Brand content diffusion on Social Networking Sites: Exploring the triadic relationship between the brand, the individual, and the community
Araujo, T.B.
Author contributions
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This dissertation is based on four articles submitted for publication. The co-authors of each article are Theo Araujo (TA), Peter Neijens (PN) and Rens Vliegenthart (RV), and their contributions are listed below.

CHAPTER 1 – THE INFLUENCE OF THE MESSAGE
(AUTHORS: TA, PN AND RV)

TA designed the study and was responsible for the data collection process, as well as the manual and automated content analysis, including the coordination of coders, and the data analysis. PN provided valuable insights on the research design and theoretical framework. RV provided guidance to the data analysis. Both PN and RV reviewed several versions of the manuscript throughout the peer review process, contributing to its development and to the final text.

CHAPTER 2 – THE INFLUENCE OF THE NETWORK
(AUTHORS: TA, PN AND RV)

TA designed the study and was responsible for the data collection process, as well as the automated content analysis, network analysis and data analysis. PN and RV provided valuable insights on the research design, theoretical framework and data analysis. PN and
RV reviewed several versions of the manuscript throughout the peer review process, contributing to its overall development and the final text.

**CHAPTER 3 – THE INFLUENCE OF PERSONALITY**  
(AUTHORS: TA, PN AND RV)

TA designed the study and was responsible for the data collection, working together with a panel research company. PN and RV provided valuable insights on the survey development, theoretical framework and data analysis. PN and RV reviewed several versions of the manuscript prior to submission, contributing to its overall development and the final text.

**CHAPTER 4 – CONSEQUENCES OF THE PROCESS**  
(AUTHOR: TA)

TA was responsible for the data collection and overall manuscript development. PN and RV provided high-level feedback on the final version of the manuscript.
Summary
Brand content diffusion on Social Networking Sites

This dissertation explores the antecedents and consequences of brand content diffusion on Social Networking Sites (SNSs), by investigating what influences SNS users to pass along messages created by brands via retweeting on Twitter, and sharing on Facebook. The dissertation is organized in four chapters. The first three chapters explore the antecedents of this process, namely how (1) message, (2) network and (3) personality characteristics influence SNS users to retweet or share brand messages. The concluding chapter (4) investigates the consequences of this behavior, particularly how it influences attitudes towards the brand, and towards the message. The Dissertation Overview summarizes the theoretical and practical implications from the overall findings of this dissertation.

CHAPTER 1 – THE INFLUENCE OF THE MESSAGE

The study included in Chapter 1 investigates how message characteristics influence pass-along behavior of content from top global brands on Twitter. Employing automated data extraction and natural language processing procedures, the study categorizes 19,343 brand messages, and evaluates how message characteristics such as informational, emotional and traceability cues influence pass-along behavior via retweets. The results indicate that informational cues are predictors of higher levels of retweeting. This particularly is the case when the information cues provided specific details about products, or has links to the brand website, to SNSs, and to photos or videos. And, although emotional cues do not influence retweeting on their
own, they reinforce the effects of informational cues and hashtags when combined in the same message. These results indicate, therefore, that Twitter users are especially interested in messages that are rich in informational content, and are more likely to pass such messages along. These findings are particularly important to practice, considering that the way in which a message is written and the information that it contains are arguably the characteristics that are most under the brand’s control.

Chapter 2 – The Influence of the Network

Chapter 2 investigates the influence of specific types of users on brand content diffusion, by following the diffusion cascade of brand messages on Twitter and identifying which users influenced others to retweet brand content. In total, the study analyzed data from 30 top global brand profiles and from over 46,000 users who retweeted brand content, identifying which users they followed and which users followed them in order to investigate network characteristics. Based on these network characteristics, the study categorized users as (a) influentials – individuals who have above average influence, including celebrities and public figures -, (b) information brokers – individuals that connect groups that otherwise would have weak or no ties, and (c) strong ties – individuals that have of a strong personal connection. The results indicate that influentials and information brokers are associated with higher levels of retweeting for brand content. In addition, although information brokers have a larger overall influence on retweeting, they are more prone to do so when influentials are mentioned on the brand tweet.
This provides support to the strategy of connecting the brand with influential users, such as celebrities or public figures.

CHAPTER 3 – THE INFLUENCE OF PERSONALITY

The study included in Chapter 3 investigates how personality characteristics are associated with the decision to pass along brand messages on SNSs, drawing from earlier research on self-disclosure and self-presentation. Using a survey with active SNS users, this study explores the association between passing along brand messages and personality characteristics such as the Big Five Personality Traits and Need for Popularity. The results show that passing along brand content on SNSs is more prevalent among people that are more friendly and warm towards others (Agreeableness) and who enjoy social exchange (Extraversion). The people who have a strong desire to be popular (Need for Popularity), however, are the ones most likely to pass along brand content. When it comes to differences between Facebook and Twitter, extroverts prefer to share brand messages on Facebook, while people who are more self-disciplined and results-oriented (Conscientiousness) are more likely to prefer to retweet brand messages on Twitter.

CHAPTER 4 – CONSEQUENCES OF BRAND CONTENT DIFFUSION

The study presented in Chapter 4, using a survey with active social media users, evaluates the influence over brand attitudes and willingness to pass along brand messages from three aspects of the communication process: the message, the sender and the receiver. The results indicate that message evaluation, the relationship with the
sender and the receiver’s own opinion leadership and opinion-seeking levels influence both willingness to pass along the message further and brand attitudes. More specifically, the more informative and entertaining that the receiver finds the message to be, the more he or she will be willing to pass it along, and the better his or her attitudes towards the brand. Moreover, opinion leaders, who engage regularly in consumer-to-consumer electronic Word-of-Mouth, are more willing to pass along messages created by brands. Opinion seekers, who regularly seek advice from others online, are more likely to have more positive attitudes towards the brand. Finally, receiving a message from a close friend has a positive influence on attitudes towards the brand when compared to receiving it from other sources.
Samenvatting
In deze dissertatie wordt onderzocht welke factoren van invloed zijn op de verspreiding van merkcontent op sociale netwerksites (SNS's) en welke effecten deze berichten hebben op de ontvangers. Het onderzoek richt zich op de verspreiding van merkberichten -berichten die een merk verspreidt- door middel van ‘retweets’ op Twitter en ‘delen’ op Facebook. De dissertatie bestaat uit vier hoofdstukken. De eerste drie hoofdstukken behandelen de antecedenten van dit proces, namelijk in hoeverre (1) het bericht, (2) het netwerk en (3) persoonlijkheidskenmerken van invloed zijn op de keuze van SNS-gebruikers om merkberichten te retweeten of te delen. In het afsluitende hoofdstuk (4) worden de gevolgen van dit gedrag onderzocht en dan met name in hoeverre de houding ten opzichte van zowel het merk (de merkattitude) als ten opzichte van het bericht wordt beïnvloed. In de Dissertation Overview zijn de theoretische en praktische implicaties van de bevindingen van het proefschrift samengevat.

**Hoofdstuk 1 – De invloed van het bericht**

In het onderzoek van hoofdstuk 1 wordt onderzocht in hoeverre de kenmerken van een bericht van invloed zijn op het retweeten van berichten van wereldwijde topmerken. Aan de hand van geautomatiseerde gegevensverzameling en middels computergestuurde inhoudsanalyse (“natural language processing”) werden 19.343
merkberichten gecategoriseerd. Vervolgens werd onderzocht in hoeverre berichtkenmerken, zoals de aanwezigheid van informatieve, emotionele en traceerbaarheids cues van invloed zijn op het retweeten van de berichten. De resultaten laten zien dat berichten die feitelijke informatie bevatten vaker worden geretweet. Dit is met name het geval als die informatie over producten gaat of er koppelingen gemaakt worden naar de website van het merk, naar SNS's en naar foto's of video's. Hoewel emotionele kenmerken op zichzelf niet van invloed zijn op retweet-gedrag, versterken ze wel de effecten van informatieve signalen en hashtags in hetzelfde bericht. Deze resultaten duiden er op dat Twitter-gebruikers vooral geïnteresseerd zijn in berichten die informatieve content bevatten en dat ze eerder geneigd zijn om dergelijke berichten door te sturen. Deze bevindingen zijn van belang voor de praktijk, omdat de wijze waarop een bericht is geschreven en de informatie die het bevat kenmerken zijn waarover het merk daadwerkelijk controle heeft.

**HOOFDSTUK 2 – DE INVLOED VAN HET NETWERK**

In hoofdstuk 2 wordt de invloed van de Twitter-gebruikers op de verspreiding van merkcontent behandeld. De verspreiding van merkberichten op Twitter wordt gevolgd waarbij gekeken wordt welke gebruikers anderen beïnvloeden om merkcontent te retweeten. In totaal zijn in het onderzoek de gegevens geanalyseerd van dertig internationale topmerken en van meer dan 46.000 gebruikers die merkcontent hebben geretweet. Voor het onderzoek werd de positie van de gebruiker in het netwerk van Twitter-gebruikers vastgesteld: welke gebruikers zij volgden en door welke gebruikers zij zelf werden gevolgd. Op basis van deze netwerkeigenschappen zijn drie typen
gebruikers geïdentificeerd: (a) invloedrijke personen – personen die een bovengemiddelde invloed hebben op het retweeten van berichten door hun volgers, zoals beroemdheden en publieke figuren; (b) informatiemakelaars – personen die groepen met elkaar verbinden die anders niet of nauwelijks met elkaar in aanraking zouden komen; en (c) hechte contacten – personen die een sterke onderlinge band hebben. De resultaten duiden erop dat invloedrijke personen en informatiemakelaars sterke invloed hebben op het retweeten van merkcontent: als zij een merkbericht retweeten is de kans groot dat ook hun volgers het bericht verder retweeten. Bovendien bleek uit het onderzoek dat als invloedrijke personen worden genoemd in de tweet van een merk de kans nog groter is dat informatiemakelaars het merk retweeten. Dit bevestigt de effectiviteit van een strategie waarbij merken invloedrijke personen, zoals beroemdheden en publieke figuren, aan zich binden.

**HOOFDSTUK 3 – DE INVLOED VAN DE PERSOONLIJKHEID**

In hoofdstuk 3 wordt onderzocht in hoeverre persoonlijkheidskenmerken van invloed zijn op het besluit om merkberichten door te sturen, waarbij gebruik wordt gemaakt van resultaten uit eerder onderzoek naar ‘self-disclosure’ en ‘self-presentation’. Aan de hand van een survey onder actieve SNS-gebruikers is onderzocht wat het verband is tussen het doorgeven van merkberichten en persoonlijkheidskenmerken, zoals de Big Five van persoonlijkheidsdimensies en de behoefte aan populariteit. De resultaten laten zien dat het doorgeven van merkcontent op SNS's
vaker voorkomt bij mensen die vriendelijker en warmer naar anderen zijn (mildheid) en die het leuk vinden om informatie uit te wisselen op sociale media (extraversie). Bij mensen die heel graag populair willen zijn (behoefte aan populariteit) is de kans echter het grootst dat ze merkberichten doorgeven. Wat betreft de verschillen tussen Facebook en Twitter delen extraverte mensen merkberichten liever op Facebook, terwijl mensen met meer zelfdiscipline en resultaatgerichtheid (ordelijkheid) eerder geneigd zijn om merkberichten op Twitter te retweeten.

**HOOFDSTUK 4 – GEVOLGEN VAN DE VERSPREIDING VAN MERKCONTENT**

In hoofdstuk 4 wordt onderzocht wat de invloed is van merkberichten op de merkattitude en de bereidheid om merkberichten door te sturen is, aan de hand van een survey onder actieve gebruikers van sociale media. Hierbij wordt gekeken naar drie aspecten van het communicatieproces: het bericht, de zender en de ontvanger. De resultaten duiden erop dat de beoordeling van het bericht, de relatie met de zender en het opinieleaderschap en mate van opiniezoekgedrag van de ontvanger van invloed zijn op de bereidheid om een bericht door te sturen en tevens de merkattitude te veranderen. Meer specifiek betekent dit dat hoe informatiever en onderhoudender de ontvanger het bericht vindt, des te meer hij of zij bereid is om dit door te sturen en des te positiever zijn of haar merkattitude is na het lezen van het merkbericht. Bovendien zijn opinieleaders, personen die regelmatig deelnemen aan elektronische ‘Word-of-Mouth’ met andere
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consumenten, meer bereid om berichten van merken door te geven. De merkattitude van opinievolgers, personen die regelmatig online advies vragen aan anderen, wordt vaker positief beïnvloed door merkberichten die ze ontvangen. Ten slotte heeft een bericht dat is ontvangen van een goede vriend een sterker effect op de merkattitude dan een bericht dat van andere bronnen afkomstig is.
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Curriculum vitae
Theo Araujo was born on August 5, 1980 in São Paulo. He completed a Research Master in Communication Science (cum laude) at the University of Amsterdam, and has worked at the Amsterdam School of Communication Research (ASCoR) to finish his dissertation on brand content diffusion on Social Networking Sites. Before coming to the Netherlands, he received a bachelor’s degree in Social Communication with major in Journalism from the Universidade de São Paulo (USP), and an Executive MBA with major in Marketing from the Escola Superior de Propaganda e Marketing (ESPM) in Brazil. He has worked for about five years at the online portal Terra Networks Brazil in several roles, including reporter, editor and manager, and for about ten years for Hewlett-Packard in Brazil and in the Netherlands. At Hewlett-Packard, he held a variety of regional and global program management functions, and his last role was of senior manager of the Localisation Services Team for PPS Support. He now works as Assistant Professor in Corporate Communication at the University of Amsterdam.