The Impact of Methodological Diversity on Productivity, Views, and Citations: An Empirical Examination of Communication and its Most Productive Scholars

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Diversity has traditionally been considered a central value in social research. However, the growing pressure to publish and the hyper-specialization of knowledge have compelled researchers to systematically focus on specific research approaches and methods, potentially limiting research pluralism. Drawing upon data from the field of communication in 2021, the aim of this study is twofold: (1) to examine the most common research approaches and methods of data collection and their diversity, and (2) to understand how the most productive scholars are clustered by research approach and methodological diversity and how these clusters influence productivity, views, and citations. Our findings show the dominance of quantitative approaches and surveys both in the field and among the most productive scholars, with low methodological diversity among top scholars. The results additionally show that the most productive scholars fall under three profiles: specialists, eclectics, and pluralists. These results also suggest, counterintuitively, that eclectics are significantly more productive than specialists.

Keywords: research diversity, methodological diversity, communication, productivity

Diversity has always been a key value of scientific research (e.g., Merton, 1968, 1973). Particularly in the history of social sciences, having a good balance between administrative and critical thinking has traditionally been considered paramount to understanding the broad nuances of social phenomena (Nordenstreng, 2007). In recent decades, there seems to be a growing consensus in the

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scientific community around the idea that having both analytical and methodological pluralism in research is crucial for pursuing research in social sciences, in which scholars from all stripes of research backgrounds and paradigms may fit and contribute to its development (Demeter & Goyanes, 2021; Goyanes & Demeter, 2020, 2021).

However, in the ever-growing competitive marketplace in which academia increasingly rewards identity-congruent careers (Goyanes & Demeter, 2021) and specialization (Rawlins, 2007), and where the imperative to "publish or perish" conditions scholars' research trajectories (Bunz, 2005; Wadesango, 2014), most fields of knowledge run the risk of research fragmentation and stagnation (Waisbord, 2019), triggering disconnected research champs (Craig, 1999) with limited or no scientific interactions despite belonging to related knowledge fields. This situation may be intensified by the growing social divide between quantitative and qualitative research, a phenomenon that contributes to a landscape of disconnected yet specialized journals that reward stereotypical research trajectories and identities that the scientific community promotes and expects (Rawlins, 2007). In this context, social sciences may jeopardize the traditional pluralism associated with scientific research, thus limiting our understanding of social phenomena, which inevitably needs the input of different voices.

In this study, by focusing on the field of communication, we aim to understand the diversity of methodologies and research approaches in two sets of samples: a representative sample of papers published in the field and a representative sample of the most productive scholars in communication. In addition, by focusing on the most prolific scholars, the study aims to understand how the most productive scholars are clustered by their levels of diversity in research approaches and methodologies, as well as how these clusters influence productivity, views, and citation scores.

We define research diversity as a measure of the various methods used within a field. Thus, we consider research to be diverse when it uses different sets of approaches and methodologies: The more approaches and methods, the more diverse it is, as suggested by Simpson's reciprocal index (Hill, 1973). Although diversity has multiple aspects, including interdisciplinarity, citation patterns, and thematic approaches, we focus on methods because they fundamentally influence the questions asked, the answers derived, and the theories formulated in research. Methodological debates between qualitative and quantitative researchers are historical in social sciences. Therefore, investigating the methodological divide in communication will provide a comprehensive picture of the extent to which these contentions have been resolved and how researchers explore the different ways of knowing. Ultimately, our study contributes to the quantitative examination of communication research patterns by understanding the research and methodological approaches in the field and how these affect impact and productivity scores.

Research and Methodological Fragmentation in Communication Studies

Communication research, within the context of the major social and technological changes over the past century, has established its place as one of the key emerging areas of scientific inquiry within global academic knowledge production (Marinho & Mariño, 2018). Notwithstanding, as it is built on highly multidisciplinary foundations (e.g., sociology, psychology, political science, and philosophy), and in the

context of the ever-changing media environment, the field still faces a multiplicity of challenges concerning its identity and methodological approaches (Nordenstreng, 2007).

The level of multidisciplinarity is well portrayed by Littlejohn's (1982) schematic overview, which identifies numerous theoretical traditions in which communication research has largely emerged independently. At the same time, incorporating such diversity into disciplinary traditions has made it hard to form the identity of communication studies as a coherent field (Waisbord, 2019). In his seminal work, Craig (1999) identifies this problem of disciplinary fragmentation: "They [the different approaches] neither agree nor disagree about anything, but effectively bypass each other because they conceive of their nominally shared topic, communication, in such fundamentally different ways" (p. 121).

In the same article, aiming to provide grounds for a comprehensive identity, Craig (1999) develops an ever-evolving dialogical and dialectical disciplinary matrix that would enable productive dialogues to emerge between the diverse traditions (and the corresponding vocabularies) of communication research. The goal is "to show how the potential practical relevance of all communication theories, whatever their disciplinary origins, can be exploited to construct a field common ground, a common (meta)discursive space, in which all communication theories can interact productively with each other" (Craig, 1999, p. 131).

Notwithstanding, two decades later, the field still struggles to unite. Communication science is still being described as a fragmented field split into many distinct and loosely connected sub-domains (Cooper Potter & Dupagne, 1993; Marinho & Mariño, 2018; Marques & Miola, 2021; Matthes, Niederdeppe, & Shen, 2016; Olasinde & Ojebuyi, 2017). For instance, Pfiffner (2021) recently conducted a semantic network analysis on the keywords of communication journal articles published between 2008 and 2019 to identify structural commonalities across these sub-domains. His analysis indicated that although there is a significant thematic overlap between the different journals, the common knowledge structure shared by all these outlets is limited to a few vaguely defined concepts.

Besides the diversity of approaches deeply rooted in the multidisciplinary foundations of communication science, social and technological development and the expansion of the past half-century also further fragment the field. New areas of the field emerge as new media, and structural aspects of communication are put forward based on their social relevance. Nordenstreng (2007), for instance, argues that these fragmentation processes have, in fact, not been halted by the digital convergence of media production and distribution either: "On the contrary, new media, Internet, etc., have entered as further specialties in media studies, often gaining the status of another study programme, major subject or even a discipline of its own" (pp. 212–213). He also notes how such fragmentation is problematic from the perspective of the history of science. As the field seems to be deserting its roots in well-established disciplines and increasingly relying on empirical and practical domains of reality (that is, existing institutions), the emphasis on the research approach inevitably shifts from a critical perspective toward an administrative one (Nordenstreng, 2007). In general, the identity of the field seems to be a key issue in relation to its multidisciplinary nature and fragmentation, which is caused by continuous technological advances in the media system (Katz, Peters, Orloff, & Liebes, 2002; Peters & Simonson, 2004). Indeed, communication scholars have argued for decades in favor of meta-level analyses, which would critically

examine the field to unite it (Craig, 1999, 2008; Littlejohn, 1982; Roskos-Ewoldsen, Aakhus, Hayes, Heider, & Levine, 2007).

The Qualitative/Quantitative Divide

The field's multidisciplinary background and ongoing social/technological developments have led to the proliferation of methodological tools for understanding communication phenomena. In a recent handbook of communication research methods, Croucher and Cronn-Mills (2021) differentiate 13 major methodological traditions—ethnography, interviewing, focus groups, content analysis, discourse analysis, surveys, descriptive statistics, inferential statistics, experimental designs, mixed methods, rhetorical criticism, critical approaches, and methods of performance—all of which engender a plethora of more specific methodological approaches. In the *SAGE Encyclopedia of Communication Research Methods* (Allen, 2017), there are over 1,900 entries on concepts, theories, and methods about communication research approaches. Notwithstanding, as the editor argues, "the boundaries of the discipline remain difficult to define, given the ubiquitous nature of communication combined with the overwhelming variety of communication" (Allen, 2017, p. 38).

One key question of academic discourse concerning the methodological diversity of the field is the harsh divide between the two prevailing paradigms of qualitative and quantitative approaches (Pfiffner, 2021; Roskos-Ewoldsen et al., 2007). DeCoster and Lichtenstein (2007) describe this paradigmatic fragmentation as a self-sustaining feedback loop. On one hand, connected to the multidisciplinary nature of the field, researchers vary greatly in their choice of methods, depending on their background. Scholars trained in quantitative methods apply statistical analyses to describe relations between measured variables, while those with a background in qualitative methods examine narratives about the phenomenon for common patterns (DeCoster & Lichtenstein, 2007).

Therefore, as most studies become exclusive to one of these paradigmatic perspectives, distinct bodies of literature develop that seldom converse with each other, leading to separate fields and even disciplines: "an uneasy relationship exists in communication research between researchers who advocate numerically based quantitative methods and those who advocate the "messier" and more subjective qualitative methods" (DeCoster & Lichtenstein, 2007, p. 228).

This paradigmatic divide is most often described as "stark, angry, or [even] dismissive" (DeCoster & Lichtenstein, 2007, p. 228). Based on a recent survey on editorial board members' perspectives, Goyanes (2020) noted a clear division between "empiricists" and "non-empiricists"—as they are often referred to. This predominance of rigorous and naturalistic quantitative methods within the field has led to the term "empirical" losing "its original meaning of evidence-based research and [becoming] shorthand for most quantitative work" (p. 1).

On one hand, case-based qualitative research methods (as opposed to code-based quantitative approaches; Jensen, 2021) are becoming distrusted in academia, to the point that top-tier journals often require quantitative evidence to supplement and support the claims of qualitative studies (Hayes & Krippendorff, 2007). On the other hand, there is a similar antagonism toward the predominance of quantitative approaches within the field, as critics claim that this numeric reductionism leads to a

depreciation of subjective experiences and narratives (DeCoster & Lichtenstein, 2007). Rawlins (2007), for instance, summarized his experiences as a communication scholar in the following way:

I was still seduced in all of my earlier work by the dominating ethos of quantitative social science into aping its trappings, writing style, and subdivisions [. . .] in order to pass as a serious researcher. I call such activity guerilla scholarship. It is necessary when certain ways of knowing are stringently enforced to the exclusion and neglect of others. The stated and unstated regimes of certain journals still require these kinds of accouterments [. . .] The risk, of course, is that being successful, that is, getting published through aping this kind of writing/inquiry, I embraced some of its pieties, and it is still a struggle for me to write in other, less-scripted ways. (p. 59)

Therefore, from the individual researcher's perspective, these unstated regimes of the publication sphere—as well as the expectation of conforming to these implicit expectations—are extremely important, as excellence is growingly understood along the lines of publishing productivity (Goyanes & Demeter, 2021).

At the same time, a growing body of research promotes a complementary, interactive, and mutually inclusive approach against the apparent divide between quantitative and qualitative methods (Croucher & Cronn-Mills, 2021; Gondwe, 2020; Kamhawi & Weaver, 2003; Trumbo, 2004). While qualitative analyses provide useful insights into the perspectives and narratives of the subjects, quantitative data analysis confirms or refutes scholarly theories (DeCoster & Lichtenstein, 2007). Both paradigms, therefore, ought to be seen and valued for their useful contributions toward communication research and implemented in a complementary, cross-paradigmatic manner to enhance the analytical strength of communication research (Benoit & Holbert, 2008; Gondwe, 2020). Moreover, a varied toolset that further diversifies the perspectives included in communication research also improves the field's alignment with Merton's (1968, 1973) norm of universalism, thus providing better and more reliable scientific results.

In 2007, about the background of this hard divide between methodological traditions, the editors of *Communication Methods and Measures* set out to improve research by providing an outlet that raises methodological awareness of the field (Roskos-Ewoldsen et al., 2007). Years later, however, the results of these aspirations remain ambiguous. Based on a 1998 survey, Frey, Anderson, and Friedman (1998) described a shift from the original quantitative foundations of the field toward qualitative methods arising in graduate communication programs. Similar trends were later also indicated by Pardun's (2000) analysis of media research journals. According to her study, 26% of the articles published in the *Journal of Broadcasting and Electronic Media* (a prominent outlet of the field) between 1978 and 1998 were qualitative studies, most of which applied mixed methods. Notwithstanding, these findings were questioned by Trumbo's (2004) analysis of 2,649 articles published in eight prominent communication journals. Trumbo indicated that there was an approximately 60/40 split between quantitative and qualitative studies, while mixed methods were especially rare.

In a recent study, Gondwe (2020) analyzed 160 articles published in 2016 in five high-ranking communication journals in the United States. His findings indicate that most of these journals prefer quantitative (59.37%) analyses over qualitative (38.75%) analysis or mixed methods (1.87%) research. Gondwe concludes that quantitative research articles with a focus on descriptive methods have a significantly

higher chance of being published in U.S. communication journals than qualitative methods do, while ethnographic qualitative research and mixed method studies are especially hard to publish.

Notwithstanding, as prior research has focused on a limited set of journals, we lack comprehensive evidence on the entire field. In this article, we aim to complement this line of research by analyzing a representative sample of the whole field while also updating the results of previous studies (i.e., journals indexed in JCR). Thus, we formulate the following research questions:

- RQ1: Among a representative sample of publications in JCR-ranked communication journals, what is the most common (a) research approach and (b) method of data collection?
- RQ2: Among a representative sample of publications in JCR-ranked communication journals, what is the level of diversity in (a) research approach and (b) methodology?

Diversity Among the Most Productive Scholars

The market-like dynamics of the current global academic knowledge production are well documented (Fyfe et al., 2017; Larivière, Haustein, & Mongeon, 2015). An increasing number of voices have raised serious concerns about the intrinsic biases that the publishing field engenders, which might corrupt the meritocratic basis at the heart of legitimate scientific inquiry (Demeter, 2019; Demeter & Goyanes, 2021; Demeter & Istratii, 2020). For instance, the well-known "publish or perish" phenomenon (Bunz, 2005; Wadesango, 2014)—that is, the pressure for scholars to publish as frequently as possible to obtain promotions and funding—is often seen to corrupt sciences as it leads to scholars

undertaking trivial studies because they yield rapid results, needlessly reporting the same study in installments, reporting a study more than once, and listing as authors people only marginally involved in the study [as well as] be a motivation for fraud. (Angell, 1986, p. 261)

Interestingly, most studies concerning methodological diversity in communication science also address these scholar-level difficulties prompted by the publishing market. In the above-mentioned study, Rawlins (2007) clearly describes how taking a stance in the qualitative/quantitative argument is a means to earn academic recognition. Similarly, DeCoster and Lichtenstein (2007) promote a cross-paradigmatic research approach through a line of argument that directly concerns scholar-level academic benefits. They argue that using both quantitative and qualitative approaches can potentially increase the study's readership and impact, as practitioners of both paradigms will be provided with acceptable evidence for the claims of the article. At the same time, citations to both bodies of literature will also increase the visibility of the research (DeCoster & Lichtenstein, 2007).

In general, it is evident that actors in the field are vying with one another for scarce resources, research funding, and academic recognition (Demeter & Goyanes, 2021; Demeter & Istratii, 2020). Moreover, the field's struggles with academic, institutional, and public recognition further contribute to making communication science an extremely competitive environment (Craig, 2008). In this context, where successful publications in dominant journals are firsthand indicators of academic excellence (Goyanes & Demeter, 2021), examining the

tools that prominent scholars implement to be successful is indicative of the publication market's unstated regimes. Notwithstanding, we know little of the diversity in methodology and research approach that these scholars engender. Therefore, we formulate the following research questions:

- RQ3: Among the most productive scholars in the field of communication, what is the most common (a) research approach and (b) method of data collection?
- RQ4: Among the most productive scholars in the field of communication, what is the level of diversity in (a) research approach and (b) methodology?

Finally, to further our understanding of the methodological profiles of the most productive scholars in the field, we pose the following research question:

RQ5: How are the most productive scholars in communication clustered (a) according to their levels of diversity in research approaches and methodology, and (b) how do clusters influence productivity, views, and citation scores?

Data Collection

Most Productive Scholars

The data about the most productive scholars within the communication field was downloaded from Scival, which works with Scopus data. It consisted of a list of 500 researchers, ranked according to their overall number of publications from 2017 to 2020. We chose these years for the analysis because we started our data collection in 2021, so this was the most recent data available. Likewise, we chose Scopus because it is one of the most established bibliographic databases. It provides consistent accuracy and options for filtering and downloading complete metadata (Uddin, Choudhury, & Hossain, 2019).

Data for this part of our study are based on a representative, stratified random sample of the abovementioned list with a confidence interval of 95% (N=220). First, the data set was divided into quartiles of 125 scholars to guarantee equal representation. Next, with a computerized random number generator, 55 scholars were selected from each of the four quartiles. Given that the sample is intended to be representative of the most productive scholars within the field of communication, our study excluded (1) communication engineers not publishing in social science journals and (2) outlier scholars publishing disproportionate numbers of papers in a single journal. The publication output of the selected scholars for those years was then examined in Scopus (N=1,121). Since this study aims to analyze and compare empirical research, theoretical studies such as literature reviews or essays were removed from the study. Articles written in languages other than English were also excluded.

The Field

To establish a benchmark for comparing the publication output of the most productive scholars and to answer the research questions, we examined publication patterns in the general communication field. Thus, we selected all papers published in JCR-ranked communication journals in 2020. We used the JCR

instead of Scopus for the field data because it comprises the most influential journals in sciences (Goyanes & Demeter, 2020). In total, there were 95 JCR journals in communication in 2020, publishing 5,351 articles. A representative, proportional, and random sample of articles evenly distributed between journals was selected, following the same premises that we had decided on for the leading scholars' output. The final sample for the field contained 357 articles.

Measurements and Coding Book

A content analysis was implemented to identify the main research approaches and methods of data collection among the most productive scholars in the field. This method is commonly used in meta-analyses to understand and produce valid and trustworthy inferences about scientific production. A content analysis typically involves establishing key research questions, choosing a group of data, describing target themes, designing a code scheme, applying the codes to the selected content, evaluating the validity of the coded data, and then executing the analysis (Kaid, 1989). A co-author coded the full sample of articles—which were the unit of analysis for this study—while another researcher coded a sample of the selected papers. The abstracts of the articles, or full articles when necessary, were read to identify whether they were eligible for our study. All the empirical articles that met the aforementioned criteria were transferred to SPSS and manually coded. For the field, discarded articles were replaced by articles that met the inclusion criteria.

The three categories for the research approach were defined *a priori*, and articles were classified based on the nature of the data collection method. Since systematic literature reviews often use different methodological approaches (both qualitative and quantitative), their research approach was not coded to prevent heterogeneity within the category. In total, there were 15 systematic literature reviews in the sample of the most productive scholars and 4 in the field (see Table 4 below), causing a gap in the total number of papers displayed in the tables. The categories for the data collection variable were developed inductively as the analysis proceeded. After the first round of data coding, a total of 62 data collection methods were identified. For the sake of simplicity, several of these categories were reviewed by the authors and collapsed into existing or new broader categories. For instance, autoethnography and quasiethnography were recoded into ethnography. Mixed-method studies were grouped under three new values encompassing quantitative and qualitative techniques. Similarly, the multiple methodologies in qualitative textual analysis (e.g., close reading, ideographic analysis, framing analysis, etc.) were coded under a single category. The final codebook included 17 data collection methods.

Following Neuendorf (2017), we selected 10% of the sample for the intercoder reliability test with a maximum subsample size of 100 (n = 36 for the field, n = 100 for the most prolific authors' publications). After independently coding the articles, the coders met to resolve differences in their coding and discussed discrepancies to reach a final decision on all variables in each article, thus ensuring agreement among the coders (Riffe, Lacy, & Fico, 2005). This final, resolved dataset was used for analysis. The reliability tests were substantial for each measurement (see Table 1). The sections and categories in which the codebook is structured are described below.

Research approach. This variable taps into the research approach employed, coded as 1 =quantitative, 2 =qualitative, and 3 =mixed methods.

Table 1. Reliability Test for the Content Analysis.

	Percent	Cohen's				
Variable	agreement	kappa	Agreements	Disagreements	Cases	Decisions
Research approach (scholar level)	93%	0.84	93	7	100	200
Data source (scholar	90%	0.87	90	10	100	200
level) Research approach	94.4%	0.91	34	2	36	72
(field level) Data source (field level)	91.7%	0.89	33	3	36	72

Data Collection

This variable examines the data collection as it was performed in the articles, coded as 1 = survey, 2 = interview, 3 = experimental, 4 = focus groups, 5 = ethnography, 6 = big data, 7 = content analysis, 8 = systematic literature review, 9 = meta-analysis, 10 = network analysis, 11 = observational analysis, 12 = mixed methods I (different kinds of quantitative methods), 13 = mixed methods II (both qualitative and quantitative methods), 14 = mixed methods III (different kinds of qualitative methods), 15 = methods papers (studies that advance methodological means), 16 = case study, and 17 = discourse analysis and textual analysis.

Number of Views

The number of views was downloaded from SciVal. View counts in SciVal were generated from usage data in Scopus. The metric is the sum of abstract views and clicks on the link to view the full text on the publisher's website.

Number of Citations

The number of citations was downloaded from SciVal. It represents the total citations (measured in Scopus) received by the publications of the selected authors.

Number of Papers (i.e., Productivity)

The number of articles was downloaded from SciVal. The number of articles (Scholarly Output) in SciVal indicates the prolificacy of an entity and shows how many publications a given entity has indexed in Scopus.

Measuring Diversity

To measure diversity, we calculated Simpson's reciprocal index of diversity for each author and field (Hill, 1973). Diversity was calculated by (1) research approach and (2) data collection. The range of this variable is between 1 and 0, where numbers closer to 1 signify greater diversity in research approach or data collection, and values closer to 0 indicate less. The calculation deals with the total number of elements in a given category (n) and with the total numbers of all elements (N), so the diversity index measures the distribution of the elements from proportional distribution (values closer to 1) to disproportional distribution (values closer to 0):

$$D = \frac{\Sigma n (n-1)}{\Sigma N(N-1)}$$

Data Analysis

To answer the research questions, we implemented different statistical techniques, both descriptive and inferential. Specifically, to answer RQ1a, b, and RQ3a, b, we reported a frequency analysis, followed by aggregate levels of the diversity of both research approaches and methodologies in the field (RQ2a,b) and among the most productive scholars (RQ4a,b). Finally, to answer RQ5, we ran a k-means cluster analysis accounting for (a) levels of diversity in research approach and (b) methodology among the most productive scholars. Before the analysis, the standardized values for both measurements were saved as variables. In addition, we exploratorily ran a single scatterplot to examine the association between research approach and methodological diversity. Specifically, research approach was included as X and methodological diversity as Y, while scholars were introduced as labels, thus grouping profiles according to cluster results (pluralist, eclectics, and specialist), and plotting the regression slopes for each cluster. Similarly, we plotted both variables for the pooled sample.

A follow-up analysis was conducted (RQ5b) to explore the effects of each cluster on research productivity, number of views, and citations. As none of the prior variables across each cluster were normally distributed, we ran the Kruskal-Wallis H non-parametric test. Given that RQ1 and RQ3, and RQ2 and RQ4 are answered with frequency analysis in the former and with diversity indexes in the latter, in the results section, we report and answer them together and not in the consecutive order suggested in the literature review.

Results

The most common research approach for both the field of communication (RQ1a) and the most productive scholars (RQ3a) is the quantitative approach, followed by the qualitative and the mixed methods research approaches (see Tables 2 and 3). However, while the contribution of quantitative research among the most productive scholars accounts for 72% of all scholarship, in the general field, the situation is more balanced, accounting for "only" 44.8% of all papers published in 2020. According to this data, there is a substantial gap (27.3%), especially between the quantitative research approach implemented by the most productive scholars and the general field: The quantitative approach is overrepresented among the most productive scholars in comparison with the proportion in the field.¹

 $^{^1}$ A Chi-Square goodness of fit test was conducted to determine whether the research approach among the most productive scholars and the field were equally distributed. For each research approach among the most productive scholars, the minimum expected frequency was 368.7, while in the field, the minimum expected frequency was 117.7. The Chi-Square goodness of fit test indicated that the research approach of the most productive scholars was not similarly distributed among either the most productive scholars ($\chi 2(2)$ = 750.04, p = .000) or the field ($\chi 2(2)$ = 44.64, p = .000). See adjusted residuals in Tables 2 and 3 to assess deviations from equal proportions.

Table 2. Research Approach Frequencies Among the Most Productive Scholars.

	Most productive scholars				
			Equal		
	Frequencies	%	Proportions	Residual	
Quantitative	796	72	368.7	427.3	
Qualitative	191	17.3	368.7	-177.7	
Mixed methods	119	10.7	368.7	-249.7	
TOTAL	1106	100	368.7		

Table 3. Research Approach Frequencies in the Field of Communication.

	Field			
			Equal	
	Frequencies	%	Proportions	Residual
Quantitative	158	44.8	117.7	40.3
Qualitative	135	38.2	117.7	17.3
Mixed methods	60	17	117.7	-57.7
TOTAL	353	100	117.7	

The most common method of data collection for both the field of communication (RQ1b) and the most productive scholars (RQ3b) was the survey, followed by experimental design for the most productive scholars and discourse/textual analysis at the field level (see Table 4).

The mean research approach diversity (RQ2a) in the field was 0.50, suggesting moderate levels of diversity, while for methodological diversity (RQ2b), the findings indicate strong levels with an average of 0.86. The mean research approach diversity (RQ4a) among the most productive scholars in the field was 0.30, suggesting low levels of diversity. As for methodological diversity (RQ4b), findings indicate moderate levels with an average of 0.57. There was a statistically significant, strong positive correlation between research approach and methodological diversity among the most productive scholars (r(218) = 0.636, p < .05).

The cluster analysis (RQ5a, see Figure 1) revealed three different profiles of communication scholars depending on their level of research approach and methodological diversity: specialists (N = 48), eclectics (N = 101), and pluralists (N = 71). Specialists are characterized by lower levels of diversity both in research approach and methodology and are in the minority within the category of the most productive scholars in communication. Pluralists, on the contrary, are more open to diversity in both research approaches and methodologies, showing higher levels of research diversity in general. Finally, eclectics—

accounting for the vast majority of the most productive scholars in communication—have increasing values of methodological diversity but decreasing values of research approach diversity.

Table 4. Research Approach Frequencies Among the Most Productive Scholars and in the Field of Communication.

	Most productive scholars		The field	
	Freq.	%	Freq	%
Surveys	368	32.8	82	23
Interviews	102	9.1	38	10.6
Experimental	282	25.2	43	12
Focus Groups	19	1.7	2	0.6
Ethnography	9	0.8	16	4.5
Big data	27	2.4	1	0.3
Content analysis	89	7.9	16	4.5
Systematic literature review	15	1.3	4	1.1
Meta-analysis	19	1.7	4	1.1
Network analysis	1	0.1	3	0.8
Observational analysis	5	0.4	9	2.5
Quantitative + Quantitative	39	3.5	9	2.5
Quantitative + Qualitative	56	5	27	7.6
Qualitative + Qualitative	24	2.1	24	6.7
Methodological studies	4	0.4	-	-
Case studies	2	0.2	10	2.8
Discourse analysis and textual analysis	60	5.4	69	19.3
TOTAL	1121	100	357	100

In Figure 2, we first plot the association between research approach and methodological diversity in the pooled sample of the most productive scholars, showing a positive linear association. In Figure 3, we plot the same variables, but accounting for the three different cluster analyses, showing a positive association between research approach and methodological diversity among pluralists and specialists and a negative association among eclectics.

A follow-up analysis (RQ6b) was conducted to explore whether there were statistically significant differences between clusters according to scholars' levels of productivity, views, and citation scores. In other words, do specialists, eclectics, and pluralists differ in their level of productivity, views, and citation scores? Distributions of productivity, views, and citation scores were similar for all three clusters, as assessed by the visual inspection of a boxplot. Median scores for productivity were statistically significantly different between clusters, H(2) = 6.15, p = .046. However, neither views, H(2) = 1.79, p = .408, nor citation scores, H(2) = 1.55, p = .460, were statistically different between clusters. For productivity, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted p-values are presented. This post hoc analysis revealed statistically significant differences in median productivity scores between specialists (11.50) and eclectics (13; p = .045), but not between

specialists and pluralists (13; p = .164) or between pluralists and eclectics (p = 1.00). Accordingly, eclectics are significantly more productive than specialists.

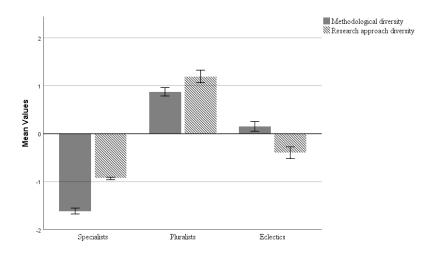


Figure 1. Cluster analysis of the most productive scholars in communication according to their research approach and methodological diversity.

 $\it Note.$ Standardized values for methodological diversity and research approach diversity. Error bars represent confidence intervals set at 95%.

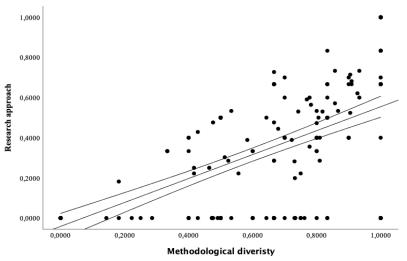


Figure 2. Scatterplot for the pooled sample.

 $\it Note.$ Fit line for the association between methodological diversity and research approach diversity in the pooled sample. 95% CI for the mean.

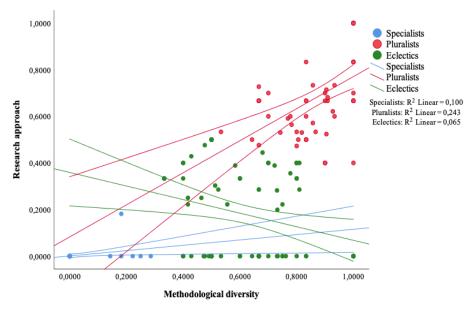


Figure 3. Scatterplot for the subgroups.

Note. Fit line for the association between methodological diversity and research approach diversity in the subgroups. 95% CI for the mean.

Discussion

The field of communication research has a wide variety of methodological approaches, ranging from ethnography to experimental designs (Croucher & Cronn-Mills, 2021). However, the prevalent divide between qualitative and quantitative approaches has led to distinct bodies of literature that often do not converse with each other (Pfiffner, 2021; Roskos-Ewoldsen et al., 2007). The predominance of quantitative methods seems to prompt a mistrust of case-based qualitative research methods (Hayes & Krippendorff, 2007). There is also a similar antagonism toward the predominance of quantitative approaches, often seen as reducing social sciences' focus on subjective experiences and narratives (Rawlins, 2007). While numerous studies have addressed methodological diversity within communication science, most have focused on a limited set of articles and journals, precluding us from a comprehensive overview of the field. Therefore, in this study, we aimed to complement this line of research by analyzing a representative sample of the field (i.e., journals indexed in JCR) while also examining trends among the most productive scholars.

About our first research question (RQ1a), we found the field of communication to be generally well-balanced concerning the two research approach paradigms (quantitative 44.8%; qualitative 38.2%). However, mixed methodologies still seem to be limited (17%). Compared with previous studies, these results indicate a more optimistic research balance: Trumbo's (2004) analysis of 2,649 articles published in eight prominent journals found an approximately 60/40 split between quantitative and qualitative studies, while Gondwe's (2020) analysis of 160 articles published in five U.S. journals indicated that quantitative studies were preferred

(59.37%) over qualitative studies (38.75%). Mixed method studies also seemed to be more prominent in the general field (17%) compared with these subsets of leading journals (1.87%; Gondwe, 2020).

Notwithstanding, mixed approaches are more crucial to enhance the analytical strength of communication research and to mend the divide between quantitative and qualitative traditions (e.g., Benoit & Holbert, 2008; Gondwe, 2020). From this perspective, our results (with 17% for mixed methods in the field) indicate that there is still room for improvement. These shortcomings are even more pronounced at the methodology level (RQ1b), as studies that combine both qualitative and quantitative methods account for only 7.6% of the whole sample (Table 4). This reflects that the methodological divide between quantitative and qualitative methodologies is still rampant in communication research, as it evidences that communication researchers do not generally employ both methods together. This could restrict our understanding of phenomena, as combining methodologies across paradigms provides insightful perspectives through findings that can be generalizable without losing sight of context, subjective perceptions, and depth (Bryman, 2012; Croucher & Cronn-Mills, 2021).

About our second research question (RQ2), our results indicated moderate levels of research approach diversity (0.5) and strong levels of methodological diversity within the field (0.86). Overall, these findings are encouraging in terms of diversity, as they indicate that communication phenomena are being examined using various methodological approaches. This finding suggests that, while there is still a relatively strong divide between the paradigms of quantitative and qualitative approaches, the methodological variety within these traditions is relatively high. It is also important to compare these findings about the field in general with the analyzed subset of the most productive scholars. Concerning the representation of research approaches among the most productive scholars (RQ3a), our results indicated a strong predominance of quantitative methods (72%) compared with qualitative ones (17.3%). Furthermore, mixed methods also seemed to be especially scarce (10.7%, including studies with mixed quantitative methods and studies with mixed qualitative methods). Compared with the field in general (quantitative: 44.8%; qualitative: 38.2%; mixed methods: 17%), these results indicate a stronger quantitative predominance within the most productive segment of the field, as well as an even more marked scarcity of mixed method studies. At the specific methodology level (RQ3b), surveys (32.8%) and experimental designs (25.2%) seem to dominate among the most productive scholars, while ethnographic methods (0.8%) and studies mixing quantitative and qualitative methods (5%) are the least represented. Although survey- and experiment-based methods are also the two most frequently used techniques within the general field, the dominance is only apparent in the case of survey methods (Table 4; survey methods: 23%, experiment-based methods: 12%, interviews: 10.6%).

One possible explanation for the predominance of quantitative methods—and, especially, survey methods—lies within the labor processes of these methodologies. It could be argued, for instance, that highly computerized quantitative methods can be done faster than qualitative research, which typically relies on time-consuming manual, interpretative coding processes, or even fieldwork (e.g., ethnographic studies). It also seems evident that quantitative research studies, which can sometimes be conducted faster, are published with a higher frequency, hence the over-representation within the subset of the most productive scholars. At the same time, as qualitative analyses provide useful insights into the perspectives and narratives of the subjects (DeCoster & Lichtenstein, 2007), trends toward quantitative exclusivity within the field can prompt dangerous epistemic homogenization processes.

Notwithstanding, as long as scholarly excellence is also conceptualized along the lines of publishing productivity (Goyanes & Demeter, 2021), we cannot neglect the motivational aspects that these dynamics elicit in individual researchers, urging them to publish more frequently, and how these career-oriented considerations hinder the emergence of an epistemically and methodologically diverse field. Communication studies therefore face a twofold problem. On one hand, the dominance of the quantitative approach tends to motivate researchers to conduct quantitative studies to complement the existing body of literature (unstated regime; Rawlins, 2007). At the same time, researchers are motivated to engage in more productive methodologies—that is, methods that can be published with a higher frequency (e.g., survey-based quantitative approaches)—to gain scholarly excellence (Goyanes & Demeter, 2021). Accordingly, it is noteworthy that while our results emphasize how the field has been slow to adopt mixed-method approaches that could aid in the development of new theories and offer a more comprehensive understanding of phenomena, their implementation may be impeded by these academic dynamics and the fact that these methods are significantly more time-consuming.

About our fourth research question (RQ4), we found low levels of average research approach diversity (0.3) and only moderate levels of average methodological diversity (0.57) among the most productive scholars. These results indicate a strong paradigmatic divide between quantitative and qualitative traditions among prominent scholars of the field with a preference for quantitative approaches. Thus, from the perspective of individual scholars, the publishing sphere seems to reward research conducted exclusively in one of these paradigmatic traditions. In addition, given the influence of these academics in the field, these low diversity patterns may impact further theoretical and empirical insights.

Finally, we conducted a cluster analysis to group the most productive scholars according to their research approach and methodological diversity (RQ5a). Our results indicated eclectic scholars, who tend to be paradigmatically exclusive yet methodologically diverse, to be the most represented group (101), as opposed to both paradigmatically and methodologically diverse pluralists (71), and the most underrepresented specialists (48), who tend to focus on specific methodological tools and research approaches. Therefore, choosing between paradigms and maintaining methodological diversity within the one selected seems to be rewarding in communication science in terms of research publications. One possible explanation for this pattern may be the labor efficiency aspects of collaboration within a particular research approach (i.e., quantitative or qualitative).

To assess differences in the level of productivity, views, and citations between the clusters, we also conducted pair-wise comparative analyses to test if specialists, eclectics, and pluralists differed in these measures (RQ5b). However, only the productivity measures were found to be statistically different and only in the case of the comparison between eclectics and specialists. In particular, the findings revealed that eclectic scholars are significantly more productive than specialists. These findings indicate, again, that the publishing market rewards scholars who conduct research exclusively in one of the paradigmatic traditions yet remain diverse in the methodological toolset they apply.

Fostering Progress in Communication Research: Advancing Methodological Diversity and Collaboration

We propose five recommendations to bridge the prevalent divide between qualitative and quantitative approaches in communication research and facilitate a more comprehensive understanding of communication phenomena. By encouraging interdisciplinary research, promoting mixed-methods approaches, increasing awareness and education, fostering open dialogue, and promoting inclusive publishing practices, these strategies seek to enhance methodological diversity, inclusivity, and collaboration within the field.

Encouraging Interdisciplinary Research

Encouraging interdisciplinary collaboration promotes methodological diversity in communication research, while such collaboration enriches investigations by bridging gaps between theory and practice. To foster interdisciplinary research, academia should recognize and value interdisciplinary contributions, encourage open knowledge exchange, and support interdisciplinary professional development. Institutions can play a pivotal role by promoting collaborations across departments to create an environment conducive to interdisciplinary work. Addressing current academic tendencies that prioritize disciplinary silos and specialized expertise is crucial for advancing the field, as these barriers impede collaboration and knowledge-sharing across disciplines.

Promoting Mixed-Methods Research

By combining qualitative and quantitative methods, researchers can achieve a more comprehensive perspective, including both subjective experiences and statistical rigor (Croucher & Cronn-Mills, 2021; Johnson & Onwuegbuzie, 2004; Kamhawi & Weaver, 2003; Trumbo, 2004). Despite its benefits, however, mixed-methods research poses challenges. Scholars may find it complex and time-consuming to integrate multiple methodologies, requiring additional training and resources. Review processes for mixed-method studies can also be prolonged and may involve conflicting feedback from reviewers specializing in different methodologies. To promote mixed-method research, several strategies can be implemented. First, institutions and journals can enhance reviewer training to better evaluate mixed-method studies. Collaborative review processes involving reviewers with diverse methodological expertise can mitigate conflicting comments and ensure a balanced evaluation. Second, dedicating special journal issues to mixed-method research increases dialogue and collaboration among scholars. Finally, funding agencies should establish grants specifically tailored to support comprehensive mixed-method studies in communication.

Increasing Research Diversity Through Training

The longstanding debate between quantitative and qualitative methodologies has deeply divided researchers in the social sciences, including the field of communication, influencing both scholars and toptier journals (Gondwe, 2020). Our findings illustrate that this methodological divide persists in communication research. To foster methodological diversity and encourage the integration of different research approaches, it is crucial to start addressing these issues early in researchers' training. By offering

workshops, courses, and seminars that cover both qualitative and quantitative methodologies, universities can cultivate a culture of methodological diversity among early-career scholars (Johnson & Onwuegbuzie, 2004). This approach ensures that emerging researchers do not feel compelled to adopt a singular methodological stance. Instead, they are equipped with the skills needed to conduct studies that combine both perspectives. Mentoring programs also play a pivotal role in advancing awareness and education. Conferences like the International Communication Association or the Association for Education in Journalism and Mass Communication provide valuable platforms for such mentoring relationships to flourish.

Encouraging Open Dialogue Between Researchers

To bridge the methodological divide and advance communication inquiry, fostering cooperation is essential. Initiating discussions among researchers from diverse paradigms at forums and international conferences can catalyze this process. Panels featuring scholars employing different methodologies provide platforms to address and overcome methodological rigidity. By highlighting how both quantitative and qualitative research contribute to a comprehensive understanding, such forums encourage broader acceptance of methodological diversity among researchers and early-career scholars. Additionally, organizing special issues in prominent communication journals can further promote open dialogue across paradigms. Special issues should showcase studies employing different methodologies, illustrating how qualitative and quantitative approaches complement each other to advance theory and empirical evidence.

Promoting Inclusive Publishing Practices

Regardless of ongoing efforts among researchers to promote pluralistic research approaches, the final decisions on what gets published lie with editors and their editorial boards. As gatekeepers of knowledge, these boards wield significant influence over the research directions and methodological standards of scientific journals (Baccini, Barabesi, & Marcheselli, 2009; Teixeira & Oliveira, 2018). Studies have highlighted how editorial board members of top-tier communication journals often hail from similar backgrounds and institutions, predominantly Western and American (de-Marcos, Goyanes, Domínguez-Díaz, 2024; Goyanes, de-Marcos, Demeter, Toth, & Jordá, 2022). This concentration may inadvertently bias journals towards specific paradigms and hinder methodological diversity, potentially stifling innovation and limiting the breadth of scientific inquiry. To foster genuine methodological and theoretical diversity, it is crucial for scientific journals to embrace broader geographic perspectives and diverse scholarly traditions (Goyanes & Demeter, 2020, 2021). This inclusivity would encourage collaboration among researchers with varied backgrounds and perspectives, enriching the discourse within each journal with unique experiences and insights.

Limitations

While our study provides valuable insights into research approaches and methodologies within the field of communication, it is essential to acknowledge its limitations. First, our findings are based on a sample of the most productive scholars and a sample of articles from JCR-ranked journals, not the entire field of communication. Consequently, the results may not be fully generalized to the broader field. Future research could address these limitations by expanding the scope of analysis to include a larger and more diverse set

of scholars and articles, spanning a broader range of years. Second, our data collection focused on a specific timeframe (2017–2020) and may not capture longer-term trends or more recent changes in research practices. Third, although not included in this study, non-English articles and theoretical studies (along with their applied theoretical frameworks) could offer a more comprehensive epistemic overview of the field. Finally, exploring the reasons behind the predominance of certain methodologies and the barriers to adopting more diverse approaches could help in developing strategies for greater methodological inclusivity and innovation within the field.

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