

How can we strengthen the integration of findings in communication sciences?

Matthias Potthoff, University of Münster, Department of Communication, Germany
matthias.potthoff@outlook.com

Abstract

Individual studies in the empirical social sciences have limited explanatory power, as they focus on particular aspects of the overarching objects of research. To explain complex communicative phenomena or describe multistep processes, individual findings need to be combined. Often, however, such an integration does not occur, and opportunities to expand the explanatory power of existing results beyond their immediate scope remain unexploited. Drawing from examples in practical research, this paper describes six metatheoretical, methodological, and context factors that explain why a higher degree of co-creation and integration remains unrealized. A good understanding of these factors can easily be translated into measures that can achieve more integration and make our results more impactful. Furthermore, the illustration of the six factors indicates where integrable findings can be found in this fragmented research landscape. The resulting recommendations are made in the hope that integrative work will be upgraded and further established as a methodological niche in the generation of insights.

Keywords

research fragmentation, knowledge fragmentation, undiscovered public knowledge, phenomenon mapping, theory construction, theory development

1 Introduction

For decades, scholars have remarked that the findings in communication sciences have not been sufficiently integrated (e.g., Potter, 2009; Waisbord, 2019). Donsbach (1991), for example, noted that while there has been diversification in the theoretical approaches and increased sophistication of empirical methods in communication research, its theories have not become more complex; that is, the number of single hypotheses that are combined into one theory has not grown. This belief is shared by DeFleur (1998), who claimed that most research constituted “a one-shot enterprise” seeking “short-term objectives that were deemed important at the time” (pp. 91–92). Furthermore, “[t]here was no theoretical trail being followed, or accumulative refinement of concepts leading from the results of one study to the design of the next” (pp. 91–92). According to Waisbord (2019), this diagnosis remained accurate twenty-one years later, when he

stated that “the field has evolved into a disorganized collection of theories, methodologies and research lines without obvious, straightforward connections” (p. 11). The results generated in this way may be complementary as science spotlights various aspects. However, such research is not cumulative, i.e., it does not bring us to a fuller, more precise understanding of a specific phenomenon.

This describes a state of fragmentation, which has several facets: Findings can remain unrelated because they describe disjunct phenomena, in which case integration potential is unavailable. In many other cases, however, findings do have certain commonalities, such as when they describe various parts of one communicative phenomenon or two closely related phenomena, and therefore, complement each other. This is a common result of how social science research is set up – and requires subsequent steps. The phenomena we investigate are complex, and a single theoretical approach will usually only be



able to integrate a “handful” of variables at a time. Thus, research has a spotlight character: Studies tend to capture only particular aspects of an overarching object of research. In a further step, individual findings must be integrated to enable a fuller understanding of the focal object of research – which is also considered fundamental to scientific progress. “No one can make use of a mass of unrelated facts [...]. Just as empirical research and social theory must be integrated, so actual findings must be related to each other” (Lazarsfeld, Berelson, & Gaudet, 1944, p. viii).

Notwithstanding this reasonable argument, such integration is not sufficiently practiced. The relations between findings are often not recognized or not explicitly described which means that most recipients of scientific work will be unaware of them. Consequently, we are missing chances to build more comprehensive descriptions of communicative phenomena.

To change this situation, the following paper is dedicated to factors that hinder stronger integration and define the potential for an ex-post integration of existing results. These factors are presented in six theses, which center on current ways of working with hypotheses. The integration of hypotheses has a key role in the integration of findings, because they usually constitute the centerpieces of scientific insights. The first step toward building the six theses consisted in a reflection on which decisions scientists take when working with hypotheses and which components of these decisions could have negative effects on integrability. It is suggested that linkages between theoretical fragments and empirical studies are constituted by a common occupation with certain variables. Hence, the deliberations leading to the six theses were based on the guiding question of how such a common occupation is impeded or disguised.

Four types of decisions in the context of hypotheses-building as well as two context factors were related to integrability and covered by one thesis each. These include defining the central variables (T1), operationalizing them via empirical case-examples (T2) and auxiliary variables

(T3), and relating them to a superordinate construct (T4). An important contextual factor impacting integration is whether hypotheses appear in the same field of research (T5). Finally, seen from a meta-level perspective, all previously mentioned factors are influenced by the researchers’ working conditions, which is explained in the last thesis (T6).

The theoretical reflections were followed by an example-search, which was constructed as a keyword-based literature-research and meant to show whether the envisaged problems can be observed in published research. This led to an iterative process. While some theses could immediately be supported by examples, others had to be modified. The body of research that was used for these examples was quantitative mass media research. This field is among the most mature ones; thus, there would have been sufficient opportunity to achieve a high degree of integration until now. As this paper is discussing the integration of hypotheses, further focus is put on the field of media effects research, which has many operationalized hypotheses to offer. As some of the six theses (esp. T5) address those findings that are not integrated because they stand in different contexts, it became imperative to also include adjacent fields in the scope of the example search. The search was concluded once pertinent examples were found, as the purpose of this paper is merely to present an overview of factors impacting integration, i.e., the example search was neither meant nor suited to quantify the appearance of the six factors.

The resulting problem description is focused on the microlevel – establishing links between individual findings. More precisely, the focus is on ways to link existing theoretical fragments with other fragments and empirical studies with other studies to achieve more comprehensive theories or generalizations. This surpasses building thematic collections in which individual pieces are merely placed next to each other. Rather, findings need to be interlinked like instruments of an orchestra, which then become more than the sum of their parts.

2 Existing perspectives on research integration

Integrating scientific findings is like putting together the pieces of a puzzle: while each piece contains some information, we strive to see the bigger picture. The more findings we combine, the clearer our explanations become and the more steps we can describe in a communicative process.

Furthermore, an integration of results can reveal a more general principle behind certain individual observations that has a wider application. One example of this is the *knowledge gap hypothesis*, which states that “increasing the flow of news on a topic leads to greater acquisition of knowledge about that topic among the more highly educated segments of society” (Tichenor, Donohue, & Olien, 1970, p. 159). This phenomenon can be considered a media-specific case of the *Matthew effect* (“to everyone who has will more be given”), which additionally manifests in citations (Merton, 1968), for example. Nevertheless, a superordinate field of research has not emerged, and the knowledge gap hypothesis continues to stand alone. Therefore, our theoretical approaches may have less scope than may at first appear; furthermore, a stronger integration of findings can lead to a reduction in redundancy. However, this would also enlarge empirical states of research and explain the peripheral conditions under which effects occur.

Since the integration of findings can strengthen our theories, it is difficult to understand why the research landscape is fragmented. One of the reasons may be a scarcity of concrete approaches on how integration can be realized. “All communication scholars know excruciatingly well that our ‘integrative theoretical discussions’ are ‘relatively weak,’ but few of us have any clue how to improve them” (Peters, 2011, p. 1469). Four approaches constitute the main pillars of the debate.

Up-front alignment to a practical problem: One proposed method of addressing fragmentation involves defining an overall objective with which all upcoming research initiatives should be aligned.

As one of the proponents of such a top-down approach, Cappella (2011) suggested that scholars should jointly select a practical problem of broad significance and then work together on a solution. This could “bridge more of the differences and lead to a greater appreciation of each other’s points of view precisely because we are trying to solve a problem beyond our own narrow intellectual boundaries” (p. 1477). Discovering practical solutions would require combined research; therefore, a stronger problem focus would lead to more collaboration between subfields and a heightened willingness to compromise on respective viewpoints.

Such an approach may bring our distinct disciplinary traditions closer together. Furthermore, it could achieve integration in the sense of alignment, that is, up-front measures to make different results complementary and compatible. However, the approach stipulates that the central problem must be chosen before any research is conducted to achieve the alignment between contributions. Hence, it would not support the integration of existing results that are not related to the yet-undefined central problem. Furthermore, creating an alignment between diverse research initiatives requires meeting several difficult conditions. Communication sciences contribute to the solution of practical problems, such as in the field of climate change communication. This is always accompanied by an accumulation of knowledge. However, an alignment requires a high degree of exchange between scholars, a willingness to arrive at a mutual solution, and a high openness to share the success, which is partly incompatible with the organizational structures in science (e.g., Corner, 2013; also T6 below). We may see this, for example, in research clusters, but less so on a broader scale.

Ex-post facto integration under an overarching phenomenon: There are further approaches that propose to bring different strands of research under the umbrella of a unifying problem. Other than in the first-named approach, the respective problems include the development of theories, and the suggested procedures

include ex-post facto integrations. Lunt and Livingstone (2016), for example, proposed that it might be worthwhile for media studies to “bring together many of its diverse theories, topics and findings in a common endeavour that would reveal [...] how mediatization works” (p. 463). And indeed, there have been efforts to show how phenomena such as agenda setting, framing, or cultivation serve as indicators of mediatization (e. g., de Vreese, 2014).

This approach creates a connection between the mentioned sub-phenomena, but the degree to which individual results are aligned and intertwined is not necessarily strong. Research on the sub-phenomena is usually not set up as research on a fragment of mediatization – and the respective studies do not reference mediatization either. In the same vein, “the framing concept has virtually gone unnoticed in the [...] burgeoning literature on mediatization” (de Vreese, 2014, p. 137). Accordingly, systematic alignment between framing and mediatization research does not exist. The bridges between mediatization and its sub-phenomena tend to only be built in separate publications. Second, connections are made vertically, that is, between the macro-phenomenon and the indicators (framing-mediatization, cultivation-mediatization), but not horizontally, that is, between elements of the sub-phenomenon level (e. g., framing-cultivation) in this context.

Mapping phenomenon perspective: Potter (2009) proposed a more bottom-up oriented approach, which starts with existing findings, claiming that it was “time to shift away from a predominantly generating-findings perspective, where we spend most of our resources on generating more ideas, assumptions, definitions, and findings” (pp. 20–21). Instead, he suggests spending more resources on “identifying the most important findings in our existing literature and organizing them in a way to extend their power of capturing the essence of our phenomenon” (p. 21). He then offers a framework that organizes findings in thematic clusters and identifies the central ideas that drive diverse lines of research on mass communication. There-

by, he summarizes a broad range of findings into a “map of scholarship” (p. xix).

The greatest strength of this commendable approach simultaneously constitutes its greatest limitation. The synthesis of the literature results in a higher level of generality. A multitude of results is compressed into one comprehensive description of a large overarching phenomenon. This enables us to observe the phenomenon of mass media from a global point of view. However, this approach also changes the characteristics of the input. The theories of medium range that build the foundation of Potter’s synthesis are treated as elements of a larger entity, but neither are they discussed in detail nor given specific focus. Their horizontal integration with other theories of medium range is not methodologically elaborated and tends to remain in the background. Hence, this approach produces thematic collections.

Opportunistic integration: Waisbord (2019) offers a fourth perspective. He, too, diagnoses the communication sciences as fragmented. The chances to change this would be limited, because calls to focus more strongly on integration, for example, by building theoretical bridges, did not lead to a significant response. As “[a]cademic incentives and interests favor continuous hyper-specialization” (p. 67), any hope for more theoretical, analytical, and / or conceptual integration would be “anachronistic” (p. 71). This would not be regrettable as intellectual integration is not necessary to move forward. However, due to the lack of intellectual cohesion or a clear disciplinary core, the communication sciences should be considered a post-discipline rather than a discipline; that is, a loose organizational construct in which scholars with a diverse set of skills develop “concepts, languages, and theories around specific problems and questions” (p. 127) without limiting themselves to a specific set of perspectives, frameworks, or methodologies. Although renouncing the claim that intellectual coherence should be a guiding principle for the communication sciences, Waisbord (2019), too, criticizes the “insufficient interest in producing ambitious theoretical arguments that bring

together different threads of research” (p. 140). He thus suggests “[finding] what different slices of scholarship have in common and develop and refine cross-cutting arguments” (p. 139) where there are opportunities to do so.

One may be more optimistic than Waisbord regarding the realization of more integration because of its practical potential. However, he persuasively proposed that the communication sciences are unlikely to become a cohesive intellectual community (Waisbord, 2019). Then again, achieving more integration does not require every scholar’s focus on it. An up-front alignment on certain fundamentals like Cappella’s (2011) approach might lead to the highest degree of compatibility and comparability of results, yet only within the limited frameworks of individual problem areas. By comparison, the opportunistic approach may be more practical as it has fewer presuppositions and establishing ex-post integrative work as a methodological niche could already bring us a long way toward realizing more integration. While they do not exclusively focus on the opportunistic perspective, the following six theses on fostering the integration of findings introduce several starting points for such targeted, decentralized integration initiatives.

3 Roadmap to research integration: Six theses offering options for action

Research fragmentation and integration manifest themselves differently in various strains of research, which made it necessary to define a clear focus for the following theses on research integration. As a starting point, the perspective of medium-range theories and quantitative research aimed at explaining or predicting phenomena was chosen, because the integration of findings is particularly important for uncovering general laws. However, this is not to say that discussing integration in other strains of research would not be equally worthwhile.

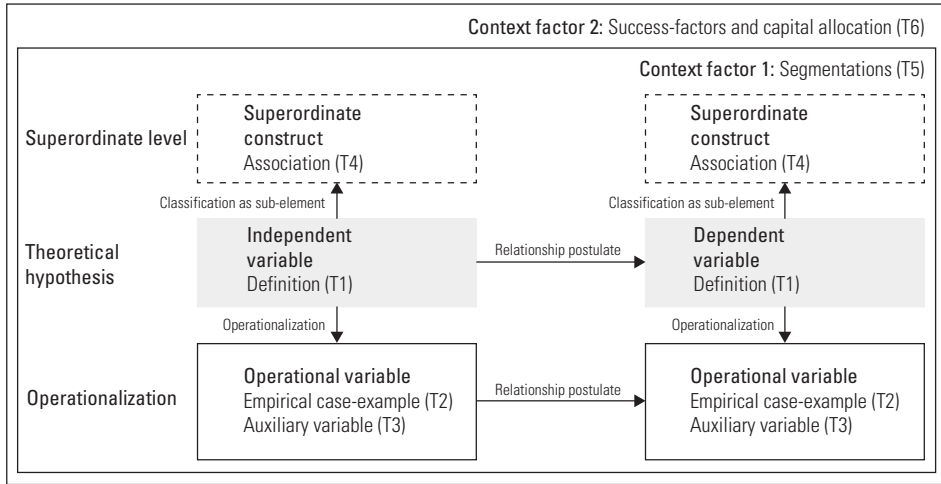
One can say that from the chosen perspective, “[m]ost research is concerned about possible relationships between variables, and hunches and theories get translated into specific statements about variables” (Iversen, 2004, p. 966). Hypotheses are the central form in which relationships between variables are postulated and documented. Hence, if we aim to facilitate integration in the field of medium-range theories and quantitative research, the integration of hypotheses is a reasonable focus.

There are several standard ways in which hypotheses can be integrated. In *theory construction*, hypotheses are related if they share one variable. The goal of combining them can be a higher degree of variance explanation (combining $A \rightarrow C$ and $B \rightarrow C$ to arrive at theory $A+B \rightarrow C$). Alternatively, researchers may seek to describe several steps in a causal chain (combining $A \rightarrow B$ and $B \rightarrow C$ to form theory $A \rightarrow B \rightarrow C$). Another form of combining existing hypotheses is generalization, which involves relating one or both variables included in a superordinate, more general construct in an inductive manner (e.g., $A \rightarrow B_1$ and $A \rightarrow B_2$ to form the new hypothesis $A \rightarrow C$, where B_1 , B_2 , and possibly other variables constitute the more abstract construct C).

In *empirical research*, results are considered related when the same hypothesis is operationalized. Having several empirical studies of the same relationship allows us to conduct meta-analyses that generate “the estimation of a population effect size by calculating a weighted estimate of that effect across all the obtainable studies of that effect” (Carpenter, 2017, p. 980). This is often combined with the identification of moderators of the effect or boundary conditions under which an effect occurs.

This demonstrates that in theory construction and empirical work, a focus on the same constructs or variables is the central requirement to realize an integration of partial outcomes, and the chances of finding studies on the same variable in different contexts are good. Our fields of research, such as media content research, strongly limit the number of variables that are useful for examination. If we see

Figure 1: Variable specifications with relevance for subsequent hypothesis-integrations



Source: Own illustration.

communication as a process, we can expect to find a relation between many of the fields that have emerged (e.g., media content and effects research), with certain variables crossing the barriers. Hence, the lack of integration that Donsbach (1991), DeFleur (1998), and Waisbord (2019) highlight is not exclusively explained by a large diversity of phenomena. In fact, the opposite may be true. Much of our potential for a stronger integration of findings results from the fact that we have generated further versions (factually or allegedly) of the same variables. For example, in some cases, abstract constructs are conflated with the objects to which they are applied (cf. the example of the knowledge gap hypothesis above, which applies the Matthew effect to the media landscape).

The six theses on research integration that are presented are the result of a focused observation of the specifications that researchers create with constructs and variables (Figure 1 for an overview). The nature of these specifications can facilitate or prevent integration. The first thesis is dedicated to the smallest constituent part of hypotheses – the *definition* of central variables. As the current variety of (operational) definitions make studies incommensurable, integration would be facilitated by using *shared* definitions

(T1, which is, therefore, oriented toward *upfront alignment*). This is followed by a call to separate theoretical concepts more consistently from the objects that we apply them to in empirical research, for example. This would reveal that many studies that have different foci at first sight are based on the same theoretical concept, which defines an enormous potential to integrate the empirical work around this concept (T2). In addition, more integration could be achieved if the relationships between theoretical and operational variables were specified more consistently (T3). Finally, integration would benefit from more consistent specifications whether constructs are superordinate or subordinate to one another (T4).

Beyond the four methodological and metatheoretical factors mentioned above, two factors related to the contexts of scientific work play a vital role for fragmentation and integration. These fuel the effects of the first four factors, but also have their own implications. The first of these contextual factors is related to existing segmentations in science. Integration could be improved by collaborating across the silos that are constituted by, for example, subdisciplines or research fields (T5). The second contextual factor is the method of allocating research funds and awarding

reputational capital, which, in its current form, tends to stipulate fragmentation rather than integration (T6). As we must assume that there are further relevant factors beyond the six theses, the following sections should be seen as the first part of an integration roadmap that is to be further expanded.

Thesis 1: Using shared definitions of variables would allow for a stronger integration of findings.

At first glance, many studies seem to have shared interest in some central variables because they share the same name. However, many terms used in the communication sciences, and the social sciences in general, are polysemous in that they have multiple conceptual definitions (Potter, 2009, p. 24). Definitions clarify the meaning of particular terms and provide descriptions of the constructs that they designate. Thus, definitions also specify the meaning of hypotheses and should be considered integral to them.

Different conceptual definitions of a particular term do not necessarily describe the same characteristics in different words. Different definitions usually have conceptual overlaps, but quite often assign different characteristics to the object in question. Depending on the precise nature of these differences, one cannot speak of the same concept. When alternative definitions specify the same essential characteristics of a phenomenon but differ in non-essential ones, we may speak of variations in a concept. If there are similarities and differences in the essential characteristics, we must speak of related but different concepts. Hence, “[t]he fact that the same variable name is used in different studies does not mean that the same variable is measured” (Hunter & Schmidt, 2004, p. 468). Consequently, we must also question whether studies using different definitions can be combined into one state of research. This also extends to instruments of measurement, which usually have a close relationship with the definitions used.

For example, while some definitions of media violence include accidents, others require intentional acts (Potter, 2009, p. 12). This makes it difficult to integrate empirical studies based on these definitions, as any variation in factors like the measured share of violent content, for example, will not only depend on the content analyzed, but also on the definition used. In such cases, there are few means to find ex-post solutions; that is, a stronger integration of findings requires a stronger up-front alignment on the definition.

Scholars have suggested new definitions of terms for multiple reasons. These include the adaptation of definitions to specific contexts or to changes in the reference object, such as updating the definition of “mass media” with the advent of new media technologies (Chaffee, 1991, p. 28). Alternatively, there may be perceived deficits in existing definitions, such as a lack of precision or completeness or a lack of operationalizability. Such explications are often repeated and then go in different directions because scholars understand the initially vaguely defined term in different ways. They may, for example, see other definitions as too broad or too narrow (cf. the example of “media violence” above). The later use of disparate definitions of a term then follows similar logic or results from the fact that scholars follow different schools of thought (Chaffee, 1991, p. 40). While this shows that a full standardization of definitions is neither possible nor desirable, it also shows that in many cases the introduction of a new definition is potentially expendable. In particular, this seems to be the case when further explications are suggested. This brings us to two central measures to achieve greater integration.

First, solving a problem includes building awareness – and there is currently no broad awareness that introducing a new definition has the potential downside of increasing research fragmentation. Going forward, it would make sense for authors (and reviewers) to undertake cost / benefit analyses, that is, to question whether a new definition has functional benefits that outweigh the costs of their fragmenting

effects. Furthermore, scholars should be aware that the act of tying into an existing line of research precludes full autonomy in defining the central variables. To facilitate the later integration of one's results with those of other researchers, one should choose the same construct definition (see also Potter, 2009, p. 28). Using a different definition implies using a different construct description, which can mean that a different phenomenon is being investigated. However, even when a researcher finds this unavoidable, there may still be ways to act mindfully with regard to fragmentation. In the example of media violence above, those who find it necessary to include accidents in their definition might, for example, capture them separately, which would make their empirical results compatible with studies based on other definitions.

Second, we could address the fact that re-definitions rarely lead to systematic advancement, even though they are often proposed because of a perceived deficit. There are useful criteria for evaluating concept descriptions (e.g., Cusella, 1984), but whereas the social sciences have an established process for replacing a hypothesis with a better one, they do not have a process for replacing a definition with a better one. This lack of a consolidation mechanism leads to the long-term coexistence of initial and revised definitions, and thus, fragmentation. This is not to say that any authority should decide which definition is to be used, but this could be made a matter of scientific debate. The genre of concept explications, which show how certain terms are used (e.g., Chaffee, 1991), could be complemented by comparative evaluations of definitions based on criteria such as uniqueness and empirical observability. This would provide objective reasons for choosing one definition over another and might thus be able to narrow down the use of definitions to some degree.

A problem similar to having multiple definitions of a concept exists with regard to constructs that have different names but (nearly) equivalent definitions, such as *second-level agenda-setting* (McCombs &

Ghanem, 2001) and certain versions of the *framing* construct (which is also heterogeneously defined). Different names suggest differences in the constructs' characteristics. When such differences are absent or insignificant, the states of research on the constructs should be combined. However, aggregations in which one of the synonymous construct names is abandoned rarely occur. There are several reasons for this.

First, the scientific norm of precision stipulates that even small differences should be considered, which provides an argument for keeping two very similar constructs separate. However, this means that a large number of similarities may be overshadowed by the existence of a very small difference. While there is no question that subtle differences *may* be significant, it is questionable whether we should always give this possibility the benefit of the doubt. In part, this has led us to a multiverse comprising very similar constructs for which we have very similar yet non-integrated insights.

Second, similar constructs with different names are often the result of parallel discoveries in different organizational silos of science, such as disciplines. Convergences may not be of interest to researchers whose careers are built on research on a particular phenomenon of interest, as this would weaken their status as "topic owners" (see also T6). Accordingly, convergences are not likely to be actively pursued by most central researchers in any field. Construct names serve as anchors for finding related research results in literature reviews and tend to be well established in their respective silos. This makes construct names difficult to replace, which is often why several strains of research on the same construct do not grow together. Eventually, synonymous terms are a symptom of the fact that different research contexts often hold complementary findings, but that at the same time the mutual demarcation and self-focus of subdivisions hinder the integration of findings (see T5 below).

Thesis 2: A clearer distinction between our theoretical concepts and the

case-examples on which we test our hypotheses could reveal that we are dealing with fewer variables than it currently seems.

A hypothesis should be as general as possible because the more general it is, the more informative it is – as long as it holds empirically. However, the concepts studied in communication sciences often appear quite narrow and only receive attention from a few specialized researchers. This seems to limit the integrability of hypotheses, as they are often built around different specialized concepts with no common focus. Again, this high degree of specialization may only exist at first sight. Corner (2013), for example, states that “[a]cross the range of work on media, there is a good deal of replication and ‘near replication,’ both in relation to the work of the past and across concurrent studies” (p. 1015). Indeed, examples of such replications are quite easily found if one brings the variables studied to a higher level of abstraction.

The hypothesis *When recipients observe a certain behavior in media content, they will also show this behavior in the future* is relatively bold. It states that any behavior will be imitated; that is, there are no limitations on the types of behavior or media content. However, rather than theorizing about imitative behavior in general, theories and empirical studies have largely dealt with imitations of *certain types* of behavior. The *Werther Effect* holds that “suicides increase immediately after a suicide story has been publicized in the newspapers” (Phillips, 1974, p. 340), whereas studies in media violence research have found that exposure to media violence is a significant predictor of aggression (e.g., Haridakis, 2006). Similarly, Engels, Hermans, van Baaren, Hollenstein, and Bot (2009) showed that the presentation of alcohol in movies and commercials stimulates young people to drink.

All of the aforementioned studies present case examples for a more general theory of imitation, but this is not how those studies were set up. In addition to the heightened risk of falsification, a rea-

son for this conceptual decision is that some researchers focus on object-related research (as opposed to theory-related research). For object-related research, theories such as social learning theory (e.g., Bandura, Ross, & Ross, 1961) are merely auxiliary concepts that help explain things like suicide, aggression, or alcohol consumption. For theory-related research, suicide, aggression, and alcohol consumption are mere case examples in which theories can be tested. Hence, because of differences in research foci, one scholar’s auxiliary concept or case example represents another’s field of research (or central variable). This creates instances of *irrelevant variety*, which “centers around the idea that when we are attempting to ascertain the relationships between two or more variables, we may be distracted by a host of situational attributes which are totally irrelevant to the relationships we are investigating” (Berger, 1977, p. 16). A great potential for integrating hypotheses can thus be revealed if we take the variables included in our hypotheses to a higher level of abstraction. This can be done by freeing the variables from elements that actually belong to the case examples used.

Hypotheses are also often made narrower than necessary because of an excessive focus on a specific field of application. Such fields of application include the disciplinary context, for example, in communication sciences. That is, the phenomenon in question may also exist in other contexts, which makes its occurrence in communication and media use a mere case example. A case in point is Klapper’s (1960) *selective exposure hypothesis*, which describes a media-specific case of *confirmation bias* – a phenomenon that “has been observed in a variety of guises” (Nickerson, 1998, p. 189). The phenomenon that “people tend to expose themselves to those mass communications which are in accord with their existing attitudes and interests” and that “[i]n the event of their being nevertheless exposed to unsympathetic material, they often seem not to perceive it” (Klapper, 1960, p. 19) is a more specific case of the phenomenon wherein “one selectively gath-

ers, or gives undue weight to, evidence that supports one's position while neglecting to gather, or discounting, evidence that would tell against it" (Nickerson, 1998, p. 175). While it certainly makes sense to test whether confirmation bias also exists with regard to media use, it is questionable whether reinforcement-oriented selective exposure should be seen as a phenomenon in its own right. In any case, a stronger integration would be reasonable.

Given our focus on scientific fragmentation, we may say that formulating hypotheses on more general, abstract concepts, that is, separating theoretical concepts more strongly from concrete objects of research, has the advantage that studies using more abstract variables are more likely to share common ground, both syntactically and regarding the specification of the variables. In our example above, all studies would have used the dependent variable "showing the behavior presented in the media" instead of "committing suicide," "drinking alcohol," and "being aggressive." This would also be a way to address the criticism that we are all too often engaged in the "pursuit of small matters" (Newcomb, 1993, p. 132). If, on the other hand, we treat each construct-case-example-combination as a construct in its own right, we rarely come upon multiple findings on the same constructs. We must ask ourselves whether a diversity of constructs is truly given when it merely results from the objects to which a general principle is applied.

Thesis 3: There are many cases in which the relation between theoretical constructs and their empirical indicators is not sufficiently specified, which causes the theoretical and empirical work to run in parallel.

Central theories on *attitude formation* describe *attitudes* as a function of *beliefs*, which result from direct experience or information provided by others (Wyer, 2019). Accordingly, we should expect to find beliefs, experiences, and persuasive messages discussed as predictors in empirical studies on attitudes. However, we

also find many studies that appear to focus on completely different factors. For example, Lewis (2003) studied *black-white* differences in attitudes toward homosexuality, and Andersen and Fetner (2008) discussed *cohort* differences. Adamczyk and Pitt (2009) shed light on the role of *religion*.

This may have been due to two reasons. The number of concrete beliefs that determine people's attitudes toward homosexuality is potentially infinite. Many different beliefs will lead to the same attitude, which is why it is difficult to translate this factor into an empirical predictor variable outside of an experimental setting. Operationalizing belief as religion offers a solution, as religions specify certain sets of beliefs (Glock & Stark, 1965). Religions may thus contain some of the beliefs that are relevant for the formation of attitudes toward homosexuality, that is, we have the opportunity to operationalize one construct (belief) via another (religion) in this case. The second potential reason for studying the relationship between religion and homosexuality attitudes could be that the researcher has a primary interest in the role of religion itself.

In either case, this results in a disconnect between theory (*attitudes depend on beliefs*) and empirical research (*attitudes predicted by religious affiliation*). If the researcher is interested in religion as such, for example, he may not focus on the theoretical underpinnings of the relationship between religion and attitude. In addition, the breadth of the construct *religion* makes it difficult to pinpoint the relationship between religion and attitude toward the beliefs included. Religion is not merely an operationalization of the belief concept; it also entails an expansion. That is, religion is a superordinate construct in that it contains not only beliefs but also numerous other elements (e.g., Glock & Stark, 1965). Furthermore, religious beliefs are correlated with a multitude of other factors, such as personality traits (Saroglou, 2002), which can also explain the relation between religion and attitudes. Accordingly, religion does not operationalize belief in such a way that would help support the theory that attitudes are belief-dependent,

at least not as long as *religion* is not broken down further into subdimensions.

Predicting attitudes toward homosexuality via skin color or cohort works in a slightly different way. Unlike religion, these variables have no conceptual overlap with beliefs, but they are correlated with the degree to which certain beliefs are held. Being born in different cohorts, for example, is related to the kind of education that someone receives. This is likely to lead to certain sets of beliefs, that is, it is possible to operationalize beliefs via skin color or cohort. However, we do not usually have a full picture of the causal chain between, for example, being born in a specific cohort and holding certain beliefs, as there are numerous other potential mediator variables besides education (e.g., sociopolitical events witnessed, changes in media content) that could also play a role. The empirical predictor variables (i.e., skin color and cohort) may not even have a relevant influence on the causal chain, but may be correlated with one of the influential factors. Hence, an empirical relationship between skin color and attitude, for example, does not allow for detailed conclusions about the role of beliefs. Even though beliefs may explain the relationship (or at least be part of it), it is only possible to speculate about this as well as about the origin of such beliefs.

Again, one of the reasons to focus on such variables anyhow could be an interest in skin color and cohort as such. That is, a researcher discussing attitudinal differences between cohorts and people of different skin colors may not necessarily have tried to operationalize belief. The group differences observed may, for example, be of interest because of their practical implications. Consequently, little reference is made to the factors underlying this correlation. This is exacerbated by the fact that such additional theorizing often leads to another scientific domain, takes place at a different level of granularity, and requires different methods.

In summary, when a construct (e.g., belief) is operationalized by another variable (e.g., skin color) or a related construct (e.g., religion) or, from another perspec-

tive, when an empirical predictor (skin color) ultimately reflects a certain theoretical construct (belief), the theories and empirical studies therein are obviously related and should be integrated. However, for the abovementioned reasons, this is not often the case in reality; that is, there is a certain disconnect between the research on the empirical predictor (e.g., skin color) and the theoretical construct (e.g., belief). One of the reasons for this is that we lack correspondence theories in the sense of clear descriptions of *how* certain constructs and variables are related. While we focus more on the relationships between independent and dependent variables (belief – attitude; skin color – attitude), little effort has been devoted to clarifying the relationships between independent constructs and empirical predictors (skin color–belief) – especially if the empirical predictor is an important variable in its own right. Thus, we can strengthen the integration of scientific results by focusing more on these predictor–construct relationships.

We could start with a stronger reflection *if* an empirical predictor ultimately represents a certain theoretical construct, which may not be consistently done today, especially if there is also a specific interest in the predictor variable (e.g., religion). This may also reveal that several empirical indicators measure the same theoretical construct but in different contexts (cf. Berger, 1977). For example, a variable like *gender* can express different kinds of *affectedness* in the context of explaining support for legal abortion (e.g., Barkan, 2014), along the lines of how *age* may express different kinds of *affectedness* in the context of explaining support for public spending for schools (e.g., Ponza, Duncan, Corcoran, & Groskind, 1988). Combining such studies, whose variables do not seem at first sight to have much in common, will enlarge our empirical evidence on the relationship between abstract variables (e.g., affectedness→policy support); that is, it would show more clearly that Barkan (2014) and Ponza et al. (1988) produced related results.

In other cases, such as the relationship between skin color and belief, we need to

transcend mere abstraction. Explaining the correspondence between such variables will require a theoretical model that summarizes the role of each mediator in the relationship. This would ultimately lead to a more complex model of attitude prediction and thus enrich our theory. On the other hand, broad variables such as religion may be broken down into separate influential and non-influential components.

Thesis 4: Hypotheses can be integrated based on hierarchical relationships between the constructs they include, but these relationships are often not clearly defined yet.

Some of the constructs used in the social sciences are hierarchically related to each other; that is, we deal with constructs and subconstructs. Subconstructs represent dimensions of a superordinate construct and need to be seen as concepts in their own right. Hypotheses refer to both the superordinate and the subconstructs. For example, one hypothesis may describe the relationship between *parasocial interaction* and *media use* (e.g., Rubin, Perse, & Powell, 1985), whereas another may propose a relationship between *media enjoyment* and *media use* (e.g., Nabi & Krmar, 2004, p. 297). At the same time, parasocial interaction may be seen as a subdimension of media enjoyment (Nabi & Krmar, 2004, p. 295).

Such cases present ideal opportunities for integrating findings, in part because the hierarchical relationship of the constructs helps to define a measurement model for the superordinate construct. Furthermore, the empirical evidence on the superordinate-level relationship is partly informative for the subordinate-level relationship (and vice versa). However, the integration of hypotheses on different levels of abstraction is often not practiced, in part because descriptions of hierarchical relationships between constructs and subconstructs are rare in the literature. A taxonomy of social science constructs does not exist, so hierarchically related constructs are often considered independent. Even

when a hierarchical relationship has been suggested, different definitions and operationalizations of respective constructs tend to leave room for disagreements with such hierarchical conceptualizations.

Furthermore, as researchers need to find arguments for the importance of their work in order to see it published, they tend to describe subconstructs as important research objects in their own right rather than as mere fragments of other constructs. Upwards-orientation and upwards-integration may thus not be fully opportune (see T6). At the same time, research on superordinate constructs often cannot adopt sophisticated methods of operationalization that are applied when subconstructs are examined in their own right. For economic reasons, complex scales are often reduced to single items. Researchers focusing on subconstructs often see such operationalizations as lacking validity, which is why findings on the superordinate construct are dismissed as not fully informative.

Hypotheses that relate framing and media bias with other factors serve as examples of the phenomenon described above. Framing has been suggested to represent a subconstruct of media bias by one of the field's most prominent authors (Entman, 2007). Framing and media bias have been related to many identical dependent variables such as *public opinion* (framing, e.g., Chong & Druckman, 2007; Slothuus & de Vreese, 2010; news bias, e.g., Hoffman & Wallach, 2007), *voter preferences* (framing, e.g., Schemer, Wirth, & Matthes, 2012; news bias, e.g., Eberl, Boomgaarden, & Wagner, 2017), and *polarization* (framing, e.g., Tsifti & Nir, 2017; news bias e.g., Bernhardt, Krassa, & Polborn, 2008). Nevertheless, the two lines of research continue to operate in parallel. Framing researchers do not consistently place their studies in the context of media bias or draw conclusions on the media bias phenomenon, and media bias researchers do not consistently operationalize frames or framing in their empirical studies.

While the hierarchical relationship between framing and news bias has been extensively explained by Entman (2007),

there are several reasons why the integration of the respective hypotheses is not strong. First, the news bias approach is mainly popular among critical scholars and may not have full acceptance among differently oriented scholars. Second, framing is a very popular approach, which is why framing researchers may not feel the need to seek legitimization for their studies by placing their phenomena of interest in a broader context. Third, both *framing* and *media bias* have been defined heterogeneously and a universally accepted definition has not emerged for either concept. The discussion of their hierarchical relationship thus lacks clear reference points (see T1).

A variation in the hierarchy problem is the non-consistent conceptualization of entities as either a) subdimensions of a latent construct or b) variables dependent on or independent of this latent construct. In communication sciences, this phenomenon can be observed with *media partisanship* and *media credibility*. Schweiger (1999) conceptualized perceived media partisanship as an indicator of perceived media credibility in his media credibility scale, while Fico, Richardson, and Edwards (2004) described perceived media partisanship as a predictor of perceived media credibility. Although the same correlation is observed, it is clear that these scientific findings cannot be directly combined. Perceived media partisanship can either influence or be part of perceived media credibility, but it cannot influence the latent construct that it co-constitutes.

To arrive at a stronger integration of findings, we could provide more room for taxonomic discussions. We should start by establishing the criteria for deciding whether constructs are hierarchically related and by creating forums to debate this. The goal would be to provide objective reasons for considering two constructs to be hierarchically related, which could culminate in a more comprehensive taxonomy. The results of these taxonomic discussions would then lay the foundation for ex-post facto integrations under overarching phenomena.

Thesis 5: There is a large yet unrealized potential for integrating hypotheses from different research contexts.

If we follow the idea that a theory is developed by combining several related hypotheses, then theory development involves *data mining*, which “refers to the process of discovering useful patterns in very large databases” (Helberg, 2007, p. 232). Researchers need to find other studies that discuss the variables they examine. If we accept the idea that new insights can result from combining existing findings into a theory, then there is “undiscovered public knowledge” (Swanson, 1986, p. 103) residing in the mass of existing scientific studies. Consider the following:

- (i) a report that process A causes the result B, and (ii) a separate report that B causes the result C. [...] We can think of i and ii as indirect tests of the hidden hypothesis “A causes C.” [...] If the two reports, i and ii, have never together become known to anyone, then we must regard “A causes C” as an objectively existing but as yet undiscovered piece of knowledge – a missing link. (Swanson, 1986, p. 110)

However, while Swanson suggested that the combined knowledge of related hypotheses would be sufficient to initiate their integration, this does not seem to suffice in practical research. Consider *news value* and *agenda-setting research*, two lines of research which every communication scholar is aware of. Both deal with whether a certain topic is being addressed in media reports, which constitutes the dependent variable for news value research and the independent variable for agenda-setting research. A combined version of both approaches describing the triadic relationship of *news values* – *media agenda* – *audience agenda* can provide us with a more comprehensive picture of agenda-related processes. However, the two approaches have not grown together thus far.

Additional approaches with unrealized potential for stronger integration are *news bias research* and studies of the *hostile media effect* (Vallone, Ross, & Lep-

per, 1985). News bias research focuses on finding evidence of biased news reporting through content analysis and aims to unravel the predictors of such bias. Researchers that examine the hostile media phenomenon try to explain perceived media bias through experimental research. Next to an actual bias, recipient factors, such as their involvement in the respective issue, predict bias perceptions (Vallone et al., 1985). Although the two approaches are often co-cited, they have not yet grown into a unified and more comprehensive news bias theory.

The examples indicate that hypotheses from different areas of research, such as *media content* and *media effects research*, may not easily converge. This may be the result of overly strict self-assignments to such research areas or different methodological requirements (in the examples: content analysis versus experimentation).

However, even within the same area of research, the related hypotheses remain separate. The *spiral of silence* and *cultivation theory* are good examples of this. An important part of the spiral of silence theory is the proposition that “[i]ndividuals form a picture of the distribution of opinion in their social environment and of the trend of opinion” (Noelle-Neumann, 1974, p. 45). In this process, the “[m]ass media are part of the system which the individual uses to gain information about the environment” (Noelle-Neumann, 1974, p. 50). This proposition describes the relationship between a) the distribution of some elements observed in the media, and b) a distribution that is assumed to exist in society. This idea is similar to the cultivation theory of Gerbner and Gross (1976), which originally proposed that “[r]itualized displays of any violence (such as in crime and disaster news, as well as in mass-produced drama) may cultivate exaggerated assumptions about the extent of threat and danger in the world” (pp. 193–194). Again, a relationship between the observation of a distribution in the media and an assumed distribution in the population is proposed. Gerbner and Gross (1976) and Noelle-Neumann (1974) assumed that distorted impressions are formed. Howev-

er, the two hypotheses and the associated empirical studies were never brought together, perhaps because in the spiral of silence, observed and assumed frequencies constitute an auxiliary concept that is applied to public opinion, whereas for cultivation theory, these distributions serve as the focal point. Hence, it may be that the context and focus of Noelle-Neumann’s theory overshadows existing similarities.

The current situation may be a consequence of the strong organizational segmentation in science, for example, in disciplines, departments, and scientific schools, which are usually highly specialized (e.g., Calhoun, 2011, 2017; Schwarzenegger, Lobbinger, & Balbi, 2019). Especially in the social sciences, there are “relatively underdeveloped networks of communication and collaboration ... among researchers pursuing different kinds of studies” (Calhoun, 2017, p. 126). The findings that have been kept apart by these factors thus far hold great promise for integrating hypotheses. We merely need to start looking across the boundaries of individual theories, fields of research, and disciplines.

Thesis 6: We will only manage a stronger integration of scientific results if we start considering a successful integration of findings a significant scientific success.

The abovementioned phenomena partly result from the framework conditions under which scientific work takes place, especially from the current ways of defining success and the system of resource allocation. This system follows a market principle in which scientists compete with each other. Success is defined by the following process: innovative and relevant findings receive attention, which contributes to a scientist’s reputation, which entitles a scientist to receive funds and, ultimately, to keep working as a scientist. While this system may be effective in stimulating innovation, it tends to negatively affect research integration because integration follows a different logic.

Integration requires cooperation between researchers and a focus on the simi-

larities of findings. Furthermore, it benefits from a fundamental understanding that each researcher, each research field, and each discipline complements the work of others. The way in which scientific competition is currently structured tends to thwart this. A key component of this problem is that the reward systems in science are still oriented toward individual rather than collective success (Corner, 2013), and that careers are often built around niche expertise (Donsbach, 2006; Hjarvard, 2012; Schwarzenegger et al., 2019). In researchers' reasoning why they should receive resources (funds, attention), they focus on finding differentiators for their fields of research, which are meant to demonstrate the superior importance of their work. This brings the focus to differences rather than similarities. Discussions on how any two strains of research might actually describe the same phenomenon would endanger a carefully crafted island position, which is why such discussions remain a marginal part of scientific discourse.

Another key component of this problem area is the idea that original research is more prestigious than organizing existing findings (Calhoun, 2011). This performance indicator leads to an excessive focus on originality. Meanwhile, integration requires the continuation of research on a particular phenomenon. Researchers would need to focus on the similarity and compatibility of results, which contradicts the narratives around *originality and innovation* that most attempt to build. This prevents similar constructs with different names from being integrated, as this would mean that one of the constructs was a mere reflection of the other (see T1). Furthermore, as the originality requirement pushes scientists to stress the novel aspects of their research, they refrain from demonstrating how their work is also similar to earlier research, for example, when seen on a higher level of abstraction (see T2).

A third problematic component of the current competitive system in science is the way in which it guides attention. The intention to construct niche expertise often keeps scientists from consuming the

output generated in other fields (Pfau, 2008; Waisbord, 2019). This maintains a strong segmentation and prevents the integration of findings from different subject areas (see T5). In addition, the competition principle stipulates that publications are classified as valuable or less valuable. To make the most of their time, researchers tend to only read the *best* or *most important* publications. As a result, few publications are read and cited by many, while many publications do not receive attention at all (Franck, 2002; see also Merton, 1968). It is evident that unread publications have no chance of being integrated with others. This means that most of the output of science remains unutilized. Achieving more integration calls for rethinking our attention economy. Each scientific finding could be seen as a piece of an information puzzle that we must complete. While some findings will still be more central than others, each has a certain informational value. The bulk of unused material would be seen as an untapped resource, while integration itself would be a refinement step for making it even more useful. Findings that do not receive attention when standing alone may very well have more relevance when combined with others.

Some of these issues are primarily a consequence of external forces, such as the way in which the scientific enterprise is funded. Other factors, such as the view on what is reputable and what not, are (at least partly) within the sphere of influence of the scientific community. However, many scientists may feel that they alone cannot change the corresponding conventions. The theory of structuration may offer a helpful perspective here by stating that "the rules and resources drawn upon in the production and reproduction of social action are at the same time the means of system reproduction" (Giddens, 1984, p. 19). That is, by aligning to, for example, the overly strong focus on original research, we constantly maintain this principle. This circle must be broken, where we feel that a convention does not set us on the ideal path to produce meaningful knowledge. Going forward, it would be useful to rethink our current success indi-

cators and to introduce a more balanced approach that reflects the important function of integrative work.

4 Conclusion

It is imperative to understand that any study cannot work within a silo, and that integrability of one's own study with others is necessary for the communication sciences to produce results of broad relevance. Currently, "hyper-specialization is the name of the game for academic success" (Waisbord, 2019, p. 137). However, "[l]ack of integration and critical reflection are problems both for enabling empirical research to have deep and cumulative scholarly significance, and for enabling researchers to say why their work really matters" (Calhoun, 2011, p. 1488). If we continue along our current path, we run "the danger of narrow endogamic scholarship - writing and talking to a relatively small number of people" (Waisbord, 2019, p. 137). This raises critical issues, especially where society expects science to provide guidance. Scattered findings on the details of an overall problem are not perceived as meaningful insights in such contexts, as they fail to provide a clear orientation.

These problems manifest globally, which is why individual scholars might not want to make integration of findings their concern. Furthermore, integrability comes at the cost of flexibility, and an individual study can answer a question without links to other findings. Accordingly, some might object that a stronger focus on integration would even be counterproductive, as it would limit their room for maneuvering. Corner (2013) described the principle of "willed ignorance" (p. 1016), which summarizes this reasoning. The work of others would sometimes be ignored if engaging with it would introduce serious complications to the research plans being pursued. This would support productivity in "conceptually active spaces, each having its own nodal reference points" (Corner, 2013, p. 1016).

Indeed, an integration of results may not be possible when results are based on

incompatible epistemological or philosophical frameworks. However, we should strive to integrate results when the prerequisites are given. This is usually the case where the same variable appears. The simplest way of achieving more integration is to join related hypotheses that are dispersed over different fields of research by identifying reappearances of the same variable in multiple contexts (T5). Integrative work will be slightly more complex when the same variable arises in various guises, which can result from, e.g., different names (T1), as well as operationalizations by means of unique cases-examples (T2). Methodologically, we can approach such integration-opportunities by abstracting our variables, the similarity of which will then become more obvious on higher abstraction-levels. Where integration requires correspondence postulates between theoretical constructs and auxiliary variables (T3) or between hierarchically related constructs (T4), we need to advance beyond data mining and organizing results. In this case, the required approach is theoretical work that describes and substantiates these relationships. Overall, however, these actions are simple compared to our most complex task - initiating a cultural change toward a greater acknowledgement of integrative achievements (T6).

The most widely applied approaches to integrating findings, literature reviews and meta-analyses, have other goals than those described above - and approach in different ways. Literature reviews, which organize, summarize, and evaluate existing research on a topic, are typically meant to present a current state of research (such as in a textbook) or to highlight the remaining gaps to justify further research. Integration extends itself further in that it creates new relationships between findings, thereby bringing them into a more coherent construct of ideas. Meta-analyses focus on sets of studies that involve the same relationship of variables (Hunter & Schmidt, 2004). That is, they are not primarily meant to determine whether two findings describe the same relationship, but rather, they require and assume this

already. Furthermore, due to their focus on calculating weighted estimates of effect sizes (Carpenter, 2017), they are not suited to organize diverse types of relationships into a more coherent form (such as combining hypotheses $A \rightarrow B$ and $B \rightarrow C$ into $A \rightarrow B \rightarrow C$), either. They address neither the integrative potential behind unspecified relationships between theoretical constructs and auxiliary variables (T3) nor the potential behind hierarchical relationships (T4).

Hence, while meta-analyses and literature reviews have important integrative functions, they will need to be complemented by more integrative work on the theory-level, which targets the phenomena described in T1–T6. Most of this work can be done ex-post, and it might suffice for a group of scholars to adapt this as a methodological niche. This could be a highly rewarding task, as there is immense potential for building more complex theories and arriving at larger scales of empirical research by combining our existing results. We only need to rise to the occasion.

Conflict of interests

The author declares no conflict of interests.

References

- Adamczyk, A., & Pitt, C. (2009). Shaping attitudes about homosexuality: The role of religion and cultural context. *Social Science Research*, 38(2), 338–351. <https://doi.org/10.1016/j.ssresearch.2009.01.002>
- Andersen, R., & Fetner, T. (2008). Cohort differences in tolerance of homosexuality: Attitudinal change in Canada and the United States, 1981–2000. *Public Opinion Quarterly*, 72(2), 311–330. <https://doi.org/10.1093/poq/nfn017>
- Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of aggressive models. *Journal of Abnormal and Social Psychology*, 63(3), 575–582. <https://doi.org/10.1037/h0045925>
- Barkan, S. E. (2014). Gender and abortion attitudes. Religiosity as a suppressor variable. *Public Opinion Quarterly*, 78(4), 940–950. <https://doi.org/10.1093/poq/nfu047>
- Berger, C. R. (1977). The covering law perspective as a theoretical basis for the study of human communication. *Communication Quarterly*, 25(1), 7–18. <https://doi.org/10.1080/01463377709369243>
- Bernhardt, D., Krasa, S., & Polborn, M. (2008). Political polarization and the electoral effects of media bias. *Journal of Public Economics*, 92(5–6), 1092–1104. <https://doi.org/10.1016/j.jpubeco.2008.01.006>
- Calhoun, C. (2011). Communication as social science (and more). *International Journal of Communication*, 5, 1479–1496. Retrieved from <https://ijoc.org/index.php/ijoc/article/view/1331/622>
- Calhoun, C. (2017). Integrating the social sciences: Area studies, quantitative methods, and problem-oriented research. In R. Frodeman (Ed.), *The Oxford handbook of interdisciplinarity* (2nd ed., pp. 117–130). Oxford, UK: Oxford University Press.
- Cappella, J. N. (2011). Bridging diversity through problem-based collaboration. *International Journal of Communication*, 5, 1476–1478. Retrieved from <https://ijoc.org/index.php/ijoc/article/view/1360/621>
- Carpenter, C. J. (2017). Meta-analysis. In M. Allen (Ed.), *The SAGE encyclopedia of communication research methods* (pp. 980–983). Thousand Oaks, CA: Sage.
- Chaffee, S. H. (1991). *Explication*. Newbury Park, CA: Sage.
- Chong, D., & Druckman, J. N. (2007). Framing public opinion in competitive democracies. *American Political Science Review*, 101(4), 637–655. <https://doi.org/10.1017/S0003055407070554>
- Corner, J. (2013). Is there a “field” of media research? – The “fragmentation” issue revisited. *Media, Culture & Society*, 35(8), 1011–1018. <https://doi.org/10.1177/0163443713508702>
- Cusella, L. P. (1984). Conceptual issues in organizational communication research: Elements of a model of conceptual authenticity. *Communication Quarterly*, 32(4), 293–300. <https://doi.org/10.1080/01463378409369566>

- DeFleur, M. L. (1998). Where have all the milestones gone? The decline of significant research on the process and effects of mass communication. *Mass Communication and Society*, 1(1–2), 85–98. <https://doi.org/10.1080/15205436.1998.9677848>
- de Vreese, C. H. (2014). Mediatization of news: The role of journalistic framing. In F. Esser & J. Strömbäck (Eds.), *Mediatization of politics* (pp. 137–155). Houndmills, UK: Palgrave Macmillan.
- Donsbach, W. (1991). *Medienwirkung trotz Selektion. Einflussfaktoren auf die Zuwendung zu Zeitungsinhalten*. [Media effects despite selection: Factors influencing the attention for newspaper contents]. Cologne, Germany: Böhlau.
- Donsbach, W. (2006). The identity of communication research. *Journal of Communication*, 56(3), 437–448. <https://doi.org/10.1111/j.1460-2466.2006.00294.x>
- Eberl, J.-M., Boomgaarden, H. G., & Wagner, M. (2017). One bias fits all? Three types of media bias and their effects on party preferences. *Communication Research*, 44(8), 1125–1148. <https://doi.org/10.1177/0093650215614364>
- Engels, R. C. M. E., Hermans, R., van Baaren, R. B., Hollenstein, T., & Bot, S. M. (2009). Alcohol portrayal on television affects actual drinking behaviour. *Alcohol and Alcoholism*, 44(3), 244–249. <https://doi.org/10.1093/alcalc/agg003>
- Entman, R. M. (2007). Framing bias: Media in the distribution of power. *Journal of Communication*, 57(1), 163–173. <https://doi.org/10.1111/j.1460-2466.2006.00336.x>
- Fico, F., Richardson, J. D., & Edwards, S. M. (2004). Influence of story structure on perceived story bias and news organization credibility. *Mass Communication and Society*, 7(3), 301–318. https://doi.org/10.1207/s15327825mcs0703_3
- Franck, G. (2002). The scientific economy of attention: A novel approach to the collective rationality of science. *Scientometrics*, 55(1), 3–26. <https://doi.org/10.1023/A:1016059402618>
- Gerbner, G., & Gross, L. (1976). Living with television: The violence profile. *Journal of Communication*, 26(2), 173–199. <https://doi.org/10.1111/j.1460-2466.1976.tb01397.x>
- Giddens, A. (1984). *The constitution of society. Outline of the theory of structuration*. Berkeley, CA: University of California Press.
- Glock, C., & Stark, R. (1965). *Religion and society in tension*. Chicago, IL: Rand McNally.
- Haridakis, P. M. (2006). Men, women, and televised violence: Predicting viewer aggression in male and female television viewers. *Communication Quarterly*, 54(2), 227–255. <https://doi.org/10.1080/01463370600650951>
- Helberg, C. (2007). Data mining. In N. J. Salkind (Ed.), *Encyclopedia of measurement and statistics* (pp. 232–235). Thousand Oaks, CA: Sage.
- Hjarvard, S. (2012). Doing the right thing: Media and communication studies in a mediatized world. *Nordicom Review*, 34(2), 27–34.
- Hoffman, A. J., & Wallach, J. (2007). The effects of media bias. *Journal of Applied Social Psychology*, 37(3), 616–630. <https://doi.org/10.1111/j.1559-1816.2007.00177.x>
- Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings*. Thousand Oaks, CA: Sage.
- Iversen, G. I. (2004). Research hypothesis. In M. S. Lewis-Beck, A. Bryman, & T. Futing Liao (Eds.), *The Sage encyclopedia of social science research methods* (p. 966). Thousand Oaks, CA: Sage.
- Klapper, J. T. (1960). *The effects of mass communication*. Glencoe, IL: Free Press.
- Lazarsfeld, P. F., Berelson, B., & Gaudet, H. (1944). *The people's choice: How the voter makes up his mind in a presidential campaign*. New York, NY: Columbia University Press.
- Lewis, G. B. (2003). Black-white differences in attitudes toward homosexuality and gay rights. *Public Opinion Quarterly*, 67(1), 59–78. <https://doi.org/10.1086/346009>
- Lunt, P., & Livingstone, S. (2016). Is “mediatization” the new paradigm for our field? A commentary on Deacon and Stanyer (2014, 2015) and Hepp, Hjarvard and Lundby (2015). *Media, Culture and Society*, 38(3), 462–470. <https://doi.org/10.1177/0163443716631288>
- McCombs, M., & Ghanem, S. I. (2001). The convergence of agenda setting and framing.

- In S. D. Reese, O. H. Gandy, & A. E. Grant (Eds.), *Framing public life. Perspectives on media and our understanding of the social world* (pp. 67–81). Mahwah, NJ: Lawrence Erlbaum.
- Merton, R. K. (1968). The Matthew effect in science: The reward and communication systems of science are considered. *Science*, 159(3810), 56–63. <https://doi.org/10.1126/science.159.3810.56>
- Nabi, R. L., & Krcmar, M. (2004). Conceptualizing media enjoyment as attitude: Implications for mass media effects research. *Communication Theory*, 14(4), 288–310. <https://doi.org/10.1111/j.1468-2885.2004.tb00316.x>
- Newcomb, H. (1993). Target practice: A Batesonian “field” guide for communication studies. *Journal of Communication*, 43(3), 127–132. <https://doi.org/10.1111/j.1460-2466.1993.tb01284.x>
- Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology*, 2(2), 175–220. <https://doi.org/10.1037/1089-2680.2.2.175>
- Noelle-Neumann, E. (1974). The spiral of silence. A theory of public opinion. *Journal of Communication*, 24(2), 43–51. <https://doi.org/10.1111/j.1460-2466.1974.tb00367.x>
- Peters, J. D. (2011). Sweet lemons. *International Journal of Communication*, 5, 1467–1471. Retrieved from <https://ijoc.org/index.php/ijoc/article/view/1355/619>
- Pfau, M. (2008). Epistemological and disciplinary intersections. *Journal of Communication*, 58(4), 597–602. <https://doi.org/10.1111/j.1460-2466.2008.00414.x>
- Phillips, D. P. (1974). The influence of suggestion on suicide: Substantive and theoretical implications of the Werther effect. *American Sociological Review*, 39(3), 340–354. <https://doi.org/10.2307/2094294>
- Ponza, M., Duncan, G. J., Corcoran, M., & Groskind, F. (1988). The guns of autumn? Age differences in support for income transfers to the young and old. *Public Opinion Quarterly*, 52(4), 441–466. <http://www.jstor.org/stable/2749255>
- Potter, W. J. (2009). *Arguing for a general framework for mass media scholarship*. Los Angeles, CA: Sage.
- Rubin, A. M., Perse, E. M., & Powell, R. A. (1985). Loneliness, parasocial interaction, and local television news viewing. *Human Communication Research*, 12(2), 155–180. <https://doi.org/10.1111/j.1468-2958.1985.tb00071.x>
- Saroglou, V. (2002). Religion and the five factors of personality: A meta-analytic review. *Personality and Individual Differences*, 32(1), 15–25. [https://doi.org/10.1016/S0191-8869\(00\)00233-6](https://doi.org/10.1016/S0191-8869(00)00233-6)
- Schemer, C., Wirth, W., & Matthes, J. (2012). Value resonance and value framing effects on voting intentions in direct-democratic campaigns. *American Behavioral Scientist*, 56(3), 334–352. <https://doi.org/10.1177/0002764211426329>
- Schwarzenegger, C., Lobinger, K., & Balbi, G. (2019). Academic traditions in communication: Expanding the field and redrawing the boundaries. ECREA 2018 special panel report. *Studies in Communication Sciences (SComS)*, 19(2), 233–237. <https://doi.org/10.24434/j.scoms.2019.02.010>
- Schweiger, W. (1999). Medienglaubwürdigkeit – Nutzungserfahrung oder Medienimage [Media credibility – user experience or media image]? In P. Rössler & W. Wirth (Eds.), *Glaubwürdigkeit im Internet: Fragestellungen, Modelle, empirische Befunde* (pp. 89–110). Munich, Germany: Reinhard Fischer.
- Slothuus, R., & de Vreese, C. H. (2010). Political parties, motivated reasoning, and issue framing effects. *The Journal of Politics*, 72(3), 630–645. <https://doi.org/10.1017/S002238161000006X>
- Swanson, D. R. (1986). Undiscovered public knowledge. *Library Quarterly*, 56(2), 103–118. <https://doi.org/10.1086/601720>
- Tichenor, P. J., Donohue, G. A., & Olien, C. N. (1970). Mass media flow and differential growth in knowledge. *Public Opinion Quarterly*, 34(2), 159–170. <https://doi.org/10.1086/267786>
- Tsfati, Y., & Nir, L. (2017). Frames and reasoning: Two pathways from selective exposure to affective polarization. *International Journal of Communication*, 11, 301–322. Retrieved from <https://ijoc.org/index.php/ijoc/article/view/5793/1898>
- Vallone, R. P., Ross, L., & Lepper, M. R. (1985). The hostile media phenomenon: Biased

perception and perceptions of media bias in coverage of the Beirut massacre. *Journal of Personality and Social Psychology*, 49(3), 577–585. <https://doi.org/10.1037//0022-3514.49.3.577>

Waisbord, S. (2019). *Communication. A post-discipline*. Cambridge, UK: Polity Press.

Wyer, R. S. (2019). Some determinants and consequences of beliefs: Cognitive, social, and motivational. In D. Albarracín & B. T. Johnson (Eds.), *The handbook of attitudes* (2nd ed., vol. 1, pp. 332–376). New York, NY: Routledge.