Application for a Grant
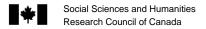
Internal use
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Identification

This page will be made available to selection committee members and external assessors.

Funding opportunity
Insight Development Grant

Grant type (Strategic Grants only)
Individual

Application title
Linguistic Mimicry in Online Word of Mouth

Applicant family name	Applicant given name	Initials
Moore	Sarah	G

Org. code	Full name of applicant's organization and department
1480111	University of Alberta
	Marketing, Business Economics and Law

Org. code	Full name of administrative organization and department
1480111	University of Alberta
	Marketing, Business Economics and Law

Scholar type	Regular ◯ New ◉	Research Field
If New, specify category	1 ◯ 2 ◉ 3 ◯ 4 ◯	43003

Does your proposal require a multidisciplinary adjudication?   Yes ◯   No ◉

Does your proposal involve human beings as research subjects? If "Yes", consult the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* and submit your proposal to your organization's Research Ethics Board.   Yes ◉   No ◯

Does your proposal involve activity that requires a permit, licence, or approval under any federal statute; or physical interaction with the environment? If 'Yes', complete Appendices A and B.   Yes ◯   No ◉

	Year 1	Year 2	Total
Total funds requested from SSHRC (from page 6)	23,700	21,900	45,600

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2011/01/28

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Canadä

Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Family name, Given name
Moore, Sarah

Participants

List names of your team members (co-applicants and collaborators) who will take part in the intellectual direction of the research. Do not include assistants, students or consultants.

Role		
Co-applicant ⦿	Collaborator ◯	

Family name	Given name	Initials
McFerran	Brent	

Org. code	Full organization name	
9938101	University of Michigan, Ann Arbor	

Department/Division name
School of Business Administration

Role		
Co-applicant ◯	Collaborator ◯	

Family name	Given name	Initials

Org. code	Full organization name	

Department/Division name

Role		
Co-applicant ◯	Collaborator ◯	

Family name	Given name	Initials

Org. code	Full organization name	

Department/Division name

Role		
Co-applicant ◯	Collaborator ◯	

Family name	Given name	Initials

Org. code	Full organization name	

Department/Division name

Role		
Co-applicant ◯	Collaborator ◯	

Family name	Given name	Initials

Org. code	Full organization name	

Department/Division name

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sciences humaines du Canada

Family name, Given name
Moore, Sarah

Research Activity

The information provided in this section refers to your research proposal.

Keywords

List keywords that best describe your proposed research or research activity. Separate keywords with a semicolon.

online word of mouth; language; mimicry; social influence; consumer communication

Priority Areas - Priority area most relevant to your proposal.

Digital Media

Disciplines

Indicate and rank up to 5 disciplines that best correspond to your proposal.

Rank	Code	Discipline	If "Other", specify
1	62622	Marketing	
2	63024	Social Psychology	
3			
4			
5			

Areas of Research

Indicate and rank up to 3 areas of research related to your proposal.

Rank	Code	Area
1	120	Communication
2	242	Information Technologies
3		

Temporal Periods

If applicable, indicate up to 2 historical periods covered by your proposal.

From		To	
Year _____ BC ◯ AD ◯		Year _____ BC ◯ AD ◯	
_____ BC ◯ AD ◯		_____ BC ◯ AD ◯	

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Family name, Given name
Moore, Sarah

Research Activity (cont'd)

Geographical Regions
If applicable, indicate and rank up to 3 geographical regions covered by or related to your proposal. Duplicate entries are not permitted.

Rank	Code	Region
1		
2		
3		

Countries
If applicable, indicate and rank up to 5 countries covered by or related to your proposal. Duplicate entries are not permitted.

Rank	Code	Country	Prov./State
1			
2			
3			
4			
5			

Personal information will be stored in the Personal Information Bank for the appropriate program.

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Page 4

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Family name, Given name

Moore, Sarah

Summary of Proposed Research

The summary of your research proposal should indicate clearly the problem or issue to be addressed, the potential contribution of the research both in terms of the advancement of knowledge and of the wider social benefit, etc.

Word of mouth (WOM) occurs when consumers communicate with one another about consumption experiences. WOM is a fundamental process in marketing: 61% of consumers rely on WOM to guide their purchases. Traditionally, WOM takes place face-to-face, between consumers and their families or friends. However, digital media has changed WOM radically in terms of how consumers share consumption experiences and with whom experiences are shared. Now, consumers converse with thousands of other consumers through online forums, email, and websites such as Amazon.com.

Previous work in marketing has shown that WOM, whether traditional or digital, impacts consumers and firms. After hearing positive WOM, consumers are more likely to try or buy a product, and vice versa after hearing negative WOM. Because of this, WOM influences the profits of companies whose products are being talked about. However, past work has not focused on WOM as a conversation (only as a single interaction) or on how specific language use in WOM might impact consumers. We address these gaps and show that conversation and content uniquely impact important outcomes for consumers and firms. To accomplish this, we introduce a new concept from psychology into marketing: linguistic mimicry.

Linguistic mimicry measures how closely individuals match others' word use in conversation, using newly developed text analysis software. As with other forms of mimicry (e.g. gestures, facial expressions), linguistic mimicry acts as "social glue" that reflects and creates bonds between people. However, prior work has examined neither the consequences of mimicry in a marketing context, nor variables that predict linguistic mimicry. We investigate this concept in the context of online WOM.

We will collect data from web forums and conduct laboratory experiments to examine a) social variables that predict linguistic mimicry and b) the consequences of linguistic mimicry for consumers. We predict that individuals will engage in different levels of mimicry depending on whom they are conversing with. Mimicry should be determined by similarity with others; for example, forum members who have belonged to the forum for the same amount of time should mimic each other more than those who have belonged for different amounts of time (e.g. old vs. new members). In addition, mimicry will impact consumers' attitudes and behaviour. Mimicking others will lead consumers to feel a greater sense of affiliation with those they mimic, which should increase posting frequency and information sharing outside the forum (e.g. Twitter). Further, being mimicked by others will have important consequences, depending on who is doing the mimicking. Individuals who are mimicked by those of a similar social group (e.g. old members mimicking old members) will likely feel more affiliation and post more frequently, while those who are mimicked by dissimilar members (e.g. new members mimicking old members) will likely feel less affiliation and post less frequently.

This work will benefit academics, practitioners, and consumers. We address gaps in the academic literature by identifying antecedents and consequences of linguistic mimicry in online WOM. Further, we open the door for other marketing research in this area by introducing the concept of linguistic mimicry and the tools to analyze it. Practitioners will be able to use this work to manage the consequences of WOM in the marketplace; for example, firms might alter the design of their forums, Facebook, or Twitter feeds to manage the types of social information available to forum participants. Finally, by understanding the impact of engaging in online conversation, consumers will be able to think critically about the new world of WOM and manage their interactions within it.

Personal information will be stored in the Personal Information Bank for the appropriate program.

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Page 5   **PROTECTED WHEN COMPLETED**

OBJECTIVES

Word of mouth (WOM) occurs when one individual communicates about a consumption experience to another individual(s) (Godes et al. 2005). WOM has long been recognized as a fundamental process in marketing (Katz and Lazarsfeld 1955); indeed, 61% of consumers rely on WOM communication to guide their purchases (Hampton 2006). However, digital media has changed WOM radically, and much WOM now occurs online. In this project, we will examine online WOM conversations by collecting data from web forums and conducting laboratory experiments. Specifically, we investigate *linguistic mimicry*, which measures how closely individuals match others' word use in conversation. We intend to initiate the first use of this construct in marketing. We will contribute to marketing theory and practice by demonstrating that linguistic mimicry in WOM has important consequences for consumers. We will also contribute directly to psychology and linguistics by investigating antecedents of linguistic mimicry (rather than just consequences), and by examining such mimicry in an online context. In this project, we identify social variables that predict linguistic mimicry in conversation (e.g. length of time belonging to forum, the particular audience addressed) and investigate how linguistic mimicry influences consumers' attitudes and WOM behaviour (e.g. frequency of posting, the likelihood of sharing positive WOM about a product, service, or experience).

CONTEXT

Literature review. At its core, WOM is a conversation where information is exchanged between two or more consumers. The definition of WOM as consumer-to-consumer communication traditionally includes only one-on-one, face-to-face communication, where consumers converse with family, friends, or colleagues. However, WOM has evolved over the past decade. Digital media has changed *how* consumers share consumption experiences and *with whom* experiences are shared. This new WOM encompasses written communication to multiple (and perhaps unknown) others through digital media such as online forums and web sites like Amazon.com (Godes et al. 2005). Despite this transition, WOM remains a conversation between two or more parties, especially in the forum context we investigate.

Regardless of whether it is transmitted in person or online, past work shows that WOM has important consequences. WOM influences the attitudes and behaviours of those who share it (Moore 2009) and those who hear it (Arndt 1967; Bone 1995; Herr, Kardes, and Kim 1991; Sheth 1971; Wangenheim and Bayon 2004). Thus, WOM influences the profits of companies whose products are discussed (Chevalier and Mayzlin 2006; Das and Chen 2007; Dellarocas, Zhang, and Awad 2007).

However, existing work in WOM leaves some important questions unanswered. First, despite the interactive nature of WOM, little work has examined WOM as a dynamic process: the online forum context we examine allows us to study WOM in a true conversational format, with multiple posts and re-posts over time. Second, prior work has generally abstracted WOM content to being either merely positive or negative, rather than considering more nuanced content; using new text-analysis software, we measure specific word use, and how consumers mimic word use, in online WOM. Third, prior work has rarely considered how the language used while sharing WOM might influence the speaker or the listener; we investigate the impact of WOM mimicry on consumers, both speakers and listeners, in terms of variables such as their likelihood of continuing the conversation (e.g. of re-posting in the forum).

Some recent work in marketing has begun to address these three issues, but has not done so holistically. Cowley (2007) investigates how conversational WOM influences the speakers' memory, but does not consider WOM content. Outside a conversational format, Schellekens, Verlegh, and Smidts (2010) examine how speakers alter their language use depending on their expectations about the experience, but not who they are speaking with. Similarly, Moore (2009) examines how different WOM content influences speakers, though not in a conversational format. In that work, the principal investigator finds that the use of explaining language (e.g. I chose this restaurant because…) in WOM

decreases evaluations of positive experiences and increases evaluations of negative experiences, but again does not examine how different audiences might moderate this effect. We address these three gaps in the literature and integrate recent work by focusing on specific WOM content and the impact of mimicking WOM content on consumers (speakers and listeners) in a true conversational format.

We also extend psychological research on linguistic mimicry, a tool we introduce into marketing to test theoretical predictions about WOM content in conversation. New software allows researchers to measure word use and calculate the degree of linguistic mimicry between two or more individuals engaged in conversation. As with behavioural (e.g. postures, mannerisms; Bernieri 1988; Chartrand and Bargh 1999; Lakin, Jefferis, Cheng, and Chartrand, 2003) and conversational mimicry (e.g. facial expressions, talking speed; Burgoon, Stern, and Dillman, 1995; Giles and Coupland 1991; Giles and Powesland 1975), linguistic mimicry can act as a "social glue" (Lakin et al. 2003). For example, higher levels of linguistic mimicry increase romantic interest between individuals who are speed dating (Ireland et al. 2011) and increase team performance and cohesion in groups (Gonzales et. al 2010). However, linguistic mimicry can also decrease the likelihood of reaching an agreement in competitive interactions (Ireland and Henderson 2010), and mimicry of negative emotion words decreases trust in dyadic interactions (Scissors, Gill, Geraghty, and Gergle, 2010). We will contribute to this new area in psychology in two ways. First, we will focus on the *antecedents* of linguistic mimicry, which have been neglected in prior work. Second, most work on the consequences of linguistic mimicry is correlational (Gonzales et al. 2010; Ireland et al. 2011). Using field data and experimental data, we will establish causal relations between antecedent variables, linguistic mimicry, and consequences of mimicry.

Current project. We aim to integrate work on WOM with work on linguistic mimicry and conversation to generate insights for the new world of digital WOM. We will synthesize these areas using both lab and field data. In our program of work, we will identify for the first time antecedents of linguistic mimicry in terms of social variables that might increase or decrease linguistic mimicry (e.g. length of time belonging to a forum group, amount of personal information disclosed in forum profile). We will also test the consequences of linguistic mimicry for consumers and firms (e.g. frequency of posting) and examine when mimicry might positively or negatively impact consumers' attitudes and behaviours. The results of this project will contribute to both marketing and psychology, and will introduce a new method to the former audience that hopefully will stimulate additional research in the area. Below, we provide details on 1) measuring linguistic mimicry and 2) our hypotheses.

In general, linguistic mimicry is measured through the correspondence between "function" words. Function words are independent of content, and are comprised of nine categories of "linking" words such as pronouns (e.g. he, she, it), adverbs (e.g. hardly), and conjunctions (e.g. but, and). Measuring linguistic mimicry in this manner allows comparison of mimicry across conversational contexts; we will use this measure along with two more specific content measures of mimicry. First, using past work in WOM and psychology as a theoretical basis (Moore 2009; Pennebaker 1997), we will examine mimicry of explaining words (e.g. because, why), as mimicry of such language should have important consequences for forum participants—for example, it may change their evaluations of the consumption experiences they are sharing. Second, we will build forum-specific measures of mimicry related to the products discussed (e.g. brand or product names). By using three measures of mimicry, we will be able to determine the antecedents and consequences of each type.

Using these measures, we will first investigate the antecedents of linguistic mimicry. Information from online forums such as time belonging to the forum, amount of personal information disclosed in forum profiles, and frequency of posting, will be used as indicators of social variables that should influence mimicry. These factors provide individuals on the forum with information about whom they are interacting with, and how they should interact with these different members or member groups (e.g. experts, novices, old members, new members, frequent posters, etc.). Past work shows that individuals attend to and use this information when communicating, altering linguistic content for different

audiences (Clark and Wilkes-Gibbs 1986; Higgins and Rholes 1978; Hilton 1990; Horton and Gerrig 2005; Zajonc 1960); this should also occur in our online WOM context. For example, we should see more explaining language and more specific product or brand name use when older forum members are addressing new members (Isaacs and Clark 1987). Importantly, in addition to altering linguistic content, individuals should also alter their levels of linguistic mimicry depending on whom they are speaking to.

In terms of linguistic mimicry, we should first see a basic proximity effect, such that individuals are more likely to mimic the language they have most recently been exposed to (Ireland and Pennebaker 2010); thus, in a forum, posts that are closer together in time should show higher levels of linguistic mimicry, because individuals will have read these more recent posts immediately before they post their own replies. Beyond this basic proximity effect, levels of linguistic mimicry should also be determined by individuals' perceptions of similarity or rapport with other members and their desires to affiliate with other members (LaFrance 1979; Chartrand, Maddux, and Lakin 2005). For example, members who share levels of disclosure or length of time belonging to the forum should mimic one another more than they should mimic those who do not disclose information or those who are newer to the forum. However, members who are new to the forum, and who wish to belong to the forum in-group (the older members' community) may mimic older members more than older members mimic them, in order to affiliate (Chartrand and Bargh 1999). In general, then, we will use the social information available on the forum to identify social groups within each forum, and will examine how these different groups mimic one another in their ongoing interactions, using previous work in mimicry as a basis for our predictions.

Beyond examining social variables that predict linguistic mimicry, we investigate the consequences of mimicry. First, we expect that mimicking others will lead consumers to feel a greater sense of affiliation or rapport with those they mimic (Jefferis, van Baaren, and Chartrand 2003); this should lead to more frequent posting behaviour. Second, *being* mimicked by others will have important consequences, depending on who is doing the mimicking. Individuals who are mimicked by those of a similar social group (e.g. old members mimicking old members) will likely post more frequently, as being mimicked by similar others increases feelings of affiliation and builds existing social bonds among in-group members (LaFrance 1979; Chartrand and Bargh 1999). However, those who are mimicked by dissimilar forum members might post less frequently, especially if the poster does not wish to affiliate or be associated with the dissimilar member; thus, if an old member is mimicked by a new member, they may post less (Dalton, Chartrand, and Finkel 2010). In sum, mimicking and being mimicked should alter individuals' perceptions of belonging to the forum and thus influence forum-related behaviours like posting frequency. Similarly, mimicry should influence an individual's likelihood of forwarding forum information via email or Twitter; we test both posting and forwarding as outcome measures.

Contributions and relation to ongoing research. We will make several contributions with this research. First, research on traditional WOM has been limited to using retrospective self-reports of consumers' conversations, or has created and studied "artificial" WOM in a laboratory setting. Digital media has opened up new venues in which to study WOM, and sophisticated software has led to new methodologies with which to study it. Recent work in WOM has made use of this new, online data to answer "old" marketing questions (does WOM influence sales?; Godes and Mayzlin 2006) and "new" marketing questions (why do people share online WOM?; Thorsten Hennig-Thurau, Gwinner, Walsh, and Gremler 2004). We also use WOM data from the digital space to address gaps in our existing knowledge of WOM; we investigate the impact of specific linguistic content on speakers and listeners engaged in conversation. Second, we integrate this new venue for studying WOM with a new methodology: software that measures linguistic mimicry. We introduce this methodology to marketing and contribute to its use in psychology by examining different types of linguistic mimicry. Third, we contribute to psychology, linguistics, and marketing by systematically examining various antecedents and consequences of linguistic mimicry (both positive and negative). This will provide a more complete picture of WOM conversation than currently exists in the field. Finally, we will make these contributions

by conducting a multi-method investigation using existing data from online forums in addition to generating experimental data. A multi-method approach will strengthen our findings and allow us to draw conclusions about mimicry in the "real world" as well as about causal relations between social variables, linguistic mimicry, and marketing consequences.

This project extends the principal investigator's previous work in WOM communication in several ways. First, it considers the impact of interactive WOM, where consumers get immediate feedback from others from sharing their consumption experiences; this is a key aspect of WOM. Moore's previous work (2009) focused on telling WOM stories without such feedback (e.g. writing an email or posting an Amazon review). Second, given its focus on conversational WOM, the current project examines the impact of WOM on both speakers and listeners, where Moore (2009) investigated only how WOM impacts the speaker. Finally, this work focuses on important social factors that influence consumer WOM, linking the principal investigator's work on WOM with the co-applicant's work on social factors that influence consumers (McFerran et al. 2010a, 2010b; Aquino, McFerran, and Laven 2011), thereby extending and integrating our research streams.

METHODOLOGY

We divide the exposition of our methodology into two parts. We first explain the methods behind assessing linguistic mimicry at a general level; we then discuss how this tool will be applied to a series of five specific studies using both primary and secondary data.

Measuring mimicry. The first step in measuring mimicry is to analyze each piece of text using the Linguistic Inquiry and Word Count (LIWC) program (Pennebaker, Chung, Ireland, Gonzales, and Booth 2007). This program parses each individual post to measure total word count as well as the percentage of words that fall into 80 categories (e.g. nouns, verbs, positive emotion words, punctuation use, etc.). The LIWC was developed based on a corpus of thousands of texts (Pennebaker et al. 2007); it has been tested stringently for external validity and is used widely in psychology (Cohn, Mehl, and Pennebaker 2004; Kahn, Tobin, Massey, and Anderson 2007; Pennebaker 1997; Slatcher and Pennebaker 2006; Richards, Beal, Pennebaker, and Segal 2000; Rude, Gortner, and Pennebaker 2004). While the LIWC was initially used to measure content in single texts, it is now being used to measure mimicry between individuals engaged in conversation (Gonzales et al. 2010). First, individual scores for each type of mimicry are calculated by adding together the appropriate word categories (e.g. function words: conjunctions, adverbs, etc.). As discussed, we intend to measure three "forms" of linguistic mimicry: function words, explaining language, and brand or product words specific to particular forums. Linguistic mimicry can then be calculated in two ways: as an average across a conversation involving multiple individuals, or as a momentary measure of mimicry between two individuals at one point in time. That is, we can measure overall mimicry between all participants, say, in a forum thread, as well as post-to-post mimicry between individuals as the thread grows. We will use both measures to analyze our data.

Research plan. To begin, we will download existing data from online forums, using a custom-programmed website crawler. We have hired a graduate student to create a pilot program that captures forum data, and have downloaded an initial limited dataset from a parenting product review forum. This site provides information on length of time belonging to the forum, number of posts, and a measure of personal disclosure (in terms of how much information individuals provide about their children). We will examine how these social variables predict linguistic mimicry within each conversation thread in the forum, as per the hypotheses above.

Once we have tested our hypotheses on this site, we propose to expand our investigation to forums that cover different WOM topics (e.g. movies, computers). We can thus ensure the generalizability and validity of our findings by measuring similar social variables (e.g. disclosure) in

different ways. Additional forums will also allow us to measure additional variables, since the antecedent (social) variables and outcome variables available will vary by website. We plan to examine two other sites once the pilot study is complete. One forum (Study 1) will be selected that provides different social variables. For example, some sites provide forum-specific rating systems that label reliable and frequent posters; this label will indicate to other forum participants what kind of a member the poster is (e.g. new or old), and how their own status compares with the poster, and should therefore influence linguistic mimicry. A second site (Study 2) will be selected that has additional measures of outcome variables in terms of WOM sharing. Here, we will examine whether those who engage in more linguistic mimicry (and those who are mimicked more) post more frequently, are more likely to deem posts "helpful", or more often pass on WOM information outside the forum through email, Facebook, or Twitter.

After testing our hypotheses using real forum data in Studies 1 and 2, we will conduct experimental studies to verify and extend our results. With experiments, we can also measure additional outcomes that are unavailable online, such as individuals' perceptions of their conversation, their feelings about their conversation partner(s), and their feelings about the consumption experience or product they were discussing (Moore 2009). Three experimental studies are planned.

Study 3 will examine the causal relationships between antecedent variables, linguistic mimicry, and outcome variables. Participants will read a forum conversation about a recent movie (conversations will be drawn from Study 1 and 2 data), and will be asked to post a reply. Between subjects, we will manipulate key social variables identified from the forum data, for example, whether or not the poster discloses their favourite movie in their forum profile. We will measure linguistic mimicry in participants' responses as a function of this social variable, and use this to predict measured outcome variables such as participants' reported likelihood of returning to the forum and attitudes toward other individuals in the conversation.

Study 4 will expand the outcome variables we examine to focus on product-related WOM outcomes in addition to forum-related outcomes. We will create a forum context similar to Study 3, where individuals read and respond to an existing conversation, though we will use a different topic for generalizability (e.g. books) and manipulate a different social variable (whether participants respond to a new vs. an old member). We will examine how this social variable predicts participants' linguistic mimicry, and how participants' mimicry influences their evaluation of the product being discussed and their intentions to share future WOM about the product.

While Studies 3 and 4 examine how a participant's mimicry of others influences the participant, Study 5 will examine how *being* mimicked influences the participant. Following the same format as Studies 3 and 4, we will manipulate a social variable such as length of time belonging to the forum. In addition, we will add a true conversational manipulation. After participants read the conversation and post a reply, we will use trained undergraduate confederates to quickly create and post a reply from a forum participant that either mimics or does not mimic the participants' language use. This manipulated reply will come either from an individual who has belonged to the forum for a similar (short) amount of time as the participant, or from an individual who has belonged to the forum for a dissimilar (long) amount of time. Thus, Study 5 will be a 2x2 design (mimicry: high or low; length of membership: short or long). We expect mimicry and membership of the individual posting to determine outcome variables such as participants' perceptions of the poster and their intentions of posting again.

CONCLUSION

This project provides the first examination of linguistic mimicry in marketing. Five studies using both field and experimental data will investigate the antecedents and consequences of linguistic mimicry. This project will contribute to theory and methodology in both marketing and psychology, and will lead to important conclusions for managers as well as for consumers engaged in online WOM. Further, it should open the door for other research in this area by the applicants and other researchers.

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4a.   Description of Research Team

This research proposal is developed in collaboration with Professor Brent McFerran. We feel that collaboration on the proposed research will result in a more significant contribution to the marketing literature than if we were to work independently for a number of reasons.

First, both of us are currently investigating other research questions related to interpersonal communication. Second, the ideas that are outlined in this proposal were developed based on discussions with Professor McFerran regarding his published papers in the *Journal of Consumer Research, Journal of Consumer Psychology* and *Journal of Personality and Social Psychology*, and it would not be appropriate to apply for this grant individually. While I am affiliated with a Canadian institution, Professor McFerran holds appointments in both the USA (University of Michigan, primary affiliation) and Canada (University of British Columbia, on leave). International collaboration is needed as the ideas in this proposal were conceived with Professor McFerran while he was in residence at UBC. Finally, while we share many research skills, I feel that my strengths lie in the theoretical development of this research area, my understanding of the literature, and my strengths in designing and analyzing studies involving word of mouth communication, whereas Professor McFerran's strength is his knowledge of and experience in studying social and interpersonal influences.

It is expected that there will be a 70/30 split in the contributions to this research (where I would be responsible for the larger portion). Although the research proposed in this grant application is challenging, we both feel that it has the opportunity to make important contributions to the field of marketing and lends itself well to programmatic work, as little has been done in the increasingly important area of digital word of mouth (Berry and Keller 2003; Godes et al., 2005; Ozcan and Ramiswamy 2006). Therefore, it will be one of my primary focuses and the largest portion of my research time will be devoted to the execution of this research (about one-third).

4b.   Training

This project will have a major training component as we feel it is very important to involve students in projects and teach them about the process of advancing knowledge. The research assistants that will be involved in this project will be hired from the graduate and undergraduate student populations at the University of Alberta; the graduate student will help with programming and downloading online forum content, and the undergraduates will help with cleaning and analyzing the online data, as well as collecting experimental data. As much as possible, we will hire students for the duration of the grant, allowing them to learn new skills and gain greater knowledge over time.

First, we will hire a graduate student capable of programming customized web crawling software in order to collect data from various online forums. Learning from this student will be an excellent opportunity for us, as well as for the undergraduate students on the research team.

Second, our undergraduate research assistants will gain a solid understanding of the research process through helping with this project. Students will learn the mechanics of running and programming studies, both in the lab and online. They will learn about experimental design (how to design and program studies) and lab management (how to schedule and run studies in a working behavioural lab). They will also learn about collecting and analyzing secondary (existing) data from the forum data we will download. By participating in a project that involves the analysis of existing data as well as the

creation of experimental data, students will learn why both primary and secondary data are useful and necessary, and will learn the strengths and weaknesses of each.

Third, research assistants will learn the basics of content analysis in order to code the data we download from forums or generate in the lab. This content analysis will be based on a coding scheme developed in the primary investigator's dissertation, based on past work in clinical psychology (Pennebaker, Booth, and Francis, 1997; Moore 2009). Coding of different social variables will also be conducted (e.g. the amount of personal information disclosed in a forum profile). Additional training will include background information and reading on word of mouth and linguistic mimicry, as well as how to calculate and assess linguistic mimicry. This practical and conceptual training will give RAs an understanding of data preparation, coding, and analysis.

Finally, students will learn about the trajectory and development of a research program; we plan to hold regular meetings with all team members to inform them of progress and discuss ideas or issues that come up as we run studies.
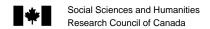
It is hoped that these experiences will prompt interest in further academic study and will enhance students' skill sets for future employment.

4c.   Previous and On-Going Research Results

The research proposed in this grant application aims to bridge the streams of research on which the applicants are currently working. This research builds on my dissertation work on word of mouth communication and its impact on the speaker (currently revising for second round review at *Journal of Consumer Research*) and Professor McFerran's research stream that investigates social and interpersonal interactions (his papers on the effects of other's actions or mere presence have appeared in *Journal of Consumer Research, Journal of Consumer Psychology, Journal of Personality and Social Psychology,* and *Personality and Social Psychology Bulletin*).

The proposed research also extends and complements my other work on word of mouth, and more broadly, builds my research focus on the impact of communication on consumers. In one word of mouth project I examine language content in terms of explanation type, and in another I examine the impact of telling word of mouth stories on the speakers' self-esteem; both of these projects have several studies completed. In two other related projects, I examine the impact of answering hypothetical questions on consumers (this paper is being revised for resubmission to *Organizational Behavior and Human Decision Processes*) and the impact of self-talk (I think I can, I think I can't) on consumer self-control (this paper is under review at *Science*).

Finally, this project is related to other projects the applicants are working on, both together and with other collaborators. In the future, it is our goal to further pursue research in the area of how people communicate differently to different social audiences, an area that has received little attention in the literature.

Family name, Given name
Moore, Sarah

Funds Requested from SSHRC

For each budget year, estimate as accurately as possible the research costs that you are asking SSHRC to fund through a grant. For each Personnel costs category, enter the number of individuals to be hired and specify the total amount required. For each of the other categories, enter the total amount required.

	Year 1		Year 2	
Personnel costs	No.	Amount	No.	Amount
Student salaries and benefits/Stipends				
Undergraduate	4	8,000	4	8,000
Masters	1	4,000	1	4,000
Doctorate				
Non-student salaries and benefits/Stipends				
Postdoctoral				
Other				
Travel and subsistence costs	Year 1		Year 2	
Applicant/Team member(s)				
Canadian travel	2,500		2,500	
Foreign travel	5,000		5,000	
Students				
Canadian travel				
Foreign travel				
Other expenses				
Professional/Technical services				
Supplies				
Non-disposable equipment				
Computer hardware	3,000		0	
Other				
Other expenses (specify)				
participant payments	1,200		2,400	
Total	23,700		21,900	

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FUNDS REQUESTED

Personnel costs

Student and non-student salaries and benefits.
We will hire four undergraduate research assistants and one graduate student each year to help collect and code data, as well as run experimental studies.

We plan to hire four undergraduate research assistants. These students will do content analysis and editing of the word of mouth data collected, as well as run experimental studies. Given that cleaning forum data is time consuming and labour intensive, the budget of $8000 will allow us to hire four students each year to work for $12.50/hour for a total of 640 hours over the course of a year (160 hours each, approximately 8 hours per week each over the fall and spring semester). This amount also includes time spent in the lab running experimental studies.

A graduate student will also be hired to program several web crawlers to collect publicly available online forum data, as well as program experimental studies in the lab. Since this individual will need to write a significant amount of original code for each site and study, (s)he will be hired for 220 hours (approximately 10 hours per week each over the fall and spring semester, and an additional 60 hours total over the summer) at the graduate rate of $18 per hour, for a total of $4000 each year.

Travel and subsistence costs.
Travel is for communication purposes for both applicants at academic and practitioner conferences, as well as travel for research purposes.

Travel for communication purposes. Assuming that registration for faculty members at North American conferences is approximately $500, three nights in a hotel is approximately $700, a round trip flight is approximately $1000, and food costs are $180 ($45 per day for four days, the University of Alberta's per diem), this is a total cost of about $2500 per conference (including some additional expenses such as taxis). Assuming we both attend one conference in North America during each year of the grant, that leaves a conference budget of $5000 per year.

Travel for research purposes. We also plan to engage in travel for research purposes so that we can collaborate on analyzing data and writing papers. Assuming travel once per year to collaborate for a week at a time, costs should be around $2500 ($800 flight, $800 accommodation, $315 for food at $45 per day, $300 for car rental).

Other expenses

Professional/Technical Services. Not applicable.

Supplies. Not applicable.

Non-disposable equipment.

Computers are not provided for research assistants at my institution. I am requesting $3000 in funds to purchase two computer systems and relevant software (e.g., SPSS, LIWC) for my research assistants to perform their assignments (e.g., coding, initial data entry, literature searches, etc.).

Non-disposable equipment – Other. Not applicable.

Other expenses.
While the Business School at the University of Alberta has a for-credit research pool, it is limited and shared between all departmental members, as is my co-applicant's subject pool. In order to run additional studies each year, we will need funding to pay student and community participants. Participants are paid $10 each, on average, to complete a half-hour long study. We propose running three studies with 160 participants each (an average of 40 per cell); we plan to complete one experimental study in year 1 and two studies in year 2. Thus, $1200 in year 1 and $2400 in year 2 would provide enough to run our proposed designs with sufficient experimental power, for a total of $3600.

Funds from Other Sources

You must include all other sources of funding for the proposed research. Indicate whether these funds have been confirmed or not. Where applicable, include (a) the partners' material contributions (e.g. cash and in-kind), and (b) funds you have requested from other sources for proposed research related to this application.

Full organization name Contribution type	Confirmed	Year 1	Year 2	
University of Alberta Cash	☒	3,000	3,000	
	☐			
	☐			
	☐			
	☐			
	☐			
	☐			
	☐			
	☐			
Total funds from other sources		3,000	3,000	

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Application WEB

Canada

Family name, Given name
Moore, Sarah

Intended Outcomes of Proposed Activities
Elaborate on the potential benefits and/or outcomes of your proposed research and/or related activities.

Scholarly Benefits
Indicate and rank up to 3 scholarly benefits relevant to your proposal.

Rank	Benefit	If "Other", specify
1	Knowledge creation/intellectual outcomes	
2	Enhanced research methods	
3	Enhanced theory	

Social Benefits
Indicate and rank up to 3 social benefits relevant to your proposal.

Rank	Benefit	If "Other", specify
1	Social outcomes	
2	Enriched public discourse	
3	(Other) - Specify	consumer empowerment

Audiences
Indicate and rank up to 5 potential target audiences relevant to your proposal.

Rank	Audience	If "Other", specify
1	Academic sector/peers, including scholarly associations	
2	General public	
3	Practitioners/professional associations	
4	Private sector	
5	Students	

Personal information will be stored in the Personal Information Bank for the appropriate program.

Application WEB

Page 8

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Canada

Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Family name, Given name

Moore, Sarah

Expected Outcomes Summary

Describe the potential benefits/outcomes (e.g., evolution, effects, potential learning, implications) that could emerge from the proposed research and/or other partnership activities.

We expect the outcomes from this research to impact both the academic and professional communities as well as the general public.

First, our work has theoretical and methodological outcomes for the scholarly community. This project extends and integrates work in marketing, psychology, and linguistics to create new knowledge that will contribute to each field through its focus on word of mouth conversation and specific linguistic content. Further, we are introducing a new methodology to marketing that should spur new research in the growing area of digital communication. We will disseminate our findings to the academic community in several ways. We plan to share this work (at various stages) to colleagues through brown bag lunches and seminars, and we will present at several relevant conferences in marketing and psychology (Association for Consumer Research, Society for Consumer Psychology, Society for Personality and Social Psychology). Ultimately, we intend to publish this work in a top-tier peer-reviewed marketing journal, such as the Journal of Consumer Research.

In addition to impacting academics, our work will impact students within the university community by allowing students to participate in the research process and enhancing our teaching. Throughout the semester, we provide opportunities for students to participate in experimental studies through our behavioural labs. We debrief students after participating, and incorporate our research projects into the classroom to provide students with information about cutting-edge faculty research---in this case, the world of digital word of mouth. Not only will this learning enhance students' understanding of the research process and spur interest in research-related careers, it will enrich their general knowledge and provide valuable (and unique) job market skills.

Beyond the university community, this work will have benefits and important outcomes for practitioners. By understanding the impact of online word of mouth on consumers, and understanding the social variables that moderate this impact, practitioners will be able to better design online forums to encourage and manage consumer-to-consumer communication. For example, our work will indicate which social variables (e.g. level of disclosure, length of membership) have the most impact on consumers' linguistic mimicry in forums, and whether this impact is positive or negative; practitioners can design their communication tools accordingly. To communicate this work to practitioners, we will attend conferences such as those offered by the Marketing Science Institute, which brings together the academic and professional communities.

Finally, our work has implications and benefits for the general public---in a very real sense, we are all consumers. Thus, understanding the impact of communicating to other consumers through online word of mouth is an important benefit for the general community. Most individuals have probably never heard of linguistic mimicry, and are unlikely to understand the impact that it might have on them as consumers; we will enhance consumers' self-knowledge and empower consumers by communicating our findings to the general public. We will do so through press releases from the Business School and professional associations (Association for Consumer Research); some of our work has already received a significant amount of media attention in the popular press. We will also communicate to consumers through teaching, and to the broader university community at alumni events and university conferences.