 3 shows that Customer Engagement and Hedonic Benefits are unique factors. Furthermore, Discriminant Validity (Appendix D) was established for these two constructs as well. This means that the two predictors are indeed different constructs according to Factor Analysis and Discriminant Validity.
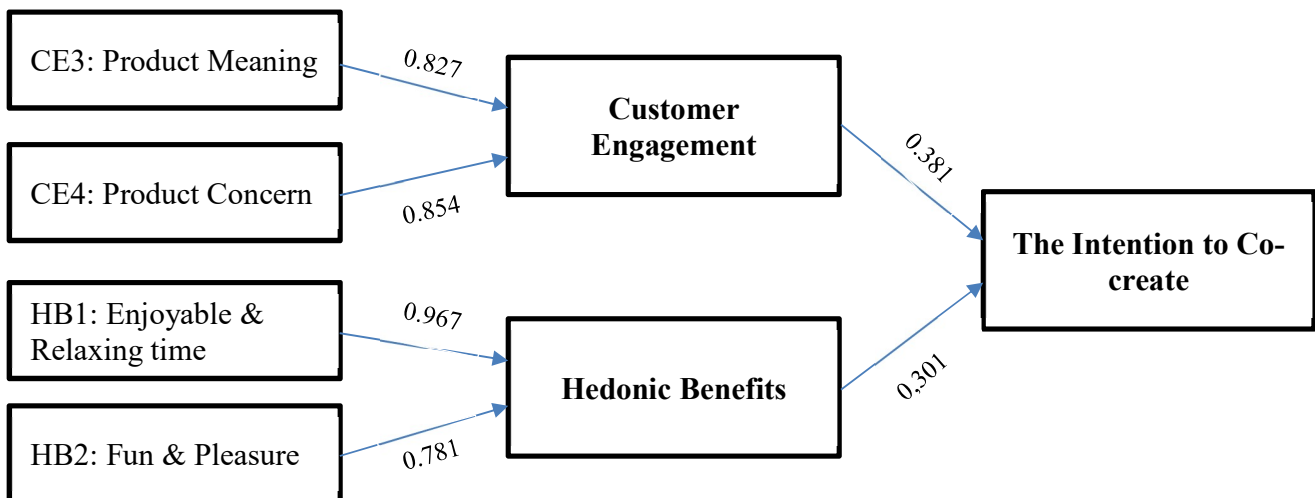

Figure 3 Analysis Model

C. Cluster Analysis Results

Using the nearest neighbour for each Perceived Benefit and Customer Engagement towards the intention to Co-create show differences between people. In general people that experience a high perceived benefit have a higher intention to Co-create based on that benefit. Therefore, people were categorized as High or Low on each benefit and Customer Engagement and this was used in further steps. One-Way ANOVA's revealed statistically significant differences amongst most groups towards the intention to Co-create. Perceived Personal Benefits was the only one that did not reach statistical significance.

Modelling attempts were made using the above categories to see if any differences occurred in predictors, but no model was statistically significant because of small group sizes.

Cluster analysis does suggest that the following groups of customers can exist:
- People that experience benefits suited to their goals and find the company important
- People that would like to socialize and like the company
- People that just want to have fun together with a company of their liking

VII. CONCLUSIONS

The goal of this study was to answer the questions in the introduction and provide a predictive model for the intention to Co-create (Figure 3). This part will start with the sub questions with their answers and then repeat and conclude on the main question.

- *What underlying dimensions exist in people's attitude to User Gratification and Engagement?*

Cluster Analysis suggest that people may be grouped differently based on what influence a particular benefit or engagement has on them according to One-Way ANOVA's there are differences here. However, as the survey didn't include any categorical questions this question cannot be answered.

- *What is the influence of the concept of User Gratification for the intention for Co-creation on Facebook?*

Results show that each separate benefit does improve the intention to Co-create (Table 5), but modelling shows that Hedonic Benefits are the most important. Hedonic Benefits explain most of the perceived gratification as seen in the analysis model.

Concluding that User Gratification does influence the intention to Co-create on Facebook, however, not that much as Customer Engagement. Hedonic Benefits explains most of the gratification by itself through the desire of people for an enjoyable and relaxing time and a fun and pleasurable experience.

- *To what extent does the concept of Customer Engagement influence the intention for Co-creation on Facebook?*

Customer Engagement doesn't function as mediator or moderator as the conceptual model suggests. Using it as such does not lead to statistically significant models and results in multicollinearity issues. A situation where predictors predict each other instead of the dependent. However, Customer Engagement does function as a separate independent, a variable that predicts the intention to Co-create by itself instead of affecting the influence of gratification.

- *What factors predict the intention for Co-creation on Facebook?*

The last two answers together form the predictive model for the intention to Co-create on Facebook which shows that Customer Engagement (0.381) is the largest predictor. Next to this Hedonic Benefits (0.301) adds predictive power. (see Figure 3: Analysis Model) The other benefits do not improve the model due to a lack of statistical significance and lower adjusted R squared. Concluding, the factors Customer Engagement and Hedonic Benefits predict the intention to Co-create on Facebook.

Why would customers take part in Co-creation on company pages on Facebook?

To explain why customers would Co-create on Facebook the results show that people need Product Meaning and Product Concern mostly to be motivated to Co-create. Gratification isn't that important, but having a relaxing and pleasurable experience in addition to a meaningful and concerning experience with products improves the intention to Co-create even further. People are motivated by meaning, engagement with a company's products and by having fun while doing so for their intention to Co-creation.

Customers want a meaningful experience in terms of long-term relationships with others, the company and its products, they want to feel an emotional connection with the company's products and people want a pleasurable time.

VIII. IMPLICATIONS

This part discusses the influence of gratification and Customer Engagement respectively on the intention to Co-create on Facebook. Thereafter, the findings of this study are compared to existing studies.

Gratification itself is not that important according to the results. In this, only Hedonic Benefits are significant as predictor in the model. (Figure 3) However, while Cognitive Benefits failed to meet a statistical significance (0.055, Appendix D) it probably reaches significance with a larger sample size although it will not add much prediction anyway.

Hedonic Benefits exists out of an Enjoyable and Relaxing time and a Fun and Pleasurable experience, while Problem Solving and Idea Generation are not pleasurable for people here

in contrast to previous studies (Lee & Kim, 2018; Nambisan & Baron, 2009). This means that people in general do not enjoy intellectual work as far as the intention to Co-create on Facebook is concerned.

Customer Engagement is a predictor on its own instead of a mediator or moderator as theory suggests. Results show it to be a good predictor for the intention to Co-create according to the analysis model (Figure 3).

Moreover, the results show that Meaning and Concern are relevant underlying dimensions, while Importance and Relevancy are not. This is different from previous research that showed all dimensions to be important (Lee & Kim, 2018; Nambisan & Baron, 2009). The results mean that long-term relationships and an emotional attachment are important for Customer Engagement in this study.

While the differences between the underlying dimensions aren't clear conceptually, the results show that they are actually quite different based on factor analysis. Customer Engagement is about relationships and emotions, not about the use of a product or service. Intrinsic motivations with regards to meaning and concern may be more important than the extrinsic rewards gratification offers for Co-creation on Facebook.

Referring back to the survey (Appendix C) the questions of Customer Engagement were not just about the company itself, but also about the products and/or services from that company. Therefore, the engagement may be with the products, the company or both combined rather than Customer Engagement specifically towards the company as entity on its own.

While the model proposed by Lee and Kim (2018) explain the intention to continuously Co-create by using gratification alone, this thesis added Customer Engagement as a predictor. While their study shows that the different sorts of gratification are significant for Co-creation, this study shows different results. Gratification here is explained by Hedonic Benefits alone instead of all possible benefits.

However, while Lee and Kim (2018) did not use Customer Engagement as a possible predictor, this study did and found it to be of importance. While one can argue that meaning and concern are similar to benefits or a sort of gratification, Factor Analysis shows that gratification and Customer Engagement are indeed different constructs. Moreover, Discriminant Validity (Appendix D) was established showing that Customer Engagement and Hedonic Benefits are two different constructs.

There are some differences between this study and that by Lee and Kim (2018). Their study location was South-Korea and this survey took place in Europe. While this study focussed on why people would intend to Co-create on Facebook itself, their study was on Corporate Social Networking Sites among people that already do Co-create. While these differences may explain some divergence in results, it appears that Customer Engagement is a predictor for Co-creation. Besides that, Hedonic Benefits seem to explain most of the expected gratification by itself.

In the end, Customer Engagement seems to be a good predictor for the intention to Co-create on Facebook and possibly better than gratification. The results actually suggest that Customer Engagement is an important motivator for Co-

creation in general. However, future research will have to show how important context is for the relationship between Customer Engagement and Co-creation. Meaning and concern can explain Facebook users' behaviour next to gratification. While gratification itself appears to be mostly an enjoyable and pleasurable experience for intention to Co-create on Facebook.

IX. LIMITATIONS AND FUTURE RESEARCH

This part explains some of the limitations of this study and makes some suggestions for future research.

During the data analysis stage, the idea emerged that there may be groups within the data. The survey did not include categories in design, as these failed to be statistically significant in previous studies. Cluster analysis does suggest people may desire different benefits in order to Co-create. While there are statistically significant differences between groups, there are no significant models due to small group sizes. Future studies that receive a larger sample size may find significant models for different groups.

While this research was carried out within Europe and the intention for Co-creation on Facebook, other regions and other Social Media platforms may provide different results. Future research may look into different regions and different Social Media platforms to see where results are the same or different.

The most important limitation is that this research asks people about the intention to Co-create and does not offer data on actual taking part in Co-creation. A self-completion survey provides data about statements such as their intention but does not show what people actually do. Future research may look into a specific company or branch and measure what people actually do. The goal could be to observe what people think and feel about the company, what they expect from Co-creating and most importantly what people actually do as Co-creation.

For future research it may proof useful to consider what lies behind people's motivation for Co-creation. This study suggests that people are more motivated by meaning and concern, which are intrinsic motivations instead of gratification and extrinsic motivations.

In general, Customer Engagement with Meaning and Concern can provide better prediction for the intention to Co-create than gratification. Future research can possibly explain Co-creation better when it looks into Meaning, Concern and intrinsic motivations over gratification and extrinsic motivations.

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Appendix A Overview of Core articles

Facebook, Co-creation and Customer Engagement	Relationship and community	Engaging on Facebook towards Co-creation	Use and Gratification theory
Westberg et al. 2018	Engagement depends on the strength of the community, Facebook allows to create networks around an object and create a sense of kinship.	Brands can interact with consumers and stimulate them to share commercials, add their own content and participate in a community. Consumers are motivated by being able to identify with others and the camaraderie from this towards a better spectator experience.	Not specifically used, but people aim to improve their "sport spectating experience".
Lee and Kim 2018	Continuing participation.	People can engage, interact and Co-create on an organizational profile on Social Networking Sites aimed at gaining Benefits. Namely, Cognitive, Social Integrative and Hedonic Benefits but their effects differ among Co-creating activities.	Refers to this as Expectancy-value theory, mentions Cognitive, Social integrative and Hedonic benefits have various influences on different Co-creating activities in various industries.
Huang and Chen 2018	People engage in order to have relationships and feel part of a community.	People aim at better experiences, the ability to Co-create improves engagement that takes the form of loyalty, marketing and purchase intention. People engage to establish an identity, connect to others, fun and gain a better service.	People aim at key values, such as self-respect, relationships with others and a sense of accomplishment: better customer experience.
Achen 2017	Facebook offers interaction and a possibility to build relationships in sports related industries.	People already desire to engage with products. Moreover, people aim at gaining relationships online around sport.	Not specifically mentioned, but people aim at intimacy and identification
Sorensen et al. 2017	Facebook allows people personalize content, to connect with others on a flat structure with a large scale.	Engaging can be information seeking, but more so active participation in commenting and creating content on Facebook. Engagement depends on the tone and use of language.	Not specifically used, but people aim at altruistic value or the sense of helping others.
Hanna et al. 2011	Facebook allows great interactivity and provides the ability to create vast networks.	Engaging with customers leads them to share content, create their own content and perform marketing activities for the company.	Not mentioned.
Marbach et al. 2016	People relate to a focal object; meaningful experiences improves this and builds communities online.	Engagement online depends on personality traits; Customer engagement promotes Co-creation and delivers a better customer experience. Engagement depends on personality traits, but it leads to a higher perceived value for customers.	Not specifically mentioned, but people desire Social value in engaging and Co-creating online and other values.
Phua et al 2017 (Found in Facebook and Customer Engagement, added here for the Use and Gratification Theory)	Not specifically mentioned	Not specifically mentioned	People aim at gratification, rewards and a kind of benefits. People want to pass time, show affection, share problems and other issues
Namisan and Baron 2009 (Found in Co-creation and Customer Engagement, added here for the Use and Gratification Theory)	Not specifically mentioned	People Engage and Co-create on virtual customer environments based on a motivational perspective: perceived benefits.	Cognitive or Learning Benefits, Social Integrative Benefits, Personal Integrative Benefits and Hedonic Benefits.
Muntinga et al. 2011 (Found in Facebook and Customer Engagement, added here for the Use and Gratification Theory)	Not specifically mentioned	People are motivated to Engage with companies and Brands to feel satisfaction afterwards.	Entertainment, Integration and Social interaction, Personal Identity, Information, Renumeration and Empowerment.

Appendix B Logbook of Literature Search
Date: January 3th, 2018

Literature search for Customer Relationship

Action	Reason and results
WebofScience for database to search in	Database shows peer-reviewed articles, findable on keywords in order to find literature on relevant subjects
Keywords	Customer Relationship
Reason for keywords	Initial search for literature to review which concepts are relevant, shows 18,966 references
Refine on 2000-2018	Shows more recent, but still a broad overview of literature, shows 18,892 references
Further refinement on Highly Cited	Reveals most important literature within the context of Customer Relationships, 96 references
Combining relevant Keywords, 2000-2018	Customer Relationship AND Social Media, shows 591 references
Refine further on Highly Cited	16 references
Review abstracts	8 references included
Revise Keyword	Customer Engagement is a better term for further searches

Year	Authors	Title	Journal	Reason
2009	Ngai et al.	Application of data mining techniques in customer relationship management: A literature review and classification	Expert Systems with Applications	Articles uses many other articles to reveal what Customer Relationship is
2018	Zhang et al.	The role of online product recommendations on customer decision making and loyalty in social shopping communities	International Journal of Information Management	Article explains customer relationship in an online setting, where other people influences decision-making
2012	Sashi	Customer engagement, buyer-seller relationships, and social media	Management Decision	Explains how companies can create relationships with customers on Social Media
2010	Van Doorn et al.	Customer engagement behavior; Theoretical foundations and research directions	Journal of Service Research	Explains various engagement behaviors and how to manage this.
2008	Payne et al.	Managing the co-creation of value	Journal of the Academy of Marketing Science	Explains how co-creation requires a relationship with the customer
2006	Palmatier et al.	Factors Influencing the Effectiveness of Relationship Management: A Meta-Analysis	Journal of Marketing	Reviews a large amount of data on customer relationships
2010	Hennig-Thurau et al.	The impact of new media on customer relationships	Journal of Service Research	Delves into customer relationships on Social Media
2011	Brodie et al.	Customer engagement: Conceptual domain, fundamental propositions, and implications for research	Journal of Service Research	Conceptualizes Customer Engagement based on many other articles

Customer Engagement	Customer Relationship	Customer Engagement
Brodie 2011	Relationships became Interactive and Co-creative which lead to Engagement.	Interactive, customers participate in development. Relationship with an object leads to Customer experience and emotion.
Doorn et al 2010	Implicit with a brand or with a firm.	Engagement toward a brand or firm goes beyond purchase. Engagement results from motivational drivers and lead to co-creation.
Hennig 2010	Sharing and generating content about brand that leads to purchases and customer retention as outcome for the firm. Gratification and emotion occur on the customer's side	Leads to content generated based on a firm or brand, people gain Cognitive, Social, Hedonic and Status benefits.

Ngai 2006	Customer identification, Attraction, Retention and Development. Leads to long-term profitable relationships with certain customers.	Not further mentioned.
Palmatier 2006	Customer Relationships involves all actions aimed at creating and maintaining relationships with customers.	Not further mentioned.
Payne 2008	Customer as cocreator in service-dominant logic: interactive. Customer is an active player, provides marketing, competence and even quality control.	Exists out of dialogue, cocreation, design and delivery. Value-in-use derived from co-creation.
Sashi 2012	Comes from connection, interaction, satisfaction and retention that leads towards loyalty, advocacy and engagement.	Engagement leads to deeper interactions over time and greater satisfaction, retention and loyalty of people through an emotional attachment.
Zhang 2018	Social shopping community online with interactive content and people co-create.	People promote sales online.

Date: January 16th, 2018

Literature search for Value Creation

Action	Reason and results
WebofScience	Database for peer-reviewed articles
Keywords	Value AND Creation
Reason	Initial search term for broad overview of possibly relevant literature.
Refine on 2000-2018	22,722 references
Highly Cited	144 references
Refine on Business and Management	Better context, 83 references
Review abstracts	8 articles
Better keywords for further searches	Co-Creation, as this is creating value while interacting with a company

Year	Authors	Title	Journal	Reason
2013	Brodie et al.	Consumer engagement in a virtual brand community: An exploratory analysis	Journal of Business Research	Article also shows customer engagement and how people create value with a brand
2011	Cova et al.	Critical perspectives on consumers' role as "producers": Broadening the debate on value co-creation in marketing processes	Marketing Theory	Explores what Value Creation is
2013	Grönroos and Voima	Critical service logic: making sense of value creation and co-creation	Journal of the Academy of Marketing Science	Explains value creation, value co-creation and the history around these terms
2010	Hoyer et al.	Consumer Cocreation in New Product Development	Journal of Service Research	Looks into how people can be involved in new product development
2010	Lusch et al.	Service, value networks and learning	Journal of the Academy of Marketing Science	Reviews what value creation is and explains Service-Dominant Logic
2009	Schau et al.	How Brand Community Practices Create Value	Journal of Marketing	Explains how people create value together in a community
2010	Teece	Business Models, Business Strategy and Innovation	Long Range Planning	Explains how companies create value in different business models
2004	Vargo and Lusch	Evolving to a New Dominant Logic for Marketing	Journal of Marketing	Explains the history of value creation and is often referenced by other articles

Co-Creation	Co-creation
Hoyer et al. 2010	Happens when people are involved in production and development to the empowerment of customers.
Grönroos and Voima 2013	Interactive, now with the customer as center. Joint value creation to more value in production and development.
Cova et al. 2011	Working together in production, using customers as resource towards greater and even a unique value.
Brodie et al. 2013	In brand community: sharing of information and knowledge and people are members of a community.
Schau et al. 2009	Collaborate with customers and even co-innovation towards customization.
Lusch et al. 2010	Customers are always co-creators of value; co-creation leads to better service.
Doorn et al. 2010	Participation of the customer in production.
MacDonald et al. 2011	Happens between supplier and consumer through interaction leads to better quality and a relationship. Customer always a co-creator.
Sahwney et al. 2005	Interactive, can span over the entire business and leads to a competitive advantage.
Vargo and Lusch 2004	Relational and the customer is always a co-creator of value.
Malthouse et al. 2013	Content generated by customers is co-creation.
Dolan et al. 2016	Active participation or interaction in value creation where people learn, share and advocate.
Diffley and McCole 2015	Interactive, high level of Engagement that leads to spreading word of mouth, offering resources and competences to the firm.

Kunz et al. 2017	Interactive, valuable for both parties, although the customer is always a co-creator, happens when value creation overlaps such as customization.
Blasco et al. 2016	Beyond purchase and integrates resources of customer and firm.
Rathhore 2016	On social media: User Generated Content, active and interactive.
See-To 2014	Customer is always a co-creator using his knowledge and expertise on a product.
Sashi 2012	When a customer interacts with a firm, generates own content, provides information and advocates on behalf of the firm towards greater satisfaction.
Payne 2008	Customer now an active party, interacts with the firm and can provide expertise, quality control and perform marketing services.
Brodie et al. 2011	Interactive with the firm and other stakeholders has a subjective value such as feeling commitment, trust and an emotional bond.

Date: June 26th, 2018

Goal: theory on Facebook

First search

Action	Reason and results
WebofScience	Academic database for peer-reviewed articles useful for literature review and theory building
Keywords	Facebook
Reason for keywords	Social Media shows too many references to process (56,688 last decade), Facebook also is better since it's where companies can meet end-users of products
Filters	Last decade and Topic search as initial filters since this show recent studies about Facebook
Results	13,410 references
Further refinement on category Business	as this is context of the study
Results	784 References
Further refinement on Highly cited in Field	Highly cited shows large impact on topic and can be used as quality measure and reason to view as important
Results	17
Review abstract for relevancy see below	9
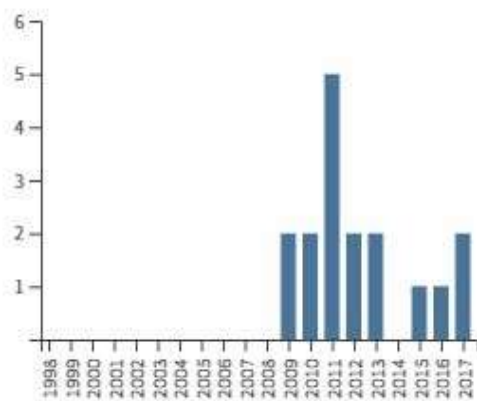
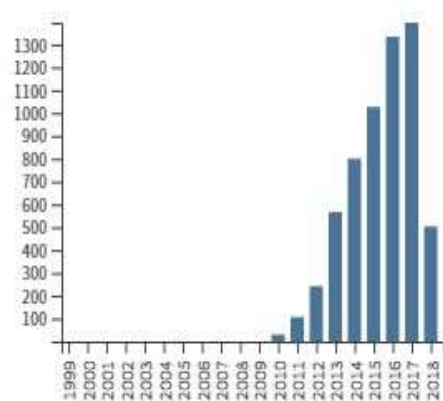Figure 3 Number of published articles with filters

Figure 2 Total citations for articles with filters

Year	Authors	Title	Journal	Reason
2010	Kaplan and Haenlein	Users of the world, unite! The challenges and opportunities of Social Media	BUSINESS HORIZONS	Highest cited, explains what Social Media means and what kinds of Social Media there are
2011	Kietzmann et al.	Social media? Get serious! Understanding the functional building blocks of social media	BUSINESS HORIZONS	Reviews Social Media and how business can engage with it and proposes a model of 7 blocks
2009	Waters et al.	Engaging stakeholders through social networking: How nonprofit organizations are using Facebook	PUBLIC RELATIONS REVIEW	On Facebook itself and how organizations use this platform to create social relationships
2011	Hanna et al.	We're all connected: The power of the social media ecosystem	BUSINESS HORIZONS	Co-creation (other required theory) on Facebook and how to measure this
2010	Hennig-Thurau et al.	The Impact of New Media on Customer Relationships	JOURNAL OF SERVICE RESEARCH	About Facebook and how to interact effectively with customers and measurements of this
2011	Lian et al.	What Drives Social Commerce: The Role of Social Support and Relationship Quality	INTERNATIONAL JOURNAL OF ELECTRONIC COMMERCE	Factors that explain the ongoing participation in social commerce
2009	Bortree and Seltzer	Dialogic strategies and outcomes: An analysis of environmental advocacy groups' Facebook profiles	PUBLIC RELATIONS REVIEW	Explains engagement between people and organizations on Facebook
2011	Muntinga et al.	Introducing COBRAs Exploring motivations for brand-related social media use	INTERNATIONAL JOURNAL OF ADVERTISING	Possibly: explains why people engage on Facebook, but is brand focused.
2013	Huang and Benyoucef	From e-commerce to social commerce: A close look at design features	ELECTRONIC COMMERCE RESEARCH AND APPLICATIONS	Relevant design features on Facebook to be successful

Facebook	Web 2.0	Social Media	Social Networking/networks	User Generated Content	Facebook
Kaplan and Haenlein, 2010	Platform to facilitate information generation and sharing by users and the platform for the evolution of Social Media.	Build upon Web 2.0 that allows the generation and sharing of User Generated Content: "revolutionary new trend"	First Weblogs, but now facilitates creating a personal profile that can connect to friends.	"sum of all ways in which people make use of SM" Three qualifications: 1 Publicly accessible 2 Creative effort 3 Outside professional practices	Social Networking Application with high self-presentation, allows the sharing of pictures, videos and other forms of media.
Kietzmann et al., 2011	Keyword, but not explained further.	Highly interactive platform that facilitates generation and sharing of User Generated Content	Mentions Sixdegrees already in 1997, but not further explained.	Keyword, but not explained further	Now for the general masses, everyone can set up a profile.

Waters et al., 2009	Not mentioned.	Variety of ways to interact with organizations and to develop relationships with important publics.	Place for Organizational profiles, public relationships that allow User Generated Content and spreading of information.	Part of Social Networking.	Facebook is a Social Networking Site where organizations can connect with customers.
Hanna et al., 2011	Highly interactive platform, people decide what to talk about and can engage with companies.	Ecosystem of related elements that allow consumer connectivity and interactivity.	Place created by many people that create User Generated Content and is about experiences.	Not further defined.	Platform that empowers consumers to "...connect, share, and collaborate, creating spheres of influence..."
Hennig-Thurau et al., 2010	Not mentioned	Calls this New Media, where people engage online in real-time, everywhere and messages are present long after the conversation.	Platform to create, share content and build relationships.	Is a mass phenomenon and often refers to brands, companies and products.	A form of New Media that empowers customers.
Lian et al., 2011	Not mentioned	Facilitates product information sharing, advising and social interaction.	Platform where people interact and most content is created by the users.	Most information on social network sites.	As an example of Social Media.
Bortree and Seltzer, 2009	Web 2.0 is the base for Social Media.	Not explained further.	Platform for an organizational profile and place to interact with important publics.	Posts made by users while interacting on or with an organizational profile.	Place where people can create profiles and interact together.
Muntinga et al., 2011	Web 2.0 is the base for Social Media.	Platforms that enable people to interact, express, share and create content online.	Not further defined.	Content created by consumers instead of companies.	As example of Social Media
Huang and Benyoucef, 2013	Platform for collective intelligence, supports creation and sharing of User Generated Content	Build upon Web 2.0 and provides information to customers.	Build on Web 2.0 and allows people to connect and interact which creates communities.	Easy access increases User Generated Content, includes likes, sharing and commenting.	Facebook allows organizations to connect and interact with customers.

July 12th, 2018 Search for Facebook AND Customer Engagement

Action search on WebofScience	Reason and results
Facebook AND Customer Engagement, last decade	To find literature on what is known on the combination between Facebook and Customer Engagement, refining to recent literature: 131 References
Refine on Business	Context for research: 53 references
Facebook AND consumer engagement, last decade	Consumer is often used instead of Customer shows 177 references
Refine on business	Again, the context at hand 78 references
Facebook AND Customer Engag*, last decade	Some authors use Engaging and such: 178 references
Refine on business	70 references
Facebook and Consumer Engag*	Consumers and customers are often used interchangeably, 252 references
Refine on business	112 references
Generated citation reports for above actions	Retraceable steps
Customer Engag* and Consumer Engag* as keywords instead of Engagement	Engag* shows references for Engagement, Engaging and related terms and provide a better overview of the literature
Literature search for Facebook AND Consumer Engag* OR Customer Engag* to combine both variations, last decade	328 references

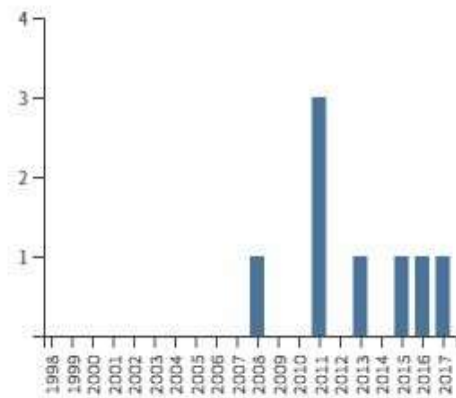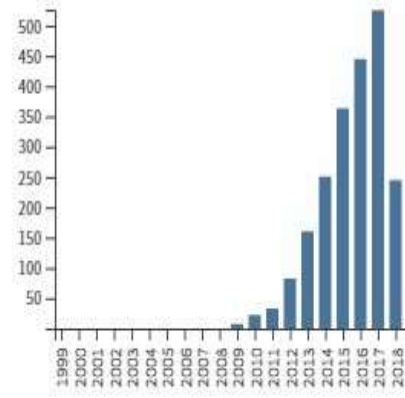| Refine on Highly Cited	Shows best available literature on this domain: 8 references
Review abstracts for useful literature	6 references

Figure 5 Number of articles with filters

Figure 4 Total citations for articles with filters

Year	Authors	Title	Journal	Reason
2011	Kietzmann et al.	Social media? Get serious! Understanding the functional building blocks of social media	BUSINESS HORIZONS	Highest cited paper within search, already selected for Facebook
2011	Hanna et al.	We're all connected: The power of the social media ecosystem	BUSINESS HORIZONS	Also selected for Facebook, clearly about people engaging with organizations
2013	Goh et al	Social Media Brand Community and Consumer Behavior: Quantifying the Relative Impact of User- and Marketer-Generated Content	INFORMATION SYSTEMS RESEARCH	Analyses different impacts of UGC (engagement of people) and Marketing content
2011	Muntinga et al.	Introducing COBRAs Exploring motivations for brand-related social media use	INTERNATIONAL JOURNAL OF ADVERTISING	Already in Facebook literature, shows intersection with engagement
2015	Aquirre et al.	Unravelling the Personalization Paradox: The Effect of Information Collection and Trust-Building Strategies on Online Advertisement Effectiveness	JOURNAL OF RETAILING	Possibly, although this seems to be about people not engaging when they feel vulnerable
2017	Phua et al.	Gratifications of using Facebook, Twitter, Instagram, or Snapchat to follow brands: The moderating effect of social comparison, trust, tie strength, and network homophily on	TELEMATICS AND INFORMATICS	Explains why people engage with brands on Social Networking sites with gratification

		brand identification, brand engagement, brand commitment, and membership intention		

Facebook and Customer Engagement	Relationships/community	Communication	Engagement on FB
Kietzmann et al. 2011	People connect based on shared interests, knowing each other only virtual or even in real life. Facebook facilitates relationships, often as extension of real-life relationships.	Many interactions happen outside the firm, Facebook facilitates communication between groups and individuals.	People already connect with shared objects, firms can build stronger relationships here.
Hanna et al. 2011	Companies can connect to people where they already are and willing to interact with firms.	Consumers are now active participants, they talk to the company and others and do not want to listen to advertisement. Facebook allows people to gain influence.	People can join Facebook in order to engage with firms and other customers. Firms need to engage with people in order to survive.
Muntinga et al. 2011	Interacting about brands, stronger impact than traditional media	Facebook allows users to interact, express, share and create content about anything, such as product information.	Three ways of engaging on Facebook: Consuming, Contributing and Creating.
Phua et al. 2017	Connect with others, share interests quickly.	Greater interactivity than just listening, newsfeed allow continuous updates.	Facebook can stimulate engagement through the ability to socialize, access to entertainment, improve self-status and spreading of information.
Goh et al. 2013	Engagement increases participation in community.	Often consumer-consumer, one-to-one with marketeer.	Leads to more expenditures, engaging increases word of mouth, information sharing and User Generated Content
Aguirre et al. 2015	Personal and overt information seeking improves trust and lead to better click-through rates.	Personal communication improves relationships.	

July 12th, 2018

Literature search for Facebook AND Cocreation

| Action	Reason and results
Facebook AND Cocreation, last decade	1 reference
Facebook AND cocreat*, last decade	2 references
Facebook AND Co-creation, last decade	54 references
Facebook AND Co-creat*, last decade	65 references
Facebook AND Cocreat* OR Co-creat*, last decade	66 references
Filter on Business	Context for study: 30 references
Review abstracts, ranked on times cited	6 references included
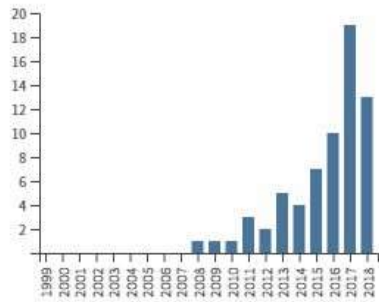
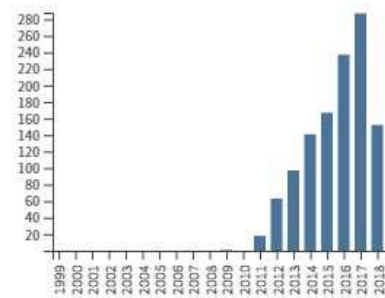Figure 6 Number of publications with filters

Figure 7 Total citations for articles with filters

Year	Authors	Title	Journal	Reason
2011	Hanna et al.	We're all connected: The power of the social media ecosystem	BUSINESS HORIZONS	Already included in Facebook, highest cited
2013	Hajli	The role of social support on relationship quality and social commerce	TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE	Proposes a model on how social support influences cocreation
2013	Turri et al.	DEVELOPING AFFECTIVE BRAND COMMITMENT THROUGH SOCIAL MEDIA	JOURNAL OF ELECTRONIC COMMERCE RESEARCH	Model explaining cocreation on Facebook and the importance of relationship
2016	Marbach et al.	Who are you and what do you value? Investigating the role of personality traits and customer-perceived value in online customer engagement	JOURNAL OF MARKETING MANAGEMENT	Mentions possible factors for people to co-create/engage
2016	Sorensen et al.	Using social media posts as resources for engaging in value co-creation the case for social media-based cause brand communities	JOURNAL OF SERVICE THEORY AND PRACTICE	About Facebook, cocreation and Customer Engagement
2013	Rolland and Parmetier	The benefit of social media Bulletin board focus groups as a tool for co-creation	INTERNATIONAL JOURNAL OF MARKET RESEARCH	Why people start to co-create on SM

Facebook and Co-creation	affection	Relationship and community	Co-creation	Co-creation on Facebook
Turri and Smith 2013	Emotional relationships based on shared values and identification.	Authors focus on artists and personal branding. Shared values and interaction lead to relationships and communities on Facebook.	Takes the form of purchase behaviour, advocacy and interacting.	Facebook participation as content creators, posting comments and sharing info above just consuming, on behalf of artist.
Sorensen et al. 2017	Engagement is a psychological state of mind. People have their own goals in relation to the company.	Authors look into cause brands which produce altruistic value. Communities have social context, structure and scale with content and storytelling.	Is active engagement such as sharing or creating posts, advocacy for a social good and interacting.	Facebook allows longer posts and stronger self-presentation.
Rolland and Parmetier 2014	Not mentioned.	People move from short term exchange towards relationships. Interaction stimulates relationships.	Customers are co-creators of meaning and knowledge and they can offer product ideas.	Facebook useful to create a discussion group which helps an organization figure thing out.
Marbach et al. 2016	Engagement is a psychological state of mind. People have their own goals in relation to the company based on an object.	Creating experiences lead to relationships with a focal object. Higher perceived (social) value means stronger relationships and larger communities online.	Higher level engagement than participation and involvement: co-creating experiences which leads to better customer-perceived value.	Lead to 6 values for Facebook users: Social, Play, Efficiency, Excellence, Aesthetic and Altruistic.
Hajli 2014	Emotional support by the online community.	People gather around shared interests and the present social support creates communities.	Sharing knowledge and information, creating content and leads to loyalty.	Facebook as place for the community.
Hanna et al. 2011	Not mentioned.	The interactivity and connectivity of Facebook leads to vast networks of people with a few people with great influence.	People have a role in everything today, such as marketing through creating, sharing and recommending information.	Not specifically mentioned.

July 12th, 2018

Literature search for Co-creation and Customer Engagement

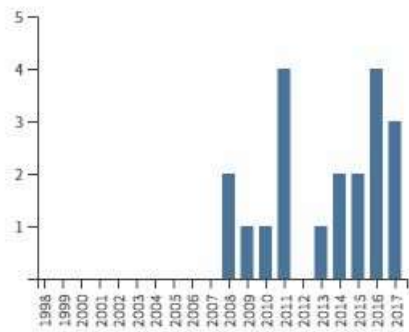| Action	Reason and Results
WebofScience search for Consumer Engag* OR Customer Enag* AND Co-creat* or Cocreat* Last Decade	These search terms show the various possibilities for Customer Engagement together with co-creation 448 references
Filter on Business	230 References
Filter on Highly cited	Best articles among these 20 references
Review abstracts	8

Figure 8 Number of publications with filters
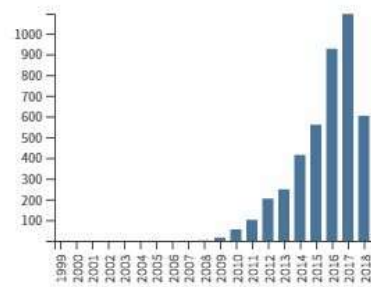
Figure 9 Total citations for articles with filters

Year	authors	Title	Journal	Reason
2008	Payne et al.	Managing the co-creation of value	JOURNAL OF THE ACADEMY OF MARKETING SCIENCE	Highest cited, about customer engaging towards co-creation
2010	Van Doorn et al.	Customer Engagement Behavior: Theoretical Foundations and Research Directions	JOURNAL OF SERVICE RESEARCH	Explains what kinds of co-creation and why people do so
2011	Brodie et al.	Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research	JOURNAL OF SERVICE RESEARCH	About the intersection of Co-creation and Customer Engagement
2011	Hanna et al.	We're all connected: The power of the social media ecosystem	BUSINESS HORIZONS	Included in Facebook too
2008	Etgar	A descriptive model of the consumer co-production process	JOURNAL OF THE ACADEMY OF MARKETING SCIENCE	Why people engage to co-produce
2009	Nambisan and Baron	Virtual Customer Environments: Testing a Model of Voluntary Participation in Value Co-creation Activities	JOURNAL OF PRODUCT INNOVATION MANAGEMENT	Co-creation on a virtual platform
2014	Jaakkola and Alexander	The Role of Customer Engagement Behavior in Value Co-Creation: A Service System Perspective	JOURNAL OF SERVICE RESEARCH	Why people engage and co-create
2016	Storbacka et al.	Actor engagement as a micro foundation for value co-creation	JOURNAL OF BUSINESS RESEARCH	Explains that engagement is needed for co-creation

July 12th, 2018

Search for Facebook and Customer Engagement and Co-creation

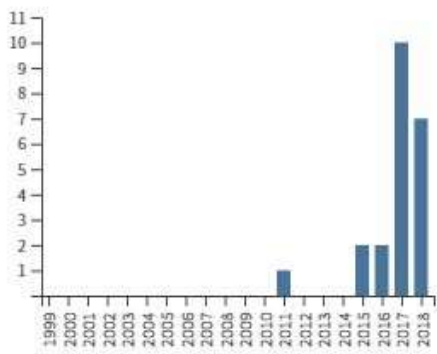| Action	Reason and results
WebofScience search for Facebook AND Co-creat* or Cocreat* AND Consumer Engag* OR Customer Engag* Last decade	Search for literature on all three fields 22 references
Review Abstracts	7 references to further process

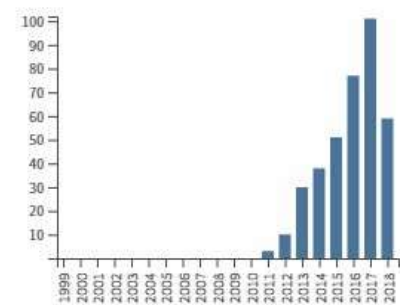Figure 10 Number of publications with filters

Figure 11 Total citations for articles with filters

Year	Authors	Title	Journal	Reason
2011	Hanna et al.	We're all connected: The power of the social media ecosystem	BUSINESS HORIZONS	Highly cited on all three search terms, already included elsewhere
2016	Marbach et al.	Who are you and what do you value? Investigating the role of personality traits and customer-perceived value in online customer engagement	JOURNAL OF MARKETING MANAGEMENT	Already included on Facebook/co-creation
2017	Sorensen et al.	Using social media posts as resources for engaging in value co-creation the case for social media-based cause brand communities	JOURNAL OF SERVICE THEORY AND PRACTICE	Already in Facebook and co-creation
2018	Westerberg et al.	An examination of how alcohol brands use sport to engage consumers on social media	DRUG AND ALCOHOL REVIEW	Possibly, although about brands it does explain higher engagement

2018	Huang and Chen	How consumers become loyal fans on Facebook	COMPUTERS IN HUMAN BEHAVIOR	About why people engage, become fans on Facebook in particular and how it leads to co-creation
2018	Lee and Kim	Customer benefits and value co-creation activities in corporate social networking services	BEHAVIOUR & INFORMATION TECHNOLOGY	On all three keywords
2017	Achen	Measuring social media marketing: moving towards a relationship-marketing approach	MANAGING SPORT AND LEISURE	Possibly explains what to measure

Customer Engagement and Co-creation	Relationship with organization	Customer Engagement and Co-creation
Payne et al. 2008	Interactive dialogue. Cognitive based, object is useful in goal-orientated behaviour or Emotional based, experience of consumption.	Co-creation always present, but Engagement leads to the emotional bond and willingness to co-develop new products.
Etgar 2008	Present when co-producing. Has Economic drivers, Psychological drivers split in extrinsic and intrinsic values and Social drivers.	Co-creation at consumption, but co-production when customers are engaged and involved in the production process such as customization.
Hanna et al. 2011	Customers now influence organizations.	People engage online towards creating their own content, sharing and commenting on behalf of a company.
Jaakkola and Alexander 2014	Commitment to the organization, willingness to co-create. Strong relationships lead to high-quality interactions and dialogue.	Customers engagement leads customers to provide resources for the firm, beyond economical decision-making.
Nambisan and Baron 2009	Leads to forms of gratification.	People engage online towards co-creation because of 4 types of gratifications experienced.
Brodie et al. 2011	Interactive and marketing together with company.	Engagement can be involvement with a focal object, but participation (interactive) is when people co-create.
Storbacka et al. 2016	Existing connections affect how actors engage.	Engagement leads to co-production, co-developing and such over just value-in-use from consumption.

van Doorn et al. 2010	Customer-firm-relationship and the behaviour from this.	Engagement based on motivational drivers lead to recommending, aid to others and creating content on behalf of the firm.

Appendix C Survey
Five-point Likert scale questions

1 Strongly Disagree -2 Disagree -3 Neutral -4 Agree -5 Strongly Agree

Introduction

This survey is about your willingness to engage with a company of your choosing on Facebook, what benefits you expect from this and your willingness to help the company out.

This survey will begin asking you about Potential Benefits you may experience, then asking about how much attached you are towards a company in Customer Engagement and your intention to offer help to a company on Facebook in Intention to Co-create.

The questions are statements regarding your attitude, assumptions and ideas towards something and ask for a response ranging from Strongly Disagree towards Strongly Agree.

At the end of the survey you can leave your email address to participate for the gift cards at Bol.com. (one card of 20 euros and two cards of 10 euros, family members of me are not eligible for the gift cards)

Potential Benefits

This section asks you about what use or extra's you expect when you visit a company's Facebook page and community around this.

There are 4 potential Benefits following namely Cognitive Benefits, Social Benefits, Personal Benefits and Hedonic Benefits.

Cognitive Benefits (based on Lee and Kim, 2018; Nambisan and Baron, 2009)

This concerns your ability to know, understand and use a product or service from a company.

- I think that I enhance my knowledge about the product (or service) and its usage on a company's profile and pages on Facebook
- I think that I obtain solutions to solve specific product-related (or service related) problems with Facebook (***Removed after Factor Analysis)***
- I think that I enhance my knowledge about advances in product-related (or service related) technology on the company's Facebook
- I think that I also enhance my knowledge about other products (or services) which are associated with the company's product (or service) on Facebook

Social Benefits (based on Lee and Kim, 2018; Nambisan and Baron, 2009)

This is about your ability to create and manage relationships with others and a sense of community on a company's Facebook.

- I think that I expand my personal/social networks in the company's Facebook
- I think that I strengthen positive affiliation with members (other users or company staff) in the company's Facebook
- I think that I enhance my sense of belongingness or intimacy with community on the company's Facebook

Personal Benefits (based on Nambisan and Baron, 2009)

This concerns yourself, your identity and status within a Facebook community.

- I think that I can enhance my status/reputation as product expert in the company's Facebook community.
- I think that I can reinforce my product-related credibility/authority in the company's Facebook community
- I think that I can derive satisfaction from influencing the product (or service) usage by other customers on the company's Facebook (***Removed after Factor Analysis)***
- I think that I can derive satisfaction from influencing product design and development (***Removed after Factor Analysis)***

Hedonic Benefits (based on Lee and Kim, 2018; Nambisan and Baron, 2009)

This concerns any pleasure and enjoyment you can experience.

- I think that I spend some enjoyable and relaxing time on the company's Facebook
- I think that I derive fun and pleasure from the experiences on the company's Facebook
- I think that I derive enjoyment from problem solving, idea generation, and so on the company's Facebook (***Removed after Factor Analysis)***

Customer Engagement

This section asks you about your connection, feelings and attitudes towards a company and its products and services.

Customer Engagement (control variable, based on Lee and Kim, 2018; Nambisan and Baron, 2009)

- The products (or services) of the company, which I have used through the company's Facebook, is important to me (***Removed after Factor Analysis)***
- The products (or services) of the company, which I have used through the company's Facebook, is relevant to me (***Removed after Factor Analysis)***
- The products (or services) of the company, which I have used through the company's Facebook, means a lot to me
- The products (or services) of the company, which I have used through the company's Facebook, is of concern to me

Intention to Co-create Value (based on Lee and Kim, 2018)

Co-creating value refers to creating more value you get from a product, improve the use of a product being able to customize products as you see fit or otherwise improve your experience as customer together with a company.

It includes actions together or for a company such as liking and sharing posts from that company, posting positive comments, giving advice on how to improve existing goods and services or even propose new products.

Some examples for co-creation:

- give a review the company can use to improve their products or services
- recommend and share a company to a friend on Facebook
- displaying your purchases for others to see

These basically are marketing services you do for the company. However, more intensive forms of co-creation would be to help a company design or test new products and services.

- I am willing to continue or start to participate in value Co-creation activities on the company's Facebook
- I will continuously or start to make efforts to attend value co-creating activities on the company's Facebook
- I will continue or start to frequently participate in value co-creating activities on the company's Facebook

Appendix D Discriminant Validity, single linear regression and Model summaries

Discriminant validity	AVE between	Correlation	Correlation^2	AVE-Correlation^2 >0
Cognitive/Social	0,587	0,326	0,107	0,481
Cognitive/Personal	0,625	0,425	0,180	0,445
Cognitive/Hedonic	0,679	-0,396	0,157	0,523
Cognitive/Customer Engagement	0,646	-0,510	0,260	0,386
Cognitive/Co-creation	0,718	0,421	0,177	0,541
Social/Personal	0,626	0,425	0,180	0,446
Social/Hedonic	0,680	-0,370	0,137	0,543
Social/Customer Engagement	0,647	-0,211	0,044	0,603
Social/Co-creation	0,719	0,273	0,074	0,645
Personal/Hedonic	0,718	-0,227	0,052	0,666
Personal/Customer Engagement	0,685	-0,304	0,092	0,593
Personal/Co-creation	0,757	0,244	0,060	0,698
Hedonic/Customer Engagement	0,740	0,483	0,234	0,506
Hedonic/Co-creation	0,740	-0,409	0,167	0,572
Customer Engagement/Co-creation	0,779	-0,494	0,244	0,535

Cognitive Benefits

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-1,601	,149		-10,740	,000
	CB Scale	1,243	,243	,451	5,108	,000

a. Dependent Variable: LN_CC

Social Benefits

Coefficientsª

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1,355	,125		-10,869	,000
	SB Scale	,962	,232	,380	4,154	,000

a. Dependent Variable: LN_CC

Personal Benefits

Coefficientsª

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1,250	,134		-9,347	,000
	PB Scale	,747	,248	,286	3,012	,003

a. Dependent Variable: LN_CC

Hedonic Benefits

Coefficientsª

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1,531	,120		-12,740	,000
	HB Scale	1,209	,206	,502	5,862	,000

a. Dependent Variable: LN_CC

Customer Engagement

Coefficientsª

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1,587	,118		-13,451	,000
	CE Scale	1,470	,227	,539	6,471	,000

a. Dependent Variable: LN_CC

Model with all Predictors

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1,947	,154		-12,664	,000					
	PB Scale	-,057	,254	-,022	-,223	,824	,286	-,023	-,018	,662	1,511
	SB Scale	,278	,255	,110	1,088	,279	,380	,109	,086	,613	1,631
	CB Scale	,447	,277	,162	1,614	,110	,451	,161	,128	,619	1,617
	HB Scale	,559	,242	,232	2,309	,023	,502	,227	,183	,619	1,615
	CE Scale	,820	,279	,301	2,935	,004	,539	,284	,232	,594	1,682

a. Dependent Variable: LN CC

Model with Cognitive Benefits, Hedonic Benefits and Customer Engagement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1,852	,150		-12,361	,000					
	CB Scale	,818	,246	,297	3,324	,001	,451	,314	,272	,837	1,195
	HB Scale	,920	,215	,382	4,276	,000	,502	,392	,349	,837	1,195
2	(Constant)	-1,918	,146		-13,128	,000					
	CB Scale	,504	,260	,183	1,942	***,055***	,451	,191	,153	,697	1,434
	HB Scale	,649	,227	,270	2,867	,005	,502	,276	,226	,700	1,428
	CE Scale	,818	,277	,300	2,957	,004	,539	,284	,233	,602	1,662

a. Dependent Variable: LN CC

Analysis model, Customer Engagement with Hedonic Benefits

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,597[a]	,357	,344	,41465	,357	27,988	2	101	,000	2,181

a. Predictors: (Constant), HB Scale, CE Scale

b. Dependent Variable: LN CC

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1,772	,127		-13,977	,000		
	CE Scale	1,037	,256	,381	4,052	,000	,722	1,385
	HB Scale	,726	,226	,301	3,208	,002	,722	1,385

a. Dependent Variable: LN CC