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The State of the Field of Social Norms Research

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This investigation provides a synthesis of the state of social norm research in the social sciences using a content analysis of 821 empirical studies that employed social norms as a primary construct. Questions guiding this analysis included: What theories are most often used in social norms research? What types of social norms are used most often in research? What referents are typically used in social norm measures? What topics are typically investigated with social norms? What outcomes are frequently associated with social norms? And what ages and in what countries are norms commonly studied? By highlighting the trends in this vast area, it is hoped that future work can focus on integrating and advancing theory in this popular domain of communication research.

Keywords: social norms, theory of planned behavior, theory of reasoned action, content analysis, theory building

More than 80 years of social norms research has demonstrated the power of normative influence, defined as the process by which people look to referent others, consciously or unconsciously, as guides for how to act or think. This form of social influence is predicated on the idea that our fundamental need to belong drives us to engage in behaviors or hold attitudes that are similar to referent others (Baumeister &

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Leary, 1995). By holding consonant attitudes and engaging in socially accepted behaviors, people help secure and affirm their role within a group and, in doing so, reduce the likelihood of ostracism or other social sanctions brought about by social deviance. Another motivation that inspires normative influence is the desire to be correct. This is the principle of social proof (Cialdini, 1987), which states that if other people hold a particular belief, then this belief must be true. Taken together, these fundamental motivations highlight the most powerful feature of normative influence: the ability of norms to operate without conscious awareness on behalf of the target (Cialdini, 2007). Given the pervasive yet subtle influence of social norms on behavior, it is no surprise that research in this vein is both prolific and diverse.

In the social sciences, social norms research is diverse in theory, operationalization, topic, and aim. Although this diversity has led to the prolific use of the construct across disciplines, it has also functioned to create silos of social norms research that may prevent studies from informing one another. As such, the purpose of this investigation, inspired by Lapinski and Rimal's (2005, 2015) seminal calls for an explication of social norms, was to perform a content analysis on the state of the field of social norms research. Whereas Lapinski and Rimal's work highlighted the theoretical complexities and ambiguities of this construct, this investigation follows up these claims with empirical evidence that documents these complexities using a content analysis of the social norms literature. This investigation was guided by our goal to present, in one place, an analysis of how social norms have been studied in social scientific research. It is argued here that if the usage of social norms, as a construct, is better understood then future research can use this information to engage in the much-needed pursuit of integrating and advancing normative theory (Rimal & Lapinski, 2015). A brief review of the questions that inspired this content analysis follows. The selection of these questions was guided by the long-term goal of theorizing, in a more cohesive manner, about social norms.

Are Norm Theories Equally Represented in Research?

Which theories are predominately used in social norms research? Although the most well-known norm theories include the theory of reasoned action (TRA; Fishbein & Ajzen, 1975), the theory of planned behavior (TPB; Ajzen, 1991), the focus theory of normative conduct (Cialdini, Reno, & Kallgren, 1990), the social norms approach (SNA; Berkowitz, 2005; Perkins, 2003), and the theory of normative social behavior (TNSB; Rimal & Real 2005; Rimal, 2008), one of the initial goals of this content analysis was to determine the extent to which each of these theories has been used. A second goal was to assess whether other theories, that may not have been originally considered, are common in norm investigations as well. By addressing these questions, the scope of normative theory, particularly in the fields of communication and psychology, can be understood.

What Types of Social Norms Are Used in Research, and How Are They Measured?

The proliferation of work in this area has led to a variety of conceptual and operational definitions of norms and norm-related constructs. Indeed, one of the enchanting and maddening features of the social norms literature, from a scholarly standpoint, is that norms have been operationalized in so many ways that is has become difficult to draw conclusions from the collective research. Norms are variously described as injunctive, descriptive, subjective, moral, and personal, among others. Although interest in

norms has dramatically increased with this wealth of theoretical attention and conceptual flexibility, it is difficult to summarize, or draw conclusions about, normative influence across disparate operational definitions. In an effort to document the existence of different norm types, this content analysis codifies the way norms are conceptualized and operationalized in the literature.

Perhaps even more diverse than the operationalization of the concept of norms is the use of social referents in the measurement of norms. Every social norm measure requires the specification of a referent group (Shulman & Levine, 2012). This requirement raises important issues regarding the role of this referent in relation to the norm construct. Typically only subjective norms and personal norms include the specification of a referent in the conceptual definition (important others and the self, respectively). For all other normative measures, the researchers decide on the referent based on their research question. Importantly, this flexibility allows for norms' widespread use in a variety of contexts. For example, when a researcher is interested in normative influence within organizations, it is sensible to refer to people within the organization (e.g., coworkers and supervisors) and not family members or friends. A problem introduced by the lack of consistency with normative referents, however, may be that the specificity or appropriateness of the normative referent is overlooked. It will be assessed here whether the ability for norms to be broadly applied has led to the proliferation of vague referents within norm measures. This possibility threatens measurement validity, because as referents become more general or vague (e.g., important others), the error surrounding normative measures is likely to increase. Additionally, when vague referents are used, our ability to explain why norms work or predict how norms will work in the future is impaired.

Related to this specificity concern is the use of multiple referents (e.g., friends and family) in a single measure, resulting in a double-barreled question. Multiple referent usage problematically assumes that all referents share the same norm. Moreover, when multiple referents are used, it becomes impossible to disentangle the source of normative influence. Thus, alluding to multiple referents when soliciting normative perceptions should also impair the validity of social norm measures. In sum, given that referent decisions can affect the quality of measures and create ambiguity regarding the source of normative influence, it is necessary to more formally consider the role of normative referents in normative theory.

Are Social Norm Propositions Tested Through a Diversity of Research Methods?

A cursory review of social norms research suggests that the diversity of theory and conceptualization has not extended to the methods used in the study of normative influence. Methods and measures are tools used to provide support for, or falsify, theoretical propositions. As such, it is critical that when testing theory, multiple methods and measures are employed to test theoretical boundary conditions and to ensure that empirical support for the theory is not contingent on any one operationalization. As argued by Greenwald (2012), methodological innovation is a critical part of theory testing to disentangle "conceptual implications from operational choices" (Slater & Gleason, 2012, p. 219). As noted by Mollen, Rimal, and Lapinski (2010), there has been an overreliance on cross-sectional survey methods in norm research. Guided by this claim, the current review takes a broad sampling of work in this area to empirically assess the degree to which methodological homogeneity is a concern.

What Is the Scope of Norms Research?

This content analysis also examines the topics studied in social norms research. In addition to topics, we analyzed what age groups, in which countries, and what outcomes (i.e., dependent variables) have been studied. Addressing these questions can contribute to our global understanding of the generalizability and robustness of theoretical claims (Berger & Chaffee, 1987; Slater & Gleason, 2012).

The Present Research

This content analysis serves as a complement to Lapinski and Rimal's (2005, 2015) arguments regarding the need for synthesis in social norms research. It is argued here that before integration is possible, it is helpful to first look objectively at how norms exist in the literature. By examining research trends alongside existing calls to improve research, the field of social norms research can be more critically assessed. Thus, the present work content-analyzes research on norms guided by the aforementioned questions. It is hoped that by providing information about key research trends and identifying areas of conceptual overlap and divide, we can illuminate areas where growth and integration are needed. As such, the aims of this research are to:

1. Describe the primary theoretical perspectives used in research on norms.

2. Describe the types of norms, referent groups, and outcome variables used in research on norms.

3. Examine the methodological approaches commonly used in norms research and determine whether diverse methodologies have been applied to individual theories.

4. Describe the scope of norms research by describing the topic areas, ages, and countries where norms are typically studied.

Method

Study Identification

This content analysis is intended to summarize the quantitative social science literature in which social influence through social norms was assessed. To identify our sample frame, a keyword search of the literature was conducted using relevant EBSCO databases (Communication and Mass Media Complete and PsycINFO). The keywords included *social norms*, *injunctive norms*, *descriptive norms*, *personal norms*, *moral norms*, *subjective norms*, and *provincial norms*. In addition to these search terms, the following filters were implemented: full text, English, human population, and term used in the title or abstract. The academic journal filters were not used in an effort to avoid publication biases where possible. In total, this search produced 1,952 articles after 338 redundant articles were removed.

Selection Criteria

After 1,952 articles were identified, these articles went through the first round of coding for inclusion in this study. Studies were excluded from further analysis if a reading of the abstract revealed (1) the research was nonquantitative; (2) the data were not at the individual level of analysis; (3) the type of norm being studied was not one of those identified in the key terms (e.g., sex/gender norms, journalism norms, linguistic norms, cultural norms, violation of norms or normative deviance); (4) there was no measured outcome (dependent variable) such as attitude, belief, behavioral intention, or behavior; (5) the study was not original research (i.e., literature reviews, meta-analyses, theoretical pieces; (6) the study employed group research paradigms (e.g., prisoner's dilemma, which discusses norms, but measures them in a different way); or (7) the study contained a small sample ($N < 20$). Studies were included for further analysis as long as one of the following conditions were met: (1) None of the exclusion categories applied, (2) a theory we were interested in was explicitly mentioned (e.g., TPB, TRA, SNA, focus theory, TNSB), (3) the research presented quantitative results, or (4) behavioral outcomes were stated. Six coders were trained according to this scheme. These coders first coded 50 articles together and placed each article in the *include* or *exclude* category ($\kappa = .62$). Given this low reliability score, two coders were removed, leaving four coders. Once these coders achieved acceptable reliability 50 ($k = 50$ articles, $\kappa = .80$), they went on to individually code the remaining studies. In total, 818 articles (41.9%) were included for further analysis.

Study Coding

All six authors discussed the coding of each category (explanations are presented below). During this round of coding, more studies were removed because of redundancies or, on further reading, failure to meet the aforementioned criteria. After this round of coding, 40 articles were excluded from further analysis, leaving a final sample of 778 articles. After these articles were identified, they were coded by study. If an article contained two or more studies, each study was separately represented in the data file. Because several articles contained multiple studies, the final sample size was 821 individual studies. A list of the studies is available at https://osu.box.com/s/l4d8vm272we49hij3e22gjcsalzkmzyg.

Theory

A total of 84 theories were coded, with many studies utilizing multiple theories ($N = 998$, $M = 1.22$). Two general categories were used to organize these data (see Table 1): "norms-related theories" (e.g., TPB, TRA) and "unrelated to norms" (e.g., social cognitive theory, technology acceptance model). A study was only counted as using a particular theory if the article in question clearly stated the theory by name before adopting its elements, and/or it cited the theory thoroughly and connected its constructs in accordance with theoretical propositions (e.g., attitudes and social norms were used to predict behavior and behavioral intentions). After examining the studies, we noticed that many did not directly cite a theory. However, after reading the article, it was clear from the operationalization of social norms, or the citations used, that the researchers were drawing from theories such as TPB or focus theory, for example. To accommodate these instances, a subcategory termed "general norm theories" was adopted for studies where the theory was not explicitly mentioned, but norm concepts were measured or manipulated in

accordance with a norms-related theory. If elements were loosely adopted without this direct connection to the theory, the study was counted in the "other norms theories" subcategory. About 5% of the studies (42) had no evident theoretical guidance.

The codebook outlined seven norm types to be identified and labeled in the articles: descriptive, injunctive, subjective, personal, moral, and provincial (see Table 2). Though the content analysis included 821 studies, several studies measured multiple norm types (N = 1,107, M = 1.35). Norm type was coded based on the label given by the researchers and as identified in the article. The coders did not interfere with the norm labeling. This decision led to the addition of a general "social norm" category because this language was consistently reported. The other two categories added were "unsure" when a norm type was not mentioned and an "other" category for all other instances.

Referent Group

Referent group was coded by categorizing the referent as described in the study. Again, the coders did not interfere with the labeling of the referent and used the language provided in the text. It was again found that many articles contained more than one referent category (N = 1,208, M = 1.47). All referents were coded into a category and subcategory. The categories included significant or important others, peers, family, context-specific referents, and miscellaneous (see Table 3). When handling multiple referents, it was important to consider whether the referents belonged to the same general category. For example, a parent, sibling, and relative are all members of one's family. When this was the case, this referent was coded into the "multiple sources" subcategory. This subcategory was included in three of the five categories. When multiple referents from *different* categories were included in the measure, such as parents and friends, these instances were coded into the main category "multiple referents." A "miscellaneous" category was coded with the following subcategories: when the referent was the self, when specific referents were unclear or not mentioned, or when the referent was highly unique.

Outcome Measure

Similar to other measures, several studies included multiple dependent variables that corresponded with norm measures (N = 1,200, M = 1.46). Five categories of dependent variables were identified (see Table 4). The "attitude" category represents participants' evaluation of the behavior or object of interest. The "behavioral intention" category represents the extent to which respondents expected to engage in the behavior of interest in the future. The "behavior" category included self-reported or observed present or past behavior. The "normative beliefs" category reflects the perception of social consequences for actions, such as anticipated social support. The normative beliefs outcome appeared to be used only in experimental, quasi-experimental, or longitudinal design studies in which the posttest perceived norm was measured as a result of a message or manipulation of the norm in the study. A final "miscellaneous category" included infrequently mentioned dependent variables, such as perceived risk, anticipated affect, susceptibility, and severity.

Research Methodology

The codebook originally specified three categories for study designs: "survey/questionnaire," "experiment," and "intervention/quasi-experiment" (N = 820, see Table 5). Methodology categories were created based on the most common methods employed in social science research. The survey/questionnaire category reflected self-reported data in which participants were asked to respond to a series of closed- and open-ended questions. *Experiments* involved the manipulation of at least one independent variable, typically in a tightly controlled lab-based setting, intervention/quasi-experiments included field studies and communication campaigns that attempted to manipulate outcomes in real-world settings. In addition to research design, time was also considered. Each study was coded for whether the data were cross-sectional, meaning the independent and dependent variables were measured at the same point in time, or longitudinal, involving a time lapse between data collection on the independent variables and the dependent variables.

Method was also considered within the context of theory (see Table 6). Specifically, for each of the five main theories, we assessed whether a certain method was applied more or less when a specific theory guided the investigation.

Topic

The topic of the investigation was identified for each study, though some studies investigated multiple topics (N = 857, M = 1.04). Topics were coded into five categories. "Health topics" dealt with health attitudes and behaviors such as smoking cessation. "Sociocultural" topics included social behavior or attitudes such as giving to charity. "Environmental" topics involved the protection of natural resources and recycling. "Commerce" topics focused on business-related processes, including consumer and employee behavior. Finally, the "miscellaneous" category encompassed the remaining topics that were too small to justify a stand-alone category, such as technology use, educational practices, and underlying mechanisms of social norms processes (see Table 7).

Population Age

Age was coded by accounting for the approximate age range of the study sample (N = 821). The categories included the following age groups: "children," "adolescents," "college-age," "adults," "seniors," "general population," and unsure (see Table 8). Children included studies where respondents were younger than 13 years old. Adolescents reflected respondents between the ages of 13 and 18. The college-age category included studies where the majority of respondents were between the ages of 18 and 24. Adults included samples of people 25 to 65 years old. Seniors included studies where participants were age 65 and older. In addition to these categories, a "general population" category was applied when all ages (older than 18) were included in the sample. The general population category was also applied to cases where online surveys/questionnaires were used and did not state specific demographics. In other words, anyone with Internet access or who was a part of a data panel (e.g., MTurk) could have participated. Finally, an *unsure* code was given when participant age was unclear or simply not specified in the research.

Country

Locations were determined from specific information provided by the authors in the text (e.g., "large Midwestern university" or "Dutch senior citizens") or by author affiliation. The latter was used only if all authors were located in the same nation and if the study site was not reported in the article. Any nation that included fewer than 10 studies was regrouped into one of the five continent categories (e.g., to avoid results lower than 1%; see Table 9). An additional "multinational/unspecified" category was created to account for studies that were either performed in four or more countries or used an online study and did not clearly specify their audience, but implied a broad international reach. Studies performed across two or three countries resulted in a count for each country, which explains the total of instances (N = 832, M = 1.01) exceeding the total study population.

Results

Theory

Overall, our results found that the theory of planned behavior dominates the norms research landscape. TPB was used as the primary theoretical lens in over a third of studies (35.4%) and was identified as a secondary framework in nearly half of the total studies analyzed. The theory of reasoned action was the second most used theory, constituting about 14% of studies. Of the studies that mentioned TRA or TPB, about 6% invoked both. When removing these two theories from the analysis, there were still significant differences in use across the three remaining theories, $\chi^2(2, N = 192) = 13.72$, $p < .05$, with the social norms approach representing the third most used theory (8.7%). Focus theory and the theory of normative social behavior were the least used of the five major theories, constituting 6% and 4.6% of studies, respectively. Theories that were unrelated to norms were used in only 22% of studies. It should be noted that when non-norm theories were used, they often supplemented norm-related theories.

One plausible explanation for the unequal use of the TPB and TRA relative to other theories is that these to theories have been around longer. As shown in Figure 1, however, even during a time when all theories are around (2005–2015), research guided by the TPB still remained most common. A look at the yearly averages, however, reveals a slightly different trend. Yearly averages were calculated by adding the total number of studies using a theory and dividing this figure by the number of years the theory has been around. Although the TPB remains most common (M = 16.81), the SNA has the second highest average (M = 5.44), followed by the TRA (M = 3.89), TNSB (M = 3.83), and focus theory (M = 2.27). Interestingly, these averages suggest that interest in the SNA and the TNSB in particular may be on the rise. In sum, to address our first research question, the five theories originally identified do appear frequently in norms research. Moreover, although at first it seems as if there is a large disparity in the use of TPB relative to other theories, data trends suggest that perhaps the SNA and TNSB are gaining momentum.

Table 1. Theories Used in the Social Norms Literature.

Theory name	Number of instances	% of total
Norms-related	**778**	**78**
Theory of planned behavior	353	35.4
Theory of reasoned action	140	14.0
Social norms marketing/social norms approach	87	8.7
Focus theory	59	6.0
Theory of normative social behavior	46	4.6
Integrative model	11	1.1
Norm activation model	11	1.1
General norms concepts	47	4.7
Other norms theories	24	2.4
Unrelated to norms	**220**	**22**
Social cognitive theory/social learning	13	1.3
Technology acceptance model	13	1.3
Theory of interpersonal behavior	9	0.9
Information-Motivation-behavioral skills model	8	0.8
Self-determination	8	0.8
Other non-norm theories	129	12.9
No theory noted	42	4.2
Total	998	100

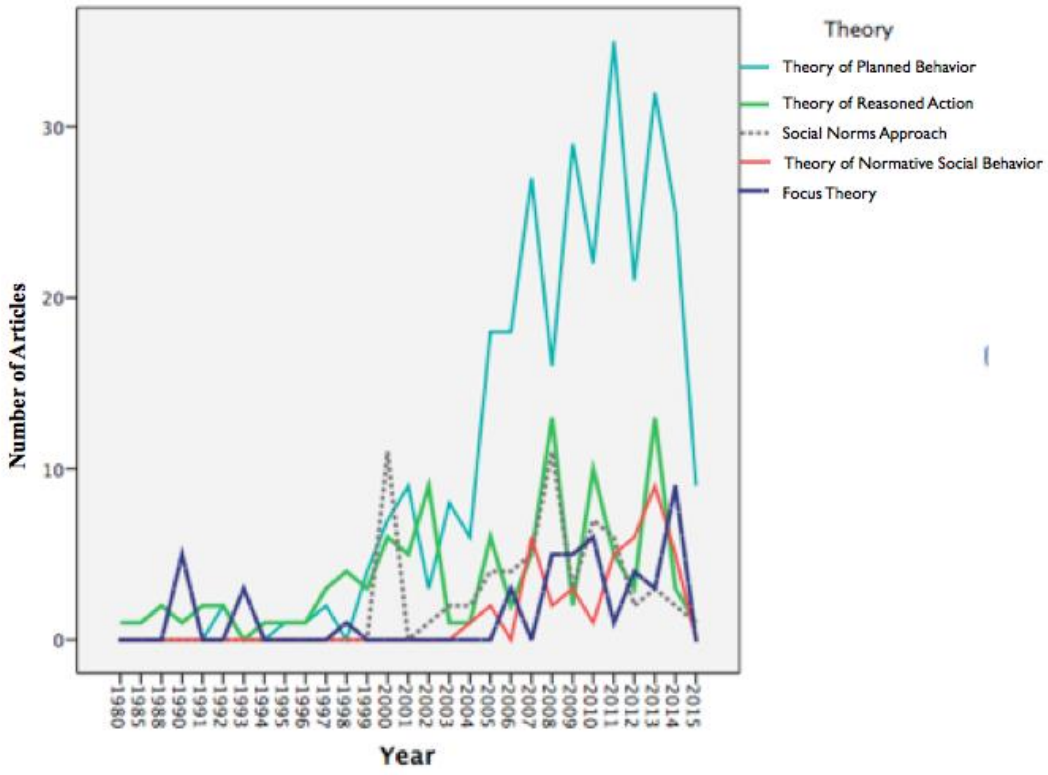

Figure 1. Number of articles using each theory, 1980–2015.

Norm Type

Our results revealed significant differences in norm type usage, $\chi^2(7, N = 1{,}107) = 1{,}441.57$, $p < .001$ (see Table 2). Specifically, subjective norms were most prevalent (40.8%). Given that the TRA and TPB were employed the most, this trend is not surprising. Even after subjective norms were removed from the analysis, however, significant differences still existed among categories, $\chi^2(6, N = 655) = 930.47$, $p < .001$. In this analysis, descriptive norms were the second most used (28.9%). Interestingly, these results revealed that subjective norms and descriptive norms account for 69.7% of social norm research. This dominance in the literature is noteworthy given the existence of several different types of norms. Our second research question inquired how different types of norms were used. This analysis suggests that, despite the proliferation of norm types, subjective and descriptive norms are most common. This finding suggests more work is needed on injunctive norms. This is the case because theories such as focus theory and TNSB, and at times SNA, employ and theorize about injunctive norms, which makes the dearth of research in this vein problematic.

Table 2. Norm Type Category Codes for Social Norm Studies.

Coding category	Number of instances	% of total
Subjective norm	452	40.8
Descriptive norm	320	28.9
Injunctive norm	204	18.4
Personal norm	52	4.7
Moral norm	25	2.3
Other[a]	23	2.0
Unsure	16	1.5
Social norm	15	1.4
Total	1,107	100

[a] *Other* includes norm types coded as normative beliefs (n = 3), prescriptive norms (n = 2), actual (n = 1), cultural (n = 1), and situational (n = 1), to name a few.

Referent Group

Significant differences in referent use across the six categories were found, $\chi^2(5, N = 1{,}208) = 606.14$, $p < .05$ (see Table 3). The referent category that was most used was the "peers" category (35%), followed by "important or significant others" (31.1%). Moreover, our analysis revealed that these two categories were used more than the other four categories combined, $\chi^2(1, N = 1{,}208) = 126.56$ $p < .05$. When the largest two categories were removed, there were still significant differences across the remaining four categories, $\chi^2(3, N = 408) = 24.29$, $p < .05$, with the context-specific referents being the third most common (10.5%). This analysis revealed a diversity of normative referents, suggesting that the contextual flexibility of social norms is enjoyed by researchers. However, it was also discovered that vague referents such as "important or significant others" were commonly used. This category in particular limits the possibility of specifically attributing normative influence.

In addition to referent category, we were also interested in the extent to which multiple referents appeared in norm measures. To address this question, the "multiple referent" category and subcategories were combined (n = 209). In total, multiple referents were used in 17.3% of normative measures. This finding problematically suggests the proliferation of double-barreled questions in the literature and, again, limits the value of the information obtained. In sum, germane to our third research question, it appears that normative referents are diverse in context and specificity. Although the former is an important and useful feature of norms research, the latter portends issues with theorizing and measurement.

Table 3. Referent Group Category Codes for Social Norm Measures.

Coding category and subcategory	Number of instances	% of total
Important or significant others	**376**	**31.1**
Generic form (specific referents unnamed)	304	25.2
"The people in my life whose opinions I value/respect"	18	1.5
"Most important person in my life"	2	0.2
Average compiled from multiple sources within category	52	4.3
Peers	**424**	**35.0**
Peers or friends	155	12.8
Close friends or best friends	27	2.2
Average student/classmate/typical student	129	10.7
Romantic partner	4	0.3
Hypothetical friend	4	0.3
Peer with an identifying quality or characteristic	58	4.8
Average compiled from multiple sources within category	47	3.9
Family	**67**	**5.6**
Parents	36	3.0
Siblings	4	0.3
Spouse	2	0.2
Children or children's friends	5	0.4
Average compiled from multiple sources within category	20	1.7
Context-specific referents	**127**	**10.5**
Colleagues or workplace referents	25	2.1
Community members (academic, local, neighborhood)	38	3.1
Citizens of participant's country	22	1.8
Members of a group with a particular characteristic	23	1.9
Experts or people in positions of authority and or power	19	1.6
Miscellaneous or generic groups	**124**	**10.2**
Self-norms	56	4.6
Nonspecific groups ("others," "people," "adults")	45	3.7
Unclear, not available, none referenced	12	1.0
Miscellaneous	11	0.9
Multiple referents averaged across categories	**90**	**7.5**
Total	1,208	100

Outcome

Behavioral intention was the most commonly reported outcome variable in the reviewed studies (39.4%), followed by behavior (34.3%). Together these outcomes represented 73.7% of all dependent variables in this body of research (see Table 4). Attitudes were the third most commonly reported outcome (14.3%). These differences in prevalence (with the miscellaneous category removed) were statistically significant, $\chi^2(3, N = 1{,}167) = 322.48$, $p < .05$. These findings suggest that social norms are often used as a tool to influence, in particular, behavior and behavioral intentions. This finding is perhaps unsurprising given that most norms research is conducted in a health context.

Table 4. Category Codes for Outcome Measures Used in Social Norm Studies.

Coding category	Number of instances	% of total
	473	39.4
Behavior intention		
Behavior	411	34.3
Attitudes	172	14.3
Normative beliefs	111	9.3
Miscellaneous	33	2.7
Total	1,200	100

Research Methodology

Social norms research is unequivocally dominated by surveys and questionnaires (76.3% of total studies; see Table 5), $\chi^2(2, N = 820) = 694.25$, $p < .001$. Relatedly, the vast majority of research was cross-sectional (71.8%) rather than longitudinal (28.2%) in design.

Table 5. Methodology Used in Social Norms Studies.

Method	Number of instances	% of total
Survey/questionnaire	**626**	**76.3**
Cross-sectional	463	56.5
Longitudinal	163	19.9
Experiment	**137**	**16.7**
Cross-sectional	105	12.8
Longitudinal	32	3.9
Intervention/quasi-experiment	**57**	**7.0**
Cross-sectional	21	2.6
Longitudinal	36	4.4
Total	820	100

We also found that methodological choices varied significantly by theory, $\chi^2(10, N = 822) = 79.32$, $p < .001$ (see Table 6). Specifically, although the use of surveys was most prevalent for all theoretical frames, this was particularly true of TPB (86%), TRA (79.4%), and TNSB (72%) research. Research guided by the SNA employed a survey design slightly less (65%), followed by focus theory (40%). Interestingly, 40% of studies guided by focus theory were experimental in nature. Among the remaining theories, surveys remained the most used method (73.3%). Thus, to answer our sixth research question, our analysis showed that norms research is heavily reliant on cross-sectional surveys and questionnaires, with the exception of work derived from focus theory.

Table 6. Methodology by Theoretical Orientation in Social Norms Studies.

Method	Theory of planned behavior	Theory of reasoned action	Social norms approach	Theory of normative social behavior	Focus theory	Other/none
Survey/questionnaire	255	85	39	28	18	203
Experiment	32	16	12	0	18	59
Intervention/quasi-experiment	10	6	9	8	9	15
Total	297	107	60	37	45	277

Topic

The results of our analysis revealed significant differences across topic categories. $\chi^2(4, N = 857) = 1{,}045.97$, $p < .001$ (see Table 7). Specifically, health-related issues appeared to monopolize the focus of social norms research, accounting for 63.9% of all topics. Even when compared with the other four categories combined, health topics remained significantly more common, $\chi^2(1, N = 857) = 66.10$ $p < .001$.

Of the approximately 25 subtopics identified within the health topic category, three accounted for 40.3% of the category total: alcohol use (21.2%), smoking (11.1%), and diet behaviors (8%). Alcohol research generally focused on college student drinking, particularly within Greek organizations. Smoking research investigated the antecedents of smoking or the effectiveness of antismoking campaigns. Research on diet-related behaviors examined different types of healthy or unhealthy food consumption. Other common health subtopics included physical activity, contraceptive use, blood or organ donation, cancer knowledge, mental health issues, and sexual activities. This analysis indicates that, although norms research is generally health related, this trend may generally reflect a more applied approach to norms research than a theoretical approach.

Table 7. Topic Categories for Social Norms Research.

Coding category and main subcategories	Number of instances	% of total
Health general	**548**	**63.9**
Alcohol use	116	13.5
Smoking	61	7.1
Food and diet	44	5.1
Sociocultural general	**90**	**10.5**
Charitable giving/helping	13	1.5
Behavior at athletic events	8	0.9
Environment general	**68**	**7.9**
Natural resource protection	20	2.3
Recycling	12	1.4
Littering	8	0.9
Commerce general	**46**	**5.4**
Consumer behavior	19	2.2
Employee behavior/business practices	10	1.2
Miscellaneous	**105**	**12.3**
Underlying processes	37	4.3
Education	30	3.5
Technology	26	3.0
Total	857	100

Note. The lists of subcategories are not exhaustive and represent the most studied topics in each category.

Table 8. Population Category Codes for Social Norm Studies.

Coding category	Number of instances	% of total
	341	41.5
College age (18–24)		
Adults (25–65)	177	21.6
Teens/adolescents (13–17)	101	12.3
Kids (≤12)	14	1.7
Seniors (≥65)	8	1.0
General population	175	21.3
Unsure	4	0.5
Undergraduate sample		
Yes	340	41.4
No	468	57
Mixed	4	0.5
Unsure	9	1.1
Total	821	100

Population Age

College-age populations were the most examined age group, accounting for 41.5% of the population category (see Table 8). A chi-square analysis confirmed significant differences across age categories, $\chi^2(6, N = 820) = 790.96$, $p < .001$. After college students, adults (21.6%) and the general population (21.3%) were most often studied. When examined in aggregate, however, an encouraging finding emerged. Undergraduate samples (41.4%) were significantly less likely to be used in research, $\chi^2(1, N = 808) = 19.96$, $p < .001$, than nonundergraduate samples (57%), indicating that, although college student samples constitute much of the work, as a whole, most social norms research is not conducted with student samples.

Country

Research based in the United States was by far the most common in this content analysis (50.8%), followed by the United Kingdom (8.2%) and the Netherlands (7.8%). Even when the U.S. cases were removed from this analysis, significant differences were still obtained, $\chi^2(14, N = 403) = 218.97$, $p < .001$, suggesting perhaps an English language bias, which may be expected due to our search filters.

Table 9. Countries in Which Social Norms Studies Were Performed.

Country/region	Number of studies	% of total
United States	423	50.8
United Kingdom	68	8.2
The Netherlands	65	7.8
Canada	39	4.7
Australia	30	3.6
China	29	3.5
Taiwan	18	2.2
South Korea	17	2.0
Germany	10	1.2
Norway	10	1.2
Africa total	24	2.9
Other Europe	41	4.9
Other Asia	25	3.0
Mexico, Central and South America, and Caribbean	11	1.3
Middle East	14	1.7
Multinational[a]/unspecified	8	1.0
Total	832	100

[a] *Multinational* denotes more than three countries per study.

Discussion

This content analysis describes the state of social norms research. Social norms represent an area of research with a great deal of conceptual and theoretical diversity; however, our concern at the outset of this analysis was that this diversity should lead to greater understanding, not more confusion, across studies. Despite the existence of diversity among norm theory, types, methods, and referents, this content analysis revealed a great deal of homogeneity as well. What is important, however, is that conceptual and methodological diversity exist in areas where diversity is needed—such as in topics, methods, and samples—and that there is consistency in areas that intend to push theory forward—such as in the conceptual and operational definitions of the norms we employ. In light of these considerations, this section outlines areas where norms research could be improved.

Theoretical Approaches

Our first research goal was to determine which theories were being used in the study of social norms. The results of our analysis demonstrate that theoretical focus relies heavily on two theories, the theory of reasoned action and the theory of planned behavior. It is not surprising that these theories are the most cited given that they have been enormously influential in many disciplines. However, notwithstanding that the TRA and TPB have helped draw attention to the role of normative influence on behavior, these are not theories *about* normative influence. The two theoretical perspectives that focus on this influence—the theory of normative social behavior (Rimal, 2008) and focus theory (Cialdini & Trost, 1998)—are represented in disproportionally smaller numbers even though yearly average numbers are encouraging. The focus on TRA and TPB likely reflects the field's focus on *using* social norm theories rather than *theorizing about* social norms or advancing social norms theories. Although both usages are legitimate, the proliferation of applied research at the expense of theoretical research leads to a lack of progress in the development of theory (Lapinski & Rimal, 2005; Rimal & Lapinski, 2015). We hope that the trends presented here serve to empirically substantiate the critical need for more diverse theoretical work in this domain. Guided by this need, and the opportunity for the field of communication to lead the charge in developing social norm theory, we recommend that more work be guided by focus theory and TNSB. Additionally, communication research that focuses on how norms are developed and communicated would be a worthy contribution to the field.

Conceptual and Operational Definitions of Norms

Through this content analysis, it became clear that there are notable inconsistencies in the use of norm type terminology. For example, some studies measured two norm types and combined them into one, such as averaging a "subjective descriptive norm" and "subjective injunctive norm" together into one measure of "subjective norms." In a similarly problematic fashion, almost all studies that utilized the TPB subjective norm construct failed to include the "motivation to comply" dimension inherent to this measure. We also noticed that the term *social norms* was often employed as an amorphous norm type with multiple operationalizations.

Another concern with conceptual definitions is the distinction between injunctive and subjective norms, because these are not always clearly differentiated in empirical studies. These are important to

distinguish because the mechanism for influence is distinct in these operationalizations. Injunctive norms as defined within focus theory refer to what is commonly approved and disapproved or the norms of ought or should (Cialdini et al., 2000). This is a more general definition than that of subjective norms, as defined in the TRA/TPB approaches (Ajzen, 1991; Fishbein & Ajzen, 1975), which link perceived approval by specific referents to one's motivation to comply with those specific others. Still other definitions posit a "group norm" construct (Terry & Hogg, 1996), which states that individuals who identify strongly with a group enact the behaviors expected of members of that group. All of these are examples of normative influence, whereby conformity to norms occurs to satisfy one's need to belong, and social costs and benefits accrue from important people in one's life (Deutsch & Gerard, 1955). Descriptive norms, in contrast, serve an information function (e.g., social proof) and help to define the typical behavior in a given situation. However, when these constructs are conflated, as was noted in many studies included in this review, it is impossible to understand the type of influence that is occurring.

These are just a few examples of troubling trends we observed. Vague discussions of what constitutes a social norm, along with conflated definitions and measures of norm types impair our ability to understand what norms are, how they work, how they should be measured, and boundary conditions that dictate where norms should and should not be applied. Importantly, these are all issues that can be addressed by theory, so long as normative measures are labeled and used with consistency. As such, given the proliferation of norms research across disciplines, we recommend that the future of norm theory include the creation and establishment of clearly outlined norm definitions and best practices for use and measurement. We hope that this content analysis provides empirical support for this need.

We also encountered measurement concerns related to the normative referents used in survey items. Normative theory and research is heavily predicated on who is doing the influencing; thus, the labeling of referent groups requires careful consideration and explication. Indeed, a strength of social norms research is the ability to clearly specify the agents of influence in diverse contexts, from unnamed others who have stayed in a given hotel room (Goldstein, Cialdini, & Griskevicius, 2008) to the best friends of teenagers who may be contemplating cigarette smoking (Rhodes, Ralston, & Bigsby, 2016). Unfortunately, the systematic consideration of the referent group is not what we observed in this analysis. Generic referents made up nearly a third of the data set, with over a quarter simply utilizing the "important others" referent from the TPB in the operationalization of subjective norms. Without knowing who these others are, there is little practical use for the information, and evaluating results for implications for theory is clouded. Our advice to researchers in this regard is to identify referents as specifically as possible to reduce measurement error and improve the validity of normative estimates. Furthermore, this specificity would enhance the predictive power of theory by implicating which referent groups are most influential and why.

An additional issue is the practice of combining multiple referents in a single study, or even in one double-barreled question, such as asking about family and friends. Combining across diverse referents obscures the possibility that individuals may perceive that there are some people in their lives who favor a particular behavior and others who do not. Thus, when multiple reference groups are invoked, or considered to be influential, they should be subjected to distinct analyses.

Methodological Considerations

Our content analysis revealed that norm propositions are heavily predicated on cross-sectional survey research. This homogeneity provides a narrow understanding of how norms operate in the social world. With onetime snapshots of participants' perceptions of the referent groups in question, claims about the long-term influence of norms or the causal relationship between normative perceptions and behaviors remain tenuous at best. The reliance on self-report is further confounded by social desirability biases (particularly problematic for health topics), which further obfuscates our understanding of normative influence. Given these trends, it is important that future work claiming to speak to the effects of social norms relies on longitudinal or experimental methods to justify this direction of influence. As it stands, work of this kind is significantly underrepresented in the field.

The Role of Context in Social Norms Research

It is clear from our findings that much of the social norms research focuses on the area of health. This focus is unsurprising given that social influence research intends to elicit positive behavioral outcomes, and such outcomes are clearly the desire of people working in health-related areas. Although the field's emphasis on alcohol, smoking, and diet seems to be a reflection of pressing national health issues, this focus is narrow in scope and leads to a dearth of research in other areas, such as mental health, an area vulnerable to the impact of social influence. There is ample room for empirical inquiry beyond this standard fare, and expanding the territory explored by social norms scholars not only facilitates the testing of theory but also promotes applied research aimed at fostering a healthier culture that is more broadly defined.

The data obtained on age group reflects a tendency for researchers to take advantage of convenience samples. To expand understanding and expose potential variance regarding how norms influence certain age groups, future research should include adolescents, kids under the age of 12, and senior citizens. Based on this information, normative research would benefit from and be more useful to a wider range of populations. This limited sphere of populations is also exemplified with the overwhelming amount of research conducted in Western countries, where the influence of social norms clashes with the individualistic cultures therein. Although some research compares the West to more collectivist cultures, these studies are infrequent. Just as with different age groups, normative research would benefit from and be more useful to a wider range of populations if it were conducted in more nations and on diverse cultural groups.

Limitations and Future Research

As with all content analyses, this work has some limitations. Although we attempted to sample broadly, it is possible that our search, which was conducted on one platform (EBSCO) may have missed published reports. Furthermore, our decision to only include work in which our search terms appeared in the abstract may have eliminated some studies that included social norms as a secondary focus. Furthermore, our sorting of the large set of studies initially identified may have inadvertently missed some research that should have been included, simply because that initial coding was done on such a large

number of studies. That said, we feel we have identified a significant subset of all relevant work with our methodology.

Another limitation was in our decision to focus on quantitative research. This decision excluded about 18% of articles from the original search. Though this decision was not meant to discount the importance of qualitative research, our goal was to summarize the state of research in the quantitative social sciences. Clearly, given the large number of quantitative studies identified, there is adequate work in this area to conduct such an analysis. It was deemed beyond the scope of this investigation to include qualitative work because that work draws on different theories, uses distinct methods, and has its own vocabulary for describing social norms and normative influence. Future research, however, should engage in a similar analysis of qualitative norms research to understand where theory and practice could be improved.

It has been established that norms are valuable constructs for predicting behavior. For researchers to understand such behaviors, continued use of the TRA/TPB framework has value, but, as previously mentioned, does little to further our theoretical understanding of norms. Future work that better elucidates the similarities and distinctions among the various operational definitions of social norms is warranted, as is further research to build and test models of how these disparate norms develop, change over time, and mutually influence behavior. More specific research to clarify whether and when certain norms constructs are more influential than others, and to hypothesize as to why these norm constructs work in these ways, would help to advance our knowledge of social norms and our ability to use social norms more effectively in future campaigns.

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