



THE LEAR CENTER  
**MEDIA  
IMPACT  
PROJECT**

# MEASURING MEDIA IMPACT

## AN OVERVIEW OF THE FIELD



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## About the Author

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## About the Norman Lear Center

The Norman Lear Center is a nonpartisan research and public policy center that studies the social, political, economic and cultural impact of entertainment on the world. The Lear Center translates its findings into action through testimony, journalism, strategic research and innovative public outreach campaigns. On campus, from its base in the USC Annenberg School for Communication and Journalism, the Lear Center builds bridges between schools and disciplines whose faculty study aspects of entertainment, media and culture. Beyond campus, it bridges the gap between the entertainment industry and academia, and between them and the public. Through scholarship and research; through its conferences, public events and publications; through its role in the formulation of the academic field of entertainment studies; and in its attempts to illuminate and repair the world, the Norman Lear Center works to be at the forefront of discussion and practice in the field.

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## About the Media Impact Project

The Lear Center's Media Impact Project is supported by grants from the Bill & Melinda Gates Foundation and the John S. and James L. Knight Foundation to establish the Lear Center as a hub for best practices, innovation and thought leadership in media metrics. The collaboration will help media organizations, journalists, and social change-makers build on the power of storytelling through data and impact measurement. The Media Impact Project brings together a unique team of researchers including social and behavioral scientists, journalists, analytics experts and other specialists to collaborate to test and create new ways to measure the impact of media. Content creators, distributors and media funders can ultimately apply these techniques to improve their work and strengthen engagement.

For more information, visit [www.mediaimpactproject.org](http://www.mediaimpactproject.org).

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# Executive Summary

Until recently, the widely held perception was that the methods and metrics for systematically and comprehensively assessing the impact of public interest media initiatives – such as non-profit and non-commercial journalism operations, social issues-based film and television programming, and public service media campaigns – were lacking. However, technological changes in the media sector have opened up a range of new analytical opportunities for understanding the impact that media can have across a range of relevant criteria. Thus, the field of media impact assessment is in a period of rapid innovation and change, in which new approaches to defining and measuring impact are being developed and adopted.

The goal of this report is to provide a comprehensive overview and assessment of the approaches being employed in this formative period of assessing media impact, with a focus on what is termed here a *social value* perspective. Social value in this context refers to analytical approaches that extend beyond financial measures of success to take into account criteria such as improving the well-being of individuals and communities across a wide range of dimensions that are central goals of most public interest media initiatives. This report seeks to identify relevant analytical approaches, methodologies, and metrics for assessing media impact in an effort to develop a baseline inventory of analytical tools, methods, and metrics that can inform further work in this area; and to identify approaches that appear particularly promising.

The key themes that emerge from the media impact literature include:

## **1. The importance of media impact assessment maintaining a high degree of methodological flexibility and diversity**

As was repeatedly illustrated in the literature, different projects require different methodological approaches to impact assessment. Moreover, a comprehensive approach to impact assessment typically requires the application of multiple methodological approaches that address different levels of analysis that reflect the different spheres of potential impact (e.g., on individual attitudes/behaviors, on media debate/discussion, on public policy).

## **2. The availability of a broad range of performance metrics**

Those engaged in assessing media impact can find themselves awash in data that can be configured into an almost overwhelm-

ing variety of performance metrics. This is a reflection of the nature of contemporary audience interaction with media, in which most aspects of the dynamics of content consumption, along with many aspects of how audiences can respond to content, are easily capturable and quantifiable. This is a dramatic departure from the past, when most dimensions of audience engagement with media were much more resistant to measurement.

### **3. The centrality of audience engagement to impact assessment**

The concept of engagement often serves as a central mechanism via which media impact is assessed, and can be utilized to serve in a variety of capacities in relation to the broader notion of media impact; for instance, as an intervening variable, as a proxy for impact, or as a form of impact in its own right. One approach to engagement measurement that seems to have taken hold involves deriving ratios of audiences exposed to media content to those who engaged in some form of measurable action during or after exposure.

Overall, these findings highlight the need for an institutional infrastructure to support this field as it develops further. Specifically, there is a need for an interdisciplinary institutional resource that can serve as a gatherer and accessible knowledge accelerator; as a facilitator of the research necessary to extract actionable insights from the relevant data; as a disseminator of information about available data, its uses, and the findings that are emerging from it to the field at large; as a critical intermediary to distinguish between useful and not useful data; and as a resource that public interest media organizations can draw upon for training, guidance, assessment, and up-to-date information about best practices.

# Introduction

Until recently, the widely held perception was that the methods and metrics for systematically and comprehensively assessing the impact of public interest media initiatives – such as non-profit and non-commercial journalism operations, social issues-based film and television programming (both scripted and documentary), and public service media campaigns – were lacking (see, e.g., Green, 2012; Lewis & Niles, 2013). However, technological changes in the media sector have opened up a range of new analytical opportunities for assessing the impact that media can have across a range of relevant criteria (see, e.g., Napoli, 2011).

In recent years, funders of public interest media initiatives have been working to improve the assessment strategies and tools that guide their work (see, e.g., Brock, Buteau, & Herring, 2012). Their goal is to have a more concrete and more comprehensive sense of the overall impact that these media initiatives are having, both within their intended audiences and beyond. Such impact can extend into realms such as politics, policy, education, public health, and the economy, depending on the focus and goals of the particular public interest media initiative.

The goal of this report is to provide a comprehensive overview and assessment of the range of approaches being employed to assess media impact, with a focus on what is termed here a *social value* perspective. Social value in this context refers to analytical approaches that extend beyond financial measures of success to take into account criteria such as improving the well-being of individuals and communities across a wide range of dimensions that are central goals of most public interest media initiatives (see Eurodiaconia, 2013, for further discussion of defining and measuring social value). Of course, positive social impact and financial performance can be positively related. Indeed, the research being assessed here could prove to be very useful in determining the extent to which this is the case.

The objective here, then, is to identify relevant analytical approaches, methodologies, and metrics for assessing media impact, in an effort to develop a baseline inventory of analytical tools, methods, and metrics that can inform further work in this area; and to identify approaches that appear particularly promising. This report builds upon recent work in this area that has, in some instances, been a bit narrower in scope (e.g., focusing primarily on journalism [Lewis & Niles, 2013]; or focusing primarily on needed data sources and analytical tools [Clark, 2010]). The scope here is a bit broader in a number of ways.

First, a key goal of this report is to cast a wide net in terms of disciplinarity, and identify the most relevant work across the spectrum of relevant academic disciplines. As quickly became apparent, work that informs efforts to assess media impact emerges from a variety of disciplines, including: information science, marketing, political science, sociology, and, of course, communication and journalism.

A wide net also was cast in terms of publication venue, as the goal here was to extend beyond the traditional academic

literature, in an effort to reflect the observation that media impact work can often be found in “‘grey’ publications, such as unpublished literature, minor journals, or perhaps most commonly, self-publications by program-planning organizations” (Inagaki, 2007, p. 2). This strategy proved well-founded, as a substantial amount of relevant material was located outside of traditional academic publications. Further, in an effort to identify relevant work taking place in the commercial sector, relevant trade publications, industry white papers, and blogs were reviewed as well. Although this report is primarily intended to inform assessment work with a strong social value orientation, it is important to recognize the potential utility of work taking place in the commercial sector that could inform such efforts.

It is also important to emphasize that the focus here is on more recent work (i.e., work published in the last decade), as opposed to older research. This emphasis was deemed appropriate in light of relatively recent changes that have affected the media environment and that have dramatically affected the dynamics of individuals’ media usage. In addition, the interactivity inherent in this new media environment has given rise to unprecedented data-gathering and analytic tools. For these reasons, a focus on more current research and developments was deemed appropriate.

# What Do We Mean By Media Impact?

Before delving into the relevant research, it is important to have a clear sense of what we mean by *media impact*. This section will lay out the basic parameters of the concept of media impact; how it differs from the related area of *media effects*; its strong connection to the concept of *media engagement*; as well as important points of differentiation between assessing *outputs versus impact*.

## Media Effects vs. Media Impact

Given that there is an extensive body of research on media effects, an important starting point for this review is to differentiate the concept of *media impact* that is the focus here from the more traditional notion of *media effects*. First, while there is certainly a substantial amount of overlap (see, e.g., Leiserowitz, 2004), the field of media effects can be characterized as having a strong micro orientation, in that the unit of analysis is typically the individual media user, and the focus is on the relatively narrow question of whether exposure to a particular media message impacted that user's attitudes, beliefs, cognitions, or behaviors. When we talk about media impact, on the other hand, the orientation can be characterized as a bit more macro, in that the concerns extend beyond whether individual media users had their attitudes, beliefs, cognitions, or behaviors affected, to also include broader systemic changes at the levels of organizations and institutions (see, e.g., Inagaki, 2007).

Also, it seems reasonable to contend that media effects studies tend to examine effects of a short-term nature. This has often been due primarily to the methodological challenges associated with conducting long-term media effects research. Inherent in the notion of media impact, however, is the idea of more lasting change (see Harmony Institute, 2013b).

## Media Engagement and Impact

Media impact also extends a bit beyond the traditional notion of media effects through its emergent focus on the concept of engagement. That is, when assessing media impact – particularly as it relates to public interest media initiatives – the stakeholders involved do not always necessarily focus on measurable effects on the attitudes, beliefs, cognitions, or subsequent behaviors of the audience. From a media impact perspective, the very nature of the interaction between audience and media represents important criteria for assessment. That is, those interested in assessing the performance of public interest media ini-



tatives are concerned with how the media are used by the audience; what the consumption dynamics are like; and what further interactions (whether with the media under consideration or beyond) are provoked by the initial interaction.

The nature of these concerns takes us into the rapidly evolving sphere of *media engagement*. As is discussed in greater detail below, from an assessment standpoint, engagement is understood in a variety of ways, including:

- As a necessary precondition for other forms of impact (i.e., as an intervening variable of sorts);
- As a proxy for forms of impact that may be resistant to available assessment tools;
- And even as a relevant form of impact in its own right.

Whether engagement is thought of as a means or an end (or both), ultimately depends upon the goals of the public service media initiative and the assessment criteria established for it. But for the purposes of this analysis, it is important to emphasize that the concept of engagement, and the associated research, are important components of the larger literature relevant to our understanding of media impact from a social value perspective.

## Outcomes vs. Impacts

In effectively establishing what media impact is – and what it isn't – it is important to distinguish between *outcomes* and *impacts*. From an assessment standpoint, outcomes are typically defined in terms of the shorter-term effects that a public interest media project can have (such as reaching, informing, engaging, and mobilizing target audiences), whereas impacts can be seen as the longer-term, more far-reaching changes (such as changes in individuals' behaviors, or changes in public policy) (see Knight Foundation, 2011).

This report will take an inclusive approach and review and assess the relevant literature that has examined both outcome and impact assessment (given the frequency with which outcomes are assessed in addition to – or instead of – impacts, for some of the reasons discussed above). What this report will not address, however, is the assessment of *outputs* – that is, the activities engaged in by an organization (see Eurodiaconia, 2013), as the goal here is to contribute to ongoing efforts to move beyond such measures of organizational activities (which are generally much easier to measure; see Tofel, 2013), and instead capture the short and long-term impacts that these activities have on individuals, organizations, and institutions.

# Assessing Media Impact: Observations and Lessons

A defining characteristic of media impact assessment is that a comprehensive understanding of the impact of any media project must employ an analytical orientation that is wide-ranging across a variety of dimensions. Barrett and Leddy (2008), for instance, call for assessment approaches that address the individual, organizational, and community levels. Such assessment needs to account not only for the audiences that directly consume the content, but also for the broader media sphere in which the content circulates (see also Diesner, et al., 2014). Consider, for instance, that in today's highly fragmented media echo chamber, in which many media outlets spend a substantial amount of time/space reporting on other media, or relaying reports generated by other media, it is essential to account for what we might call the *media ripple effect* in assessing impact (see Barrett & Leddy, 2008). Certain pieces of media content can have an agenda-setting effect on other media (see Nisbet, 2007); and as a result individuals, organizations, or institutions can be affected without ever having been exposed to the original content.

The importance of this approach is reflected in Leiserowitz's (2004) analysis of the impact of the Hollywood film, *The Day After Tomorrow*, a disaster film about the dangers of climate change. This study involved a national survey on individuals' risk perceptions, behavioral intentions, and policy priorities related to climate change a week before and four weeks after the release of the film (a traditional media effects research approach). In addition, the author conducted a content analysis of a month's worth of local and national print and electronic media coverage to determine the extent to which the film was able to place the issue of climate change on the news agenda. The results showed that not only did the film significantly impact viewers' risk perceptions, behavioral intentions, and policy priorities, but it also generated ten times the amount of media coverage about the issue of climate change than the recent release of a major international report on the subject (Leiserowitz, 2004).

In his analysis of the political impact of documentary film and video, Whiteman (2004) advocates for – and employs – what he terms a “coalition model” for assessing impact (see also Karlin & Johnson, 2011). This coalition model is intended to be much more wide ranging than the traditional “individualistic model” of assessing impact, which focused only on “assessing the impact of a *finished* film on individual citizens and within the *dominant* public discourse” (p. 51). According to Whiteman (2004), this “individualistic” analytical orientation may actually “direct our attention to the circumstances under which the film is *least likely* to have an impact” (p. 54, emphasis in original).

The coalition model, in contrast, broadens the focus in three ways:

- First, by incorporating the entire film making process (rather than focusing only on the finished product);
- Second, by moving beyond individual citizen-viewers to also consider the larger political content (such as relevant social movements and activist and elite networks);
- And third, by considering the impact of a film on discourse outside of the mainstream (such as efforts by social movements to create and sustain alternative spheres of public discourse) (Whiteman, 2004, p. 54).

In keeping with what will prove to be a recurring theme within the media impact literature (see below), Whiteman's (2004) methodological approach for impact assessment guided by this coalition model necessarily employs multiple methods, including interviews, participant-observation, and content analysis.

Diesner and colleagues (2014) have developed what they call a CoMTI (**c**ontent, **m**edium, **t**arget, and **i**mpact) analytical framework for assessing the impact of documentary films. Like Whiteman (2004), they operate from a more expansive framework for operationalizing impact. Specifically, their analytical approach is based upon the premise that documentaries should not be approached as a one-way communication between content creator and audience, but rather as a "two-way process in which senders and receivers interact with each other," and in which "receiver's responses and reactions to senders' input form dynamic feedback loops" (Diesner, et al., 2014, p. 5). The researchers have translated this analytical framework into a multi-method approach primarily involving the integration of social network analysis and natural language processing (NLP) of news media and social media data (specifically, Twitter and Facebook).

The Harmony Institute (2013b) emphasizes in its guide for assessing the impact of fictional and documentary film and video projects that "there is a growing recognition that there is no single standard metric for measuring impact" (p. 12). Similarly, within the context of journalism, a key outcome of a symposium dedicated to the topic of new metrics for assessing journalism concluded that: "There is no one-size-fits-all solution. What works in one organization might not work in another. Tactics, and therefore metrics, must be specific to [the individual] newsroom and perhaps to individual projects" (Mayer & Stern, 2011, p. 2).

## Achieving policy impact

As this report illustrates, media impact can take a wide range of forms. In some cases, government policy may be directly affected. Such was the case in the wake of Participant Media's documentary, *Middle of Nowhere*, which chronicles a woman's separation from her husband while he serves a four-year prison sentence (Lindstrom, 2013). Like all Participant Media projects, the film was accompanied by a multi-pronged social action campaign in order to maximize the film's impact.

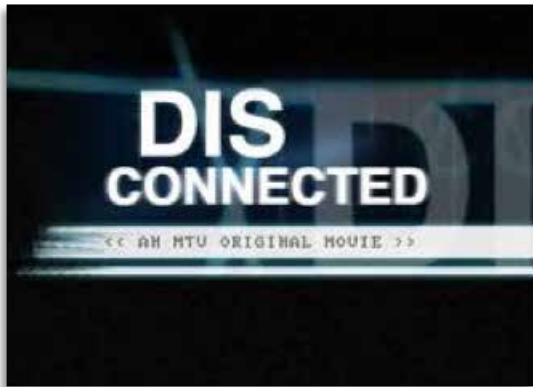
While the film was concerned with the broad range of challenges that confront the families of those who are incarcerated, one issue that emerged during the planning of the social action campaign was the exorbitant phone rates charged to the families and loved ones of inmates; and the additional hardships such predatory pricing placed on families already in an incredibly difficult situation. This issue ultimately served as a focal point of the social action campaign that accompanied the film.

Through a variety of activities, such as film screenings, an educational campaign within schools, and a petition drive, conducted in collaboration with other organizations that had been working on the issue of predatory prison phone rates, the issue found its way onto the Federal Communications Commission's (FCC) policy agenda. Ultimately, in August of 2013, the FCC voted to dramatically lower interstate prison phone rates and to initiate a proceeding directed at intrastate prison phone rates.

This example illustrates the kind of tangible, measurable policy impact that public interest media work can have; as well as the value of work of this type being accompanied by a well-planned social action campaign.

The Harmony Institute has developed a number of methodological approaches to assessing the impact of message-oriented films, television programs, and new media content (see, e.g., Harmony Institute, 2013a, 2013c). For instance, the organization conducted a comprehensive analysis of the impact of the documentary *Waiting for "Superman,"* which focused on the state of public education in the U.S. (Harmony Institute, 2011). This analysis was described as "one of the first of its kind to measure the effects social-issue entertainment can have on audiences and institutions" (Harmony Institute, 2011, p. 6) – an important statement in that it highlights the very recent emergence of efforts to comprehensively assess the impact of public interest media initiatives. The evaluation methodology employed by the Harmony Institute (2011) was a multi-method approach that included content analysis of press coverage, focus groups with audience members, online surveys, and in-depth interviews with leaders in the education field.

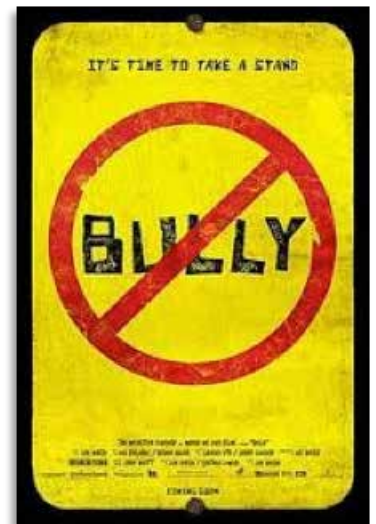
A similar multi-method approach can be found in the Harmony Institute's (2012b) recent assessment of the impact of the MTV film *(Dis)Connected*. This assessment employed focus groups, in-depth interviews, online analytics, social media analysis,



and survey research to assess the extent to which the film affected how teens and young adults think about and use communications technologies such as mobile and social media. Through this combination of methodological approaches, the organization was able to gain a comprehensive sense of how the attitudes, beliefs, and behaviors of those exposed to the program were affected, as well as gain a sense of the overall level of public debate and discussion that was initiated by the film.

The organization's assessment of the documentary *Bully* (which addressed the issue of bullying in American school systems) focused on the film's influence in the social media sphere (Harmony Institute, 2012a).

Through analyzing the quantity of Twitter and Facebook posts, as well as associated linking and link-clicking activity, the authors were able to provide a detailed map of the flow and reach of online discussion about the film (noting, for instance, the importance of "elite" sources such as celebrities and traditional media outlets in facilitating the rapid spread of information and discussion). Importantly, however, the authors emphasize the need "to acknowledge the limitations of studying the influence of entertainment in a single domain [such as social media]. Many of *Bully's* most important goals lie outside the scope of this investigation" (Harmony Institute, 2012a, p. 5). This is an important point as it reflects the wide range of contexts in which the impact of a public interest media initiative can be felt and should be assessed in order to develop a comprehensive impact assessment. Today, because many of the new analytical tools and data sources are oriented around – and generated from – various online activities, there is clearly a strong emphasis on the online space as the focal point for assessing impact. Of course, to exclusively focus on the online realm could lead to important forms of impact being overlooked, or to impacts among certain stakeholder groups (i.e., those not well-represented online) being missed.



## From Methods to Metrics

As the previous section illustrated, the field of media impact assessment is characterized by a diversity of methodological approaches that draw from a wide range of data sources. This diversity is amplified when we consider the range of specific metrics that can be used to quantify media impact.

In an effort to develop a quantitative approach to media impact, the Harmony Institute (2012c) has developed an “HI Score,” which is a system to quantify the influence of entertainment content that seeks to facilitate positive social change. The HI Score is derived from data from Twitter, news media, and Google searches, with each input weighted differently. For instance, news media mentions are weighted more heavily in the HI Score calculus in recognition of the larger audience that such outlets generally have (Harmony Institute, 2012c). Using the HI Score, Harmony Institute researchers conducted a test analysis in which they charted the impact of three years-worth of Oscar-nominated documentary films (Harmony Institute, 2012c). As Figure 1 illustrates, with this approach the researchers are able to track the magnitude of a documentary’s impact over time, as well as compare the relative impacts of different films.

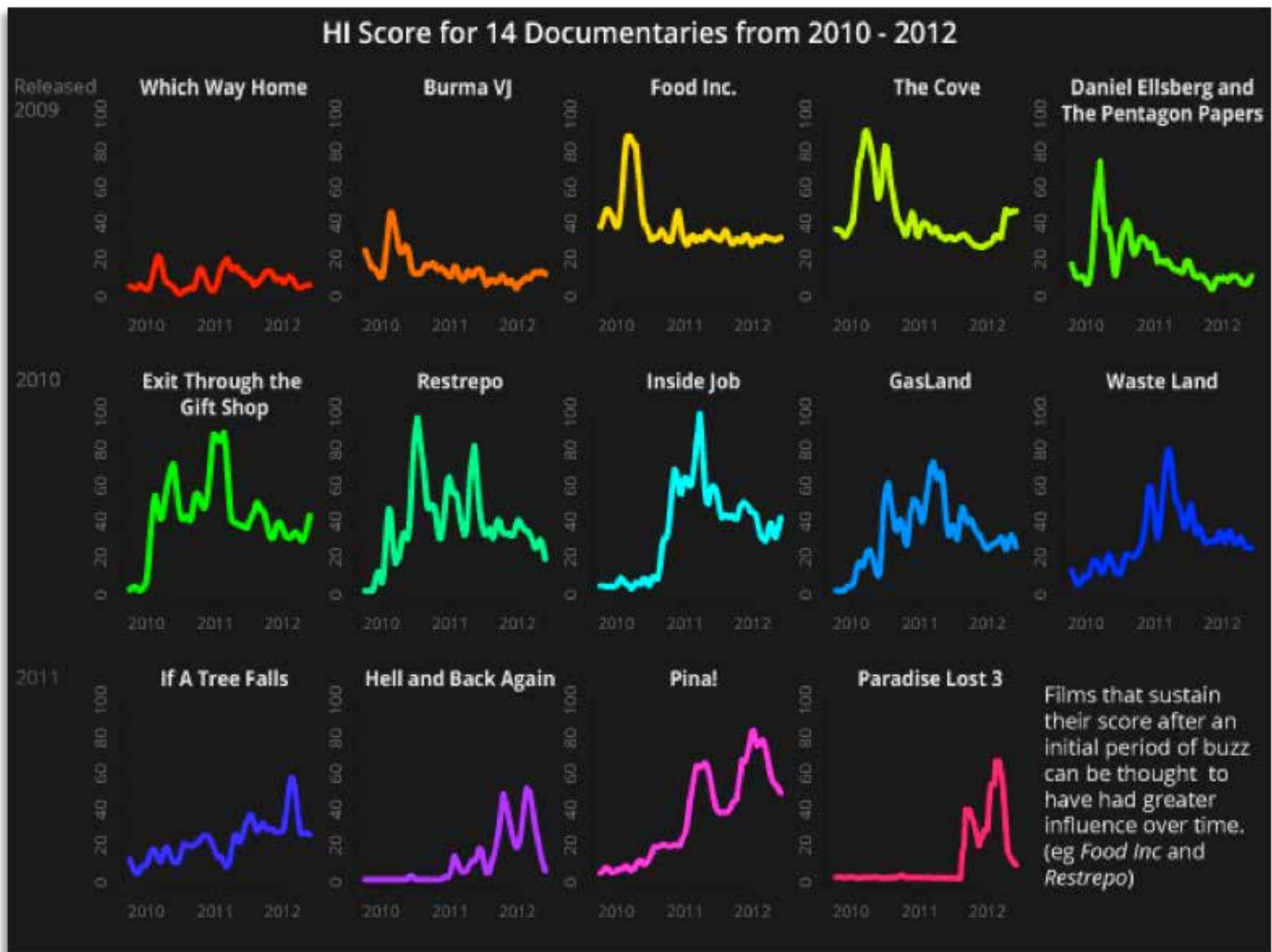
In a similar vein to the Harmony Institute’s work, researchers Michelle, Davis, and Vladica (2012) analyzed variation in audience engagement and response to the motion picture *Avatar*. The authors employed Q methodology (a technique common to fields such as psychology, political science, and policy studies), which is a qualitative approach that uses factor analysis to “discern and describe people’s shared subjective viewpoints and understandings” (Michelle, et al., 2009, p. 118). Specifically, participants are asked to rate (in terms of agree/disagree) and sort a set of statements about the object of study (in this case, the film *Avatar*) (for more methodological detail, see Michelle et al., 2009).

The range of analytical approaches relevant to understanding media impact is further expanded when we consider the literatures on communication for development and media development. Work in this area focuses either on the role of strategic communication campaigns in achieving social, political, or economic development goals for nations or communities; or on efforts to develop well-functioning media systems that meet the information needs of individuals in countries or communities where such systems are under-developed (for a more detailed discussion on the points of distinction between these two areas, see Ministry of Foreign Affairs of Denmark, 2007).

To the extent that media development work is intended to “promote social change through access to information and opportunities for expression” (Ministry of Foreign Affairs of Denmark, 2007, p. 13), work in this area obviously fits squarely within the media impact context being discussed here. The same can be said for development communication work, with its emphasis on the use of strategic communication for policy development, institutional strengthening, and enhancing community well-being. In both of these contexts, the issue of assessing impact has been a long-standing challenge, though important and promising efforts to develop relevant indicators, and the associated data, have emerged, with organizations such as Internews and the Media Map Project working specifically to advance impact measurement in these areas (see, e.g., Roy, 2011).

In media development, such indicators have included the degree of media independence; the number and activity of media outlets; the plurality and diversity of media ownership and content, technological infrastructure, and professional capacity (number and training of journalists, etc.) (Ministry of Foreign Affairs of Denmark, 2007; Servaes, et al., 2012). Macro-level ranking data, provided by organizations such as Freedom House and the International Research and Exchanges Board (IREX), which as-

**Figure 1:**  
Tracking the Impact of Social Issues Documentaries



Source: Harmony Institute (2012c).

ness and rank national media systems according to criteria such as media freedom and independence, have also frequently been employed as media development assessment criteria (Servaes, et al., 2012). Because media development work often focuses on efforts to transform an entire media system, the field's most common impact indicators often focus on a unit of analysis that extends a bit beyond that required to assess the impact of an individual public interest media initiative; but such criteria can potentially be scaled down and applied, if relevant, to more narrowly tailored media contexts.

Such indicators can be thought of purely as outputs if the ultimate objective is the establishment of a media system that achieves broader socio-political effects such as empowering, informing, and mobilizing the citizenry. Taking this next step, and assessing whether efforts to develop a media system are having a broader political, social, or economic impact is more challenging. But here, relevant indicators range from voting behaviors, to community engagement (see below), to changes in socio-economic status (Ministry of Foreign Affairs of Denmark, 2007). It is important to emphasize that research that has explored relationships between media development and macro-level political and economic impacts has found a range of important connections, including positive relationships between media development and economic development, political stability, and



gender empowerment (Roy, 2011).

In development communication, the assessment approach is more focused on whether the primary messages of a strategic communication campaign are having an effect on the attitudes, beliefs, or behaviors of target audiences (see, e.g., Murphy, et al., 2007). Because the goals and strategic approaches of such campaigns can be so varied, it has been argued that “it is impossible to produce a general list of indicators” to guide assessment (Ministry of Foreign Affairs of Denmark, 2007, p. 16). As Servaes, et al. (2012) note: “The evaluation of Communication for Development needs to be based on an appropriate combination of qualitative and quantitative techniques, complementary approaches and triangulation, and recognition that different approaches are suitable for different issues and purposes” (p.100).

As these authors illustrate, something approaching a consensus has emerged in the communication for development field that the assessment process and criteria should have a strong participatory dimension (see Byrne, 2007), to the extent that they should be developed in collaboration with those most affected and involved, “rather than apply predetermined objects, indicators, and techniques” (Servaes, et al., 2012, p. 108). And so once again, we see in these contexts (as we have seen in other contexts discussed thus far), an emphasis on multi-method evaluation approaches, incorporating methodologies such as survey research, focus groups, interviews, and participant-observation (see, e.g., Murphy, et al., 2007; Servaes, et al., 2012). But perhaps more important is that, inherent in this approach is the idea that those affected and involved help to articulate the specific metrics by which the initiative is to be assessed.

Reflected in this emphasis on methodological diversity and participatory development of assessment criteria is the commonly expressed theme that work in this area should not look to develop any kind of standardized assessment metrics. Such a strategy simply does not reflect the diversity of objectives and approaches that are found in the design and implementation of public interest media initiatives.

Nonetheless, there have been efforts in some contexts to develop more standardized assessment criteria. For instance, within the field of cultural economics the focus has been on developing an assessment approach that operates within the traditional economics vocabulary – that is by expressing impact in economic terms. Reflecting this economic orientation to the notion of social value, cultural economics approaches to impact assessment operate from the assumption that a monetary value can be estimated to reflect the *positive externalities* produced by a public interest media project such as a documentary (see Reeves, 2002). Externalities refer to the (often unintended) byproducts of economic activities. Within the context of informational and cultural products such as journalism, documentary and narrative films, television programs, and Web and social media sites, understanding and effectively evaluating the positive externalities is particularly important in order to understand the full extent of their value and impact (Search, 2011).

Efforts to translate this perspective into concrete economic performance metrics have, for instance, used survey research to ask respondents to provide hypothetical monetary valuations of the relevant media content in order to estimate its overall social value (an approach known as contingent valuation). As might be expected, such an analytical approach is somewhat controversial. As Search (2011) notes, “such studies try to put a value on things which don’t currently have a market value. This makes it difficult for respondents to pull a number out of thin air” (p. 36). That being said, an effort to estimate the social value of Al Gore’s *An Inconvenient Truth* in the United Kingdom put the overall social value at over £73 million, through an approach derived primarily from measures of consumers’ willingness to pay to see the film (Search, 2011).

Another economics-driven analysis of *An Inconvenient Truth* utilized regional data on the purchase of voluntary carbon



offsets to estimate the impact of the film on this particular form of environmental awareness and behavior (Jacobsen, 2009). The analysis found that within zip codes within a 10-mile radius of where the film was shown, carbon offset purchases showed a 50 percent increase relative to other areas of the country (Jacobsen, 2009). Thus, in this case the impact of the film was quantified in terms of the apparent increases in expenditures on carbon offsets that it caused. This research example is notable for the way it employed a specific set of uniquely relevant behavioral data to assess the actual behavioral impact of a particular public interest media initiative. In this regard it is illustrative of the larger point made previously that assessment approaches

and criteria should be uniquely tailored to the characteristics and objectives of the particular media initiative.

## Factoring Engagement into Media Impact Assessment

As was noted previously, the concepts of media engagement and media impact are often tightly intertwined. However, the concept of engagement has proven notoriously resistant to any kind of uniform, consensus definition – something that is fundamentally debilitating to its use in the commercial sector (see Napoli, 2011), though not necessarily so in this context of assessing public interest media projects where, as was noted above, the goals and assessment criteria can and should vary from project to project.

Audience engagement is often seen as a necessary step toward achieving broader, longer-term social change (see, for instance, Barrett & Leddy, 2008, Figure 2; Harmony Institute, 2013b; Zuckerman, 2011), and as such, often factors into the shorter-term assessment criteria that are employed to evaluate public interest media initiatives. It should be emphasized, that while the two concepts are related, “engagement isn’t the same as impact” (Stray, 2012, p. 4). The extent to which engagement is a significant intermediate step on the way to impact is something that future research must more intensively address. As *ProPublica*’s Richard Tofel (2013) recently stated, “Engagement is not the same thing as impact, but the two may be closely correlated for explanatory journalism” (p. 5). And so, to some extent and in some contexts, engagement can perhaps be best thought of as a useful proxy for impact, which is why the concept – and its measurement – continues to play a prominent role in the media impact assessment field.

Some work in this area has sought to develop what are perhaps best called hierarchies of engagement, in which different dimensions of engagement are assigned different weights in accordance with the extent to which they can contribute to more concrete forms of impact. The Harmony Institute (2013b), for instance, assesses engagement on a passive to active continuum as follows:



**Figure 2:**  
**Media Engagement Continuum**



(Derived from Harmony Institute, 2013b).

As should be clear from this figure, the most highly valued forms of engagement within this particular framework for assessing media impact are the extent to which individuals take part in various forms of civic activity. From this standpoint, the notion of civic engagement and how it is affected, which is a common point of focus in the field of political science (and, to some extent, sociology as well), represents another point of disciplinary intersection with the measurement of media impact (see, e.g., Couldry, Livingstone, & Markham, 2010). Civic engagement has been defined along three primary criteria:

- The ability to acquire and process information relevant to forming opinions on civic matters;
- The ability to voice and debate opinions and beliefs related to civic matters;
- The ability to take action in regards to civic matters (Gordon, Baldwin-Philippi, & Balestra, 2013).

Following from these three broad categories, civic engagement has been operationalized in a variety of ways, ranging from participation in civic activities (such as attending a political meeting, rally, speech, or protest; or working for a political party or candidate; working for a community organization), to engaging in various forms of political communication (such as contacting public officials, speaking out in a public forum, signing petitions, or, more recently engaging in various forms of online communication such as commenting on news stories and blogs, or engaging in political activity via social media) (see, e.g., Jennings & Zeitner, 2003; Smith, 2013). And, of course, voting in elections has traditionally been an important dimension of civic engagement. Not surprisingly, researchers in this area have become increasingly interested in the relationship between media usage (particularly in terms of online activities) and civic engagement (see, e.g., Gordon, Baldwin-Philippi, & Balestra, 2013; Jennings & Zeitner, 2003; Knight Foundation, 2013), a line of research that, of course, has a direct bearing on efforts to assess the impact

of public interest media initiatives.

The field of information science provides a relevant perspective on engagement as well. Information scientists generally are concerned with how users engage with information technologies (see, e.g., Attfield, et al., 2011; O'Brien & Toms, 2008, 2010). The issue of content is, to some extent, secondary for researchers in this field. But of course, the extent to which audiences' engagement with public interest media initiatives often takes place via technological platforms such as smartphones, tablets, and computers means that this literature can also make a potentially useful contribution to crafting comprehensive approaches to measuring media engagement.

Work in this area has approached engagement as both "process and product of interactions," which certainly fits well with the notion of engagement as both a means and an end, which to some extent characterizes the state of thinking in the media impact field (see above). Definitions put forth by researchers in information science remain, at this point, somewhat broad. Attfield, et al. (2011), for instance, define user engagement as "the emotional, cognitive and behavioral connection that exists, at any point in time, between a user and resource" (p. 2). This definition is associated with a wide range of fairly abstract components, ranging from attention and durability to novelty, richness, and control.

Given such multi-dimensionality, methodological approaches have been multi-faceted as well. Some work in this area has employed user self-reports of their experiences interacting with information technologies (see, e.g., O'Brien & Toms, 2010), though with the recognition that such self-reporting approaches to measuring a concept as complex and multi-dimensional as engagement have obvious shortcomings related to the well-documented unreliability of user self-reports (see Attfield, et al., 2011). More objective measurement approaches have been employed as well, such as asking users to estimate the passage of time during an activity, or assessing performance of a different task immediately following a period of engaged interaction; or even employing physiological and behavioral measures such as eye tracking, biosensors, and, of course, Web usage patterns. As O'Brien and MacLean (2009) note, "it is not enough to use multiple methodologies at the same time; rather we must be able to select the best methods for the task at hand and have a concrete understanding of how they complement each other" (p. 4). It seems reasonable to say that engagement measurement (both within and beyond the information science field) has not yet reached this next developmental stage, in which a comprehensive understanding has been reached as to which methodological approaches best suit the particular assessment task at hand.

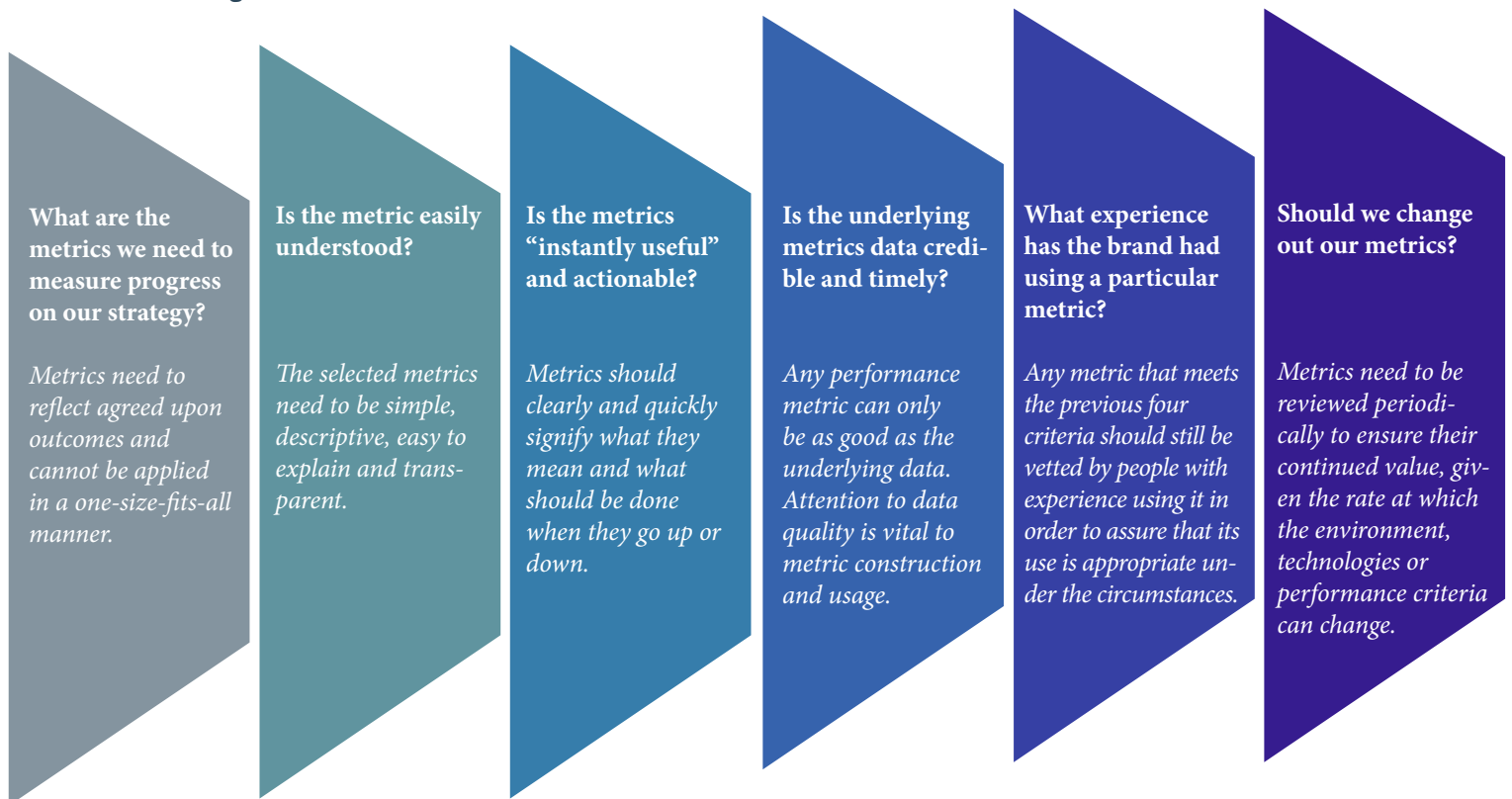
The field of marketing also has recently begun to delve into how to define, assess, and value audiences' engagement with media (see Haven, 2007; Paine, 2009). As is the case with many of the fields whose work is being summarized here, assessing audience size/reach is increasingly seen as insufficient from an assessment standpoint (Henry & Harte, 2012). However, as much of this marketing work emphasizes, this research is still in its early conceptual, exploratory stages, in terms of theory, method, and metrics [see, e.g., Gambetti & Graffigna, Biraghi, 2012; Mandelli, Accoto, & Mari, 2010; Vivek, Beatty, & Morgan, (2012)]. As Hollebeck (2011) notes, research addressing customer brand engagement "has transpired in the marketing literature only relatively recently" (p. 556). As recently as 2010, engagement was described as "a new concept in the marketing literature" (Gambetti & Graffigna, 2010, p. 804).

In marketing, the primary concern that has emerged is with consumers' engagement with individual brands (e.g., Gambetti & Graffigna, 2010; Heath, 2009; Hollebeck, 2011; Sprout, Czellar, & Spangenberg, 2009; Vivek, Beatty, & Morgan, 2012). As with other fields that have tried to unpack the concept of engagement and translate it into meaningful performance criteria, within the field of marketing we see engagement being understood as a multi-dimensional concept, comprised of elements

such as attention, dialogue, interaction, emotions, and activation (Gambetti & Graffigna, Biraghi, 2012). Other marketing studies have conceptualized engagement in terms of consumers’ personal enjoyment, sense of community, and participation experience (Pagani & Mirabello, 2011/2012); while others have conceptualized engagement in terms of “four I’s”: involvement, interaction, intimacy, and influence (Haven & Vittal, 2008).

Not surprisingly, marketers and marketing researchers have begun to devote substantial attention to the ways in which the Web and social media can be utilized as ways of both fostering and measuring consumers’ engagement with brands (see, e.g., Castelyn, Mottart, & Rutten, 2009; Cooke & Buckley, 2008; Mandelli, Accoto, & Mari, 2010; Pagani & Mirabello, 2011/2012; Peterson & Carrabis, 2008). The breadth of work in this area, as well as the volume of data that can be drawn upon, are well-illustrated by the fact that the Advertising Research Foundation’s (ARF) forthcoming *Digital Metrics Field Guide* (Rappaport, in press), contains descriptions of 197 different digital metrics for use in marketing and brand performance research. The key challenge that arises from such a scenario involves deciding which metrics to utilize in particular assessment contexts. According to the ARF, reaching this determination involves answering the six questions outlined in Figure 3.

**Figure 3:**  
**The Advertising Research Foundation’s Metric Selection Process**



Derived from Rappaport (in press).

Given the range of available options, there have also been efforts to categorize the range of online metrics that can be employed to assess engagement. Mandelli, et al. (2010), for instance, categorize the range of metrics according to four overarching categories:

- Customer engagement (which includes metrics such as quantity and frequency of activities such as content downloads and uploads; widget and application installations; video start and completion rates, etc.);
- Buzz measurement (which includes metrics such as volume of online discussion, social media mentions, online sentiment, etc.);
- Brand advocacy (which includes metrics such as number of recommendations, product reviews and feedback, sharing rates, etc.);
- Network influence (which includes metrics such as number of followers, retweet and pass-along rates, number of incoming links, etc.).

Some of the specific metrics being employed can be quite complex and multi-dimensional, whereas others are much simpler and unidimensional. An example of the more complex, multi-dimensional approach can be seen in the measure created by analytics firm Web Analytics Demystified (Peterson & Carrabis, 2008). Their multi-dimensional measure of online audience engagement is comprised of elements such as attention and loyalty (as measured by criteria such as session duration, page views per session, visits per hour); brand awareness (as measured by search activity), and feedback and interactions (as measured by criteria such as email feedback, audience ratings of content, content downloading, comment submissions, etc.). The complete equation for this measure (which has been employed by some news organizations [see below]) is described in Figure 4.

**Figure 4:**  
**A Multi-Dimensional Measure of Online Audience Engagement**

$$\sum(C_i + D_i + R_i + L_i + B_i + F_i + I_i)$$

**Where:**

**C = Click Depth Index (derived from page and event views).**

**D = Duration Index (derived from time spent on the site).**

**R = Recency Index (derived from the rate at which visitors return to a site over time).**

**L = Loyalty Index (derived from the level of long-term interaction visitors have with the site).**

**B = Brand Index (derived from the visitors' brand awareness of the site or product).**

**F = Feedback Index (derived from qualitative information including propensity to solicit additional information or supply direct feedback)**

**I = Interaction Index (derived from visitor interaction with the content or functionality designed to increase visitor attention to the brand or site).**

Source: Peterson & Carrabis (2008).

As should be clear, many of the criteria utilized in this approach are derivatives of more traditional "exposure" metrics; and it is questionable whether criteria related to audiences' media exposure can, on their own, effectively represent a more complex construct such as audience engagement (see, e.g., Napoli, 2011). The notion of engagement would seem to suggest dimensions of audience interaction with media that extend beyond frequency and duration of exposure.

A similar point can be made about a recent assessment case study of the marketing efforts of Tourism Ireland, which focused on how to assess the value of social media activity (Henry & Harte, 2012). The authors' effort to develop what they term "social equivalent advertising value (SEAV)" focused on the following:

- Post impressions (i.e., views of brand posts in a social medium);
- Page impressions (i.e., views of brand owner's social platform; -- personal actions (i.e., consumption of brand content through an action such as clicking on a photo, video, or link);
- Public actions (i.e., sharing brand content through social media platforms through liking, commenting, etc.).

As should be clear, three of these four assessment criteria remain grounded in measures of audience exposure, and so this approach would not seem to expand the notion of engagement beyond traditional media consumption activities to the extent that available data sources or analytical tools would allow.


Social media marketing firm Socialbakers utilizes a more unidimensional approach to online engagement, but one that more effectively extends beyond audience exposure (Rezab, 2012). The firm calculates Engagement Rate metrics for both Facebook and Twitter. Their Facebook Engagement Rate is as follows:



$$\text{Average Post Engagement Rate} = \frac{\text{Likes + Comments + Shares on a given day}}{\frac{\text{\# of wall posts made by page on a given day}}{\text{Total Fans on a given day}}} \times 100$$

Source: Rezab (2012)

Their Twitter Engagement Rate is calculated as follows:



$$\text{Engagement Rate} = \frac{\text{\# of Replies + Retweets}}{\text{\# of Followers}} \times 100$$

Source: Rezab (2012).

As should be clear, both metrics involve ratios of audience exposure to specific communicative actions.

The journalism field has been particularly focused on developing meaningful ways of assessing audience engagement and impact (Schaffer & Polgreen, 2012; Ward, 2012). Online news production, distribution, and consumption, like other areas of online activity, provides a wide array of opportunities, tools, and data sources for measuring various aspects of performance, audience engagement, and impact (for an extensive list of Web and social media metrics, see Pop, 2008). As Anderson (in press) notes, "the sudden availability of news metrics [has been] making journalists and editors more sensitive to the implications of

## Understanding what drives the sharing of news stories on social media

One of the key challenges – and opportunities – confronting the field of journalism today involves learning how to take maximum advantage of social media platforms as a means for increasing the readership of individual news stories. The sharing of individual news stories has emerged as a primary metric in terms of assessing the extent to which a story has engaged audiences and the impact that it has had on them (see main text).

Recent research has shown that social media platforms such as Facebook and Twitter are playing an increasingly influential role in how audiences consume the news (Pew Research Center, 2013). In this way, social media platforms are evolving to serve as a gatekeeper in their own right; a new and potentially influential intermediary between news organizations and their audiences. Of course, the complicating – and exciting – factor here is that the audiences themselves play an active role in the gatekeeping function served by social media platforms.

Recent research has produced a number of valuable insights about the dynamics of sharing news stories via social media. Ongoing research by NPR Digital Services, for instance, has identified nine categories of local news stories that are the most likely to be shared on Facebook. These range from “curiosity stimulators” (stories that highlight the unique aspects of a local community) to “news explainers” (stories that help make sense of the news) (Athas & Gorman, 2013a). This same line of research has also determined

(continued on page 23)

what their audience was reading and why” (p. 563). In this regard, the news audience has become much more empowered than has perhaps ever been the case in the history of journalism. Long-standing theoretical models that traditionally placed audiences at the periphery of the sources of influence on news production are now being revised to better reflect the increasingly central role that audience tastes, preferences, feedback – and even content production – play in the creation of news (Vu, 2013).

In addition, in this time in which traditional commercially-oriented journalism is in decline, we are seeing a growth in efforts to experiment with various forms of non-profit and/or non-commercial journalism. For journalistic organizations of this sort, performance criteria that go beyond traditional commercial measures of reach and financial success are naturally of greater relevance (Nolan & Setrakian, 2013).

Thus, journalistic organizations and journalism researchers are now awash with new data sources, analytical tools, and metrics that have the potential to completely reconfigure how journalistic success and impact are measured, at just the time when there is a strong desire within the field to look beyond traditional performance criteria (Linch, 2012; Ward, 2012). As Lee and Lewis (2012) state: “What is unique about the present moment is the sheer volume of audience data, generated by the ease and ubiquity of digital tracking technologies” (p. 7). The challenge at this point, as Aron Pilhofer (2012) of the *New York Times* has noted, is one of “figuring out which data to pay attention to and which to ignore. It is about setting up frameworks for testing, analysis and interpretation that are both scalable and replicable” (p. 2). Toward this end, the *New York Times* has been working on a project designed to “find the right metric for news” (Stray, 2012, p. 2).

The Reynolds Journalism Institute convened a group of industry professionals and researchers to tackle the question of identifying and measuring audience engagement efforts. Their table of potential measurement approaches is too large to reproduce here, but represents one of the more comprehensive efforts to brainstorm new approaches to measuring journalistic impact (see Mayer & Stern, 2011). A similarly extensive effort can be found in the Knight Foundation’s guide to evaluating community information projects (FSG, 2011). J-Lab: The Institute for Interactive Journalism, has also delved deeply into the issue of defining and measuring user engagement, with a large-scale survey of digital-first

news sites that gathers information on how these sites are defining and measuring user engagement and employing engagement-based analytics into the operation of their news organizations (Schaffer & Polgreen, 2012). The J-Lab approach to engagement involves four engagement categories: 1) engagement as outreach (driving users to consume content); 2) engagement as reaction (inviting users to comment, share, like, and chat); 3) engagement as stakeholder participation (getting users to contribute stories, time, and funding); and 4) engagement as civic participation (activating audience members to address community issues). J-Lab has also provided one of the few comprehensive inventories of analytical tools (software packages, data sources, etc.) that can be employed in the task of measuring various forms of audience engagement (see Schaffer & Polgreen, 2012, p. 34).

A number of journalistic organizations have made significant progress in developing and employing their own engagement metrics, and now systematically use them as benchmarks to assess their performance (see, e.g., Nolan & Setrakian, 2013). Philadelphia news provider Philly.com employs a seven-part equation for measuring online engagement, derived largely from the Web Analytics Demystified (Peterson & Carrabis, 2008) framework discussed above.

Chicago Public Media measures its audience's engagement according to five criteria (Richardson, 2011). The first is station partnerships and collaborations, which is defined in terms of the number of institutional partners and collaborations in effect in a given month. These partnerships and collaborations are operationalized in terms of story posts, broadcasts, and public events.

The second is a "Consume:Converse Ratio," which is a ratio of page views to reader comments in a given month. The logic here is that a useful measure of engagement can be derived from the extent to which readers of a particular story are motivated to post a comment in response to that story. In a typical month, Chicago Public Media observes a Consume:Converse Ratio of about 400:1. As Richardson (2011) points out: "Is this number good? Without anything to compare it to, we don't really know" (p. 2). This is an important observation as it highlights how early we are in the development and evaluation of meaningful engagement and impact metrics. Presumably, down the line such an engagement metric can be explored in relation to other relevant measures of impact to

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that substantive news stories are shared with equal frequency as less serious, "fun" stories – an important finding that indicates that substantive journalism can effectively engage audiences in the social media space (Athas & Gorman, 2013b).

Knight-Mozilla OpenNews Fellow Sonya Song (2013) has been engaging in similar analyses at the *Boston Globe*. Her research has focused on identifying disconnects between the kinds of stories that the *Globe* shares on Facebook and the kinds of stories that are viewed, shared, and commented upon via social media. Using these criteria, Song (2013) finds gaps that suggest that opinion pieces, business news, and lifestyle news are story categories that are not being shared by the *Globe* on Facebook in proportion to the extent that they engage readers. According to Song (2013), such "misalignment between staff's shares and readers' perceptions may be a starting point for adjustment."

These types of analyses are valuable in that they provide news organizations with new insights into how their work is resonating with their audiences; as well as a means of better calibrating their work to their audiences' expressed needs and interests.



develop a deeper understanding of their relationship and thus a deeper understanding of the value of this representation of engagement and the key thresholds that should ideally be reached.

The third engagement metric employed by Chicago Public Media is C.U.E. Opportunities (Call-in, Upload, and solicited E-communication). This is a monthly total of various forms of audience participation, such as calling in to radio shows, audience-generated content uploaded online, and the number of responses to requests for program topics, guests, or questions to be asked of guests.

Fourth, Chicago Public Media tracks, on a monthly basis, the number of times in which its stories are shared or recommended online. And finally, the organization keeps a monthly count of the number of events produced and the attendance, in terms of total attendance and in terms of percentage of total capacity (Richardson, 2011).

The popular online gossip/news site *Gawker* employs a “recurring reader affection” formula that, at its core, emphasizes the value of regular, returning visitors over the occasional or one-time visitors (Garber, 2010). This metric is a product of data on direct visits (with an emphasis on unique visitors over page views) and branded search queries (as measured via Google Analytics) (Garber, 2010). Underlying this emphasis is the increasingly widely-held assumption that “the highly engaged reader is actually far more receptive to the publisher’s marketing messaging than the occasional passerby” (Garber, 2010, p. 2), an assumption that is receiving growing empirical support in the marketing literature (see, e.g., Kilger & Romer, 2007; Wang, 2006).

A case study of *BusinessWeek*’s online platform (Ulken, 2009) provides another view into how online news sources are assessing audience engagement. Reflecting once again the distinction between casual and engaged visitors, *BusinessWeek* employs an engagement index that “is a comments-to-postings measure for a given month” (Ulken, 2009, p. 1). This analysis is conducted at a sufficient level of granularity that “return commenters” (i.e., people that comment multiple times on the same story) can be separately quantified. In constructing this index, *BusinessWeek* employs well-known analytical tools such as Omniture and Movable Type to track the numbers of blog comments and posts. The publication also conducts analyses beyond their engagement index, such as maintaining counts of retweets, Digg, Delicious saves, referring traffic, and online mentions (Ulken, 2009).

Perhaps the most extensive discussion of methods for assessing journalistic impact (and the challenges associated with doing so) can be found in a white paper by Richard Tofel (2013), president and founding general manager of the political news site *ProPublica*. Here, too, much of the focus is on assessing audience engagement. Within the context of explanatory journalism in which *ProPublica* operates, such engagement “is especially critical,” as greater engagement “will tend to indicate both how likely an explanatory story is to resonate with readers, i.e., how much it has explained to them, how likely they are to share it..., how likely they are to be moved by it to act” (Tofel, 2013, p. 4).

In outlining how *ProPublica* charts impact, Tofel (2013) describes the Tracking Report that is a key part of the assessment process for most individual stories that the site posts. This report includes data on reprints or follow-up pieces that appeared in other media outlets; any official actions (such as statements by public officials or agencies) influenced by the story; opportunities for change (such as legislative hearings or administrative studies); and any change that resulted. Along with the Tracking Report, *ProPublica* produces other reports that focus on criteria such as Web traffic and its origins; social media follower counts, app downloads, and online sharing.

One conclusion that *ProPublica* has reached from its tracking activities is that “true impact – in the real world change sense...is relatively rare” (Tofel, 2013, p. 20). Given that assessing such impact is, by most accounts, in its early developmental



stages, treating such a conclusion as definitive seems a bit premature at this point. At the very least, such a strong statement should perhaps be modified to acknowledge that it is true *measurable* impact that may be relatively rare at this point in time, given the current state of available analytic tools. Such a modification is reflective of *ProPublica's* second conclusion, that not all forms of impact are quantifiable; and thus “we should want to take great care that we not create pressure to undertake only that work the outcomes from which are likely to be quantifiable” (Tofel, 2013, p. 20). The final key lesson that *ProPublica* has drawn from its efforts is that “there is no one reliable measure of journalism’s impact, no single algorithm that can be devised, no magic formula to load into a spreadsheet or deploy in an app” (Tofel, 2013, p. 21).

As many of these examples from journalism indicate, a key goal is to achieve what the J-Lab has termed “Audience Conversion,” which is defined as “the process of moving users beyond superficial interaction to actual investment in an online news site” (Schaffer & Polgreen, 2012, p. 15). Reflecting this perspective, many of the newer “single subject” news organizations that have emerged online are focusing on “return rate” measures rather than more general measures of audience size (Nolan & Setrakian, 2013). New analytical tools such as ChartBeat and NewsBeat are oriented specifically around distinguishing between active and non-active users

A final important context to consider in terms of the assessment of media engagement and impact is the field of health communication. Health communication researchers have long sought to comprehensively assess the impact of health communication campaigns in a variety of contexts, traditionally relying upon methods such as surveys and interviews to gauge the impact of strategic health communication campaigns on individuals’ attitudes, beliefs, and behaviors (e.g., Agha & Rossem, 2002; Vaughan & Rogers, 2000). In some instances, the relevant health communication messages are embedded in popular culture content such as television and radio programs (see, e.g., Sharan & Valente, 2002; Vaughan & Rogers, 2000).

A focus on engagement has emerged in this body of literature as well (see, e.g., Neiger, et al., 2013). Here, as in other fields discussed in this report, efforts have been made to categorize different online and social media activities in terms of the level of engagement they represent. In the health communication context, activities such as Facebook likes and Twitter followers have been categorized as low engagement. Activities such as retweets and blog comments have been categorized as medium engagement. Activities such as Facebook shares and user generated content posts have been categorized as high engagement (Neiger, et al., 2013; for further discussion of social media metrics within the health communication context, see Krall, 2009).

This process of creating rigid engagement hierarchies is a bit problematic, particularly within the context of assessing media impact that is our focus here, where it seems to be abundantly clear that the diversity of media initiatives and the diversity of desired outcomes and impacts would inevitably require a substantial amount of flexibility in terms of assigning value judgments to various engagement criteria. As Neiger et al. (2013) note, within the context of health communication, each engagement “stage” is presumed to have a causal relationship with the following stage (i.e., low engagement activities lead to medium engagement activities, which lead to high engagement activities). Research has yet to document this kind of causality; but should it exist, it would certainly help to clarify and solidify the exact nature of engagement’s inherent multi-dimensionality.

# Conclusion

This report has drawn from a wide range of relevant literatures in an effort to provide a comprehensive overview of the current state of the field of media impact assessment. This report is intended to be used as a baseline from which future efforts to develop analytical approaches, methodologies, and metrics can be made.

In synthesizing this body of literature, some themes emerged. These included:

## **1. The importance of media impact assessment maintaining a high degree of methodological flexibility and diversity**

As was repeatedly illustrated in the literature, different projects require different methodological approaches to impact assessment. Moreover, a comprehensive approach to impact assessment typically requires the application of multiple methodological approaches that address different levels of analysis that reflect the different spheres of potential impact (e.g., on individual attitudes/behaviors, on media debate/discussion, on public policy).

## **2. The availability of a broad range of performance metrics**

Those engaged in assessing media impact can find themselves awash in data that can be configured into an almost overwhelming variety of performance metrics. This is a reflection of the nature of contemporary audience interaction with media, in which most aspects of the dynamics of content consumption, along with many aspects of how audiences can respond to content, are easily capturable and quantifiable. This is a dramatic departure from the past, when most dimensions of audience engagement with media were much more resistant to measurement.

## **3. The centrality of audience engagement to impact assessment**

The concept of engagement often serves as a central mechanism via which media impact is assessed, and can be utilized to serve in a variety of capacities in relation to the broader notion of media impact; for instance, as an intervening variable, as a proxy for impact, or as a form of impact in its own right. One approach to engagement measurement that seems to have taken hold involves deriving ratios of audiences exposed to media content to those who engage in some form of measurable action during or after exposure.

As is frequently emphasized in the literature discussed here, impact measurement is relatively new in this realm of public interest media. One of the challenges this poses is that there is not a stockpile of relevant research to draw upon to serve as a basis for testing performance metrics and investing them with meaning (see, e.g., Roy, 2011). As Christina Lindstrom (2013a) of Participant Media emphasizes, in fields such as education there is a long tradition of impact assessment. Consequently, there is also a significant accumulation of findings from previous research that can be drawn upon to develop a deeper understand-

ing of what individual metrics actually mean. Thus, for instance, education research has demonstrated significant relationships between test scores, graduation rates, and future income. Impact assessment on an education initiative designed to affect test scores can then draw upon this body of research to estimate longer-term impacts, such as on individuals' earning potential. It is through exploring such connections across data that the value and utility of specific performance metrics can be ascertained and the full impact of specific initiatives can be assessed. However, "What happens when no prior research exists to match up to your own metrics" (Lindstrom, 2013a, p. 1)?

This question represents both the key challenge and the key opportunity facing the field of media impact assessment today. Further, this question highlights the need for the establishment of an institutional infrastructure to support this field as it develops further.

As this review has clearly shown, there are a number of individuals and organizations that are making dramatic strides in terms of advancing the science of media impact assessment. However, as this review has also shown, this work is scattered across a wide range of fields that are not necessarily well-connected with one another. Such a scenario highlights the need for an interdisciplinary institutional structure that can serve as a hub of relevant research and data; as a facilitator of the research necessary to extract insights from these data; as a disseminator of information about available data, its uses, and the findings that are emerging from it to the field at large; and as a critical intermediary to distinguish between useful and not useful data. Some work along these lines has begun with the Harmony Institute's (2013d) forthcoming launch of its ImpactSpace application, which will provide online access to various types of impact data for social issues films to facilitate both longitudinal and comparative impact analyses. The development of comparable tools with a broader reach, into realms such as journalism and public service media campaigns, would be particularly valuable to the field.

This latter point highlights the increasing recognition within the field of media impact assessment that one of the key challenges that stakeholders face now is wading through the massive amounts of available data to determine which data, and which performance metrics that can be constructed from these data, have the most value in terms of providing insights that can guide decision-making and improve performance (see, e.g., Ingram, 2013; Linch, 2012). As Medium Data Lab's Pete Davies (n.d.) has noted, "We've crossed the point at which the availability of data has exceeded what's required for quality metrics" (p. 2).

This statement points to the need, once again, for an institutional infrastructure that can engage in the relevant assessments and inform the field about the relative value and utility of different data sources and performance metrics. And, importantly, in this Big Data age, this institutional infrastructure must possess the knowledge, skill sets, and technological capacity to do this kind of work at a scale that reflects the scale of the available data resources. Such support for the field is lacking at this point.

Finally, to the extent that comprehensive impact assessment is a relatively new priority in the media field, the organizations engaged in producing and disseminating public interest media typically do not have a tradition of conducting these kinds of rigorous self-evaluations. Moreover, this kind of impact assessment represents a very different set of skills from those that have traditionally characterized those engaged in public interest media work. Certainly, media organizations and professionals are evolving rapidly in this regard. Nonetheless, the field would benefit from an institutional resource that could be drawn upon to provide public interest media organizations and professionals with training, guidance, assessment, and up-to-date information about best practices.

There would, of course, be a number of challenges for an organization seeking to fill this role. First, processes of developing and potentially imposing more quantitatively oriented performance criteria on any media sector have traditionally met with

resistance from some stakeholder groups, as such forms of measurement can, in some instances, be seen as posing threats to established practices or priorities, as potentially compelling emphases on some (more measurable) aspects of performance to the neglect of other important aspects of performance (see Napoli, 2011).

Second, while there is certainly a tremendous amount of potentially useful data available to facilitate rigorous media impact assessments, a substantial amount of the data are generated, or aggregated, by commercial organizations. These data are typically only available at substantial costs and often with fairly restrictive (and temporary) terms of access. Building a truly comprehensive analytics resource will require access to such data, either through the generation of significant funds to obtain long-term access to such data, or through establishing collaborative relationships with the relevant data providers and obtaining discounted or complimentary access on the basis of the substantial public interest value of the research being conducted with such data.

Finally, as the above overview has made clear, providing a comprehensive institutional resource for media impact assessment requires assembling a wide range of areas of expertise. Both online and offline research expertise is required; as are both quantitative and qualitative methodological orientations that span all of the relevant spheres of potential impact, ranging from individual attitudes and behaviors, to geographically, demographically, or issue/interest-defined communities, to the realms of local, state, and federal policymaking.

The opportunities for public interest media organizations to better understand and demonstrate their impact are clearly expanding dramatically. The suggestions put forth here are intended to help these organizations maximize these opportunities and thereby become more effective in achieving their goals and demonstrating their success. •

## References

- Agha, S., & Van Rossem, R. (2002). Impact of mass media campaigns on intentions to use the female condom in Tanzania. *International Family Planning Perspectives*, 28(3), 151-158.
- Anderson, C. (2011). Between creative and quantified audiences: Web metrics and changing patterns of newswork in local U.S. newsrooms. *Journalism: Theory, Practice, Criticism*, 12(5), 630-646.
- Athas, E., & Gorman, T. (2012, November). What kinds of local stories drive engagement? The results of an NPR Facebook experiment. *Nieman Journalism Lab*. Retrieved November 22, 2013, from: <http://www.niemanlab.org/2012/11/what-kinds-of-local-stories-drive-engagement-the-results-of-an-npr-facebook-experiment/>
- Athas, E., & Gorman, T. (2013, November). Why so serious? Maybe because data shows news stories can get shared just as often as lighter fare. *Nieman Journalism Lab*. Retrieved November 20, 2013, from: <http://www.niemanlab.org/2013/11/why-so-serious-maybe-because-data-shows-news-stories-can-get-shared-just-as-often-as-lighter-fare/>
- Attfield, S., Kazai, G., Lalmas, M., & Piwowarski, B. (2011, February). Towards a science of user engagement. Paper presented at the WSDM '11 Conference, Hong Kong.
- Barrett, D., & Leddy, S. (2008). Assessing creative media's social impact. Retrieved August 22, 2013, from: <http://www.thefledglingfund.org/resources/impact/>
- Beckett, L. (2010, October 26). Getting beyond just pageviews: Philly.com's seven-part equation for measuring online engagement. *Nieman Journalism Lab*. Retrieved August 2, 2013, from: <http://www.niemanlab.org/2010/10/getting-beyond-just-pageviews-philly-coms-seven-part-equation-for-measuring-online-engagement/>
- Brock, A., Buteau, E., & Herring, A. (2012). Room for improvement: Foundations' support of nonprofit performance assessment. Center for Effective Philanthropy. Retrieved August 22, 2013, from: <http://www.effectivephilanthropy.org/index.php?page=publications>
- Byrne, A. (2007, November 1). Working toward evidence-based process evaluation that matters. Retrieved August 18, 2013, from: <http://www.communicationforsocialchange.org/mazi-articles.php?id=356>
- Castelyn, J., Mottart, A., & Rutten, K. (2009). How to use Facebook in your market research. *International Journal of Market Research*, 51(4), 439-447.
- Clark, J. (2010, May 11). 5 needs and 5 tools for measuring media impact. Retrieved August 2, 2013, from: <http://www.pbs.org/mediashift/2010/05/5-needs-and-5-tools-for-measuring-media-impact131/>
- Clark, J., & Van Slyke, T. (2010). Investing in impact: Media summits reveal pressing needs, tools for evaluating public interest media. Center for Social Media, American University. Retrieved August 22, 2013, from: [http://www.centerforsocialmedia.org/sites/default/files/documents/pages/Investing\\_in\\_Impact.pdf](http://www.centerforsocialmedia.org/sites/default/files/documents/pages/Investing_in_Impact.pdf)
- Cooke, M., & Buckley, N. (2007). Web 2.0, social networks and the future of market research. *International Journal of Market Research*, 50(2), 267-292.
- Couldry, N., Livingstone, S., & Markham, T. (2010). *Media consumption and public engagement: Beyond the presumption of attention*. New York: Palgrave Macmillan.

- Davies, P. (n.d.). Medium's metric that matters: Total time reading. *Medium Data Lab*. Retrieved November 24, 2013, from: <https://medium.com/data-lab/86c4970837d5>
- Diesner, J., Pak, S., Kim, J., Soltani, K., & Aleyasen, A. (2014). Computational assessment of the impact of social justice documentaries. Paper presented at the iConf 2014, Berlin.
- Eurodiaconia (2013). Measuring social value. Retrieved August 2, 2013, from: [http://www.eurodiaconia.org/files/Eurodiaconia\\_policy\\_papers\\_and\\_briefings/Briefing\\_-\\_Measuring\\_Social\\_Value.pdf](http://www.eurodiaconia.org/files/Eurodiaconia_policy_papers_and_briefings/Briefing_-_Measuring_Social_Value.pdf)
- FSG (2011, March 4). Impact: A practical guide to evaluating community information projects. John S. and James L. Knight Foundation. Retrieved August 22, 2013, from: <http://www.knightfoundation.org/publications/impact-practical-guide-evaluating-community-inform>
- Gambetti, R.C., & Graffigna, G. (2010). The concept of engagement: A systematic analysis of the ongoing marketing debate. *International Journal of Market Research* 52(6), 801-826.
- Gambetti, R.C., & Graffigna, G., Biraghi, S. (2012). The Grounded Theory approach to consumer-brand engagement: The practitioner's standpoint. *International Journal of Market Research*, 54(5), 659-687.
- Garber, M. (2010, March 30). A "reader affection" formula: Gawker creates a metric for branded traffic. *Nieman Journalism Lab*. Retrieved September 12, 2013, from: <http://www.niemanlab.org/2010/03/a-reader-affection-formula-gawker-creates-a-metric-for-branded-traffic/>
- Gordon, E., Baldwin-Philippi, J., & Balestra, M. (2013). Why we engage: How theories of human behavior contribute to our understanding of civic engagement in a digital era. Working paper, Berkman Center for the Internet & Society. Retrieved November 22, 2013, from: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2343762](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2343762)
- Green, D. (2012, November 26). Eyeballs and impact: Are we measuring the right things if we care about social progress? Retrieved August 23, 2013, from: <http://www.impatientoptimists.org/Posts/2012/11/Eyeballs-and-Impact-Are-We-Measuring-the-Right-Things-if-we-Care-About-Social-Progress>
- Harmony Institute (2013a). A new story: Purposeful storytelling and designing with data. Retrieved August 3, 2013, from: [http://www.academia.edu/4248593/A\\_New\\_Story\\_Purposeful\\_storytelling\\_and\\_designing\\_with\\_data](http://www.academia.edu/4248593/A_New_Story_Purposeful_storytelling_and_designing_with_data)
- Harmony Institute (2013b). Impact playbook: Best practices for understanding the impact of media. Retrieved August 2, 2013, from: <http://www.media-alliance.org/article.php?id=2231>
- Harmony Institute (2013c). Sharing influence: Understanding the influence of entertainment in online social networks. Retrieved August 2, 2013, from: [http://harmony-institute.org/wp-content/uploads/2013/07/Sharing\\_Influence\\_HarmonyInstitute.pdf](http://harmony-institute.org/wp-content/uploads/2013/07/Sharing_Influence_HarmonyInstitute.pdf)
- Harmony Institute (2013d). A better way to analyze social impact. Retrieved November 23, 2013, from: <http://harmony-institute.org/therippleeffect/2013/11/15/a-better-way-to-analyze-social-impact/>
- Harmony Institute (2012a). *Bully*: Measuring online engagement. Retrieved August 2, 2013, from: <http://harmony-institute.org/wp-content/uploads/2012/10/bullysocialmedia.pdf>
- Harmony Instituted (2012b). MTV's *(Dis)Connected*: Entertainment evaluation. Retrieved September 14, 2013, from: [http://harmony-institute.org/docs/full\\_report\\_v5.pdf](http://harmony-institute.org/docs/full_report_v5.pdf)
- Harmony Institute (2012c, June 27). HI score: Towards a new metric of influence. Retrieved August 2, 2013, from: <http://harmony-institute.org/therippleeffect/2012/06/27/hi-score-towards-a-new-metric-of-influence/>

- Harmony Institute (2011). Entertainment evaluation highlights: Waiting for "Superman." Retrieved August 3, 2013, from: [http://harmony-institute.org/wp-content/uploads/2011/07/WFS\\_Highlights\\_20110701.pdf](http://harmony-institute.org/wp-content/uploads/2011/07/WFS_Highlights_20110701.pdf)
- Haven, B. (2007). Marketing's new key metric: Engagement. Forrester Research. Retrieved August 22, 2013, from: [http://www.adobe.com/engagement/pdfs/marketings\\_new\\_key\\_metric\\_engagement.pdf](http://www.adobe.com/engagement/pdfs/marketings_new_key_metric_engagement.pdf)
- Haven, B., & Vittal, S. (2008). Measuring engagement. Forrester Research. Retrieved August 22, 2013, from: [https://www.adobe.com/engagement/pdfs/measuring\\_engagement.pdf](https://www.adobe.com/engagement/pdfs/measuring_engagement.pdf)
- Heath, R. (2009). Emotional engagement: How television builds big brands at low attention. *Journal of Advertising Research*, 49(1), 62-73.
- Henry, M., & Harte, B. (2012). A new model for assessing the value of social media activity. *Journal of Brand Strategy*, 1(3), 234-239.
- Hollebeck, L. (2011). Exploring customer brand engagement: Definition and themes. *Journal of Strategic Marketing*, 19(7), 555-573.
- Inagaki, J. (2007). Communicating the impact of communication for development: Recent trends in empirical research. Washington, DC: World Bank.
- Ingram, M. (2013, April 29). Some advice for media: Just because you can measure something doesn't make it important. Gigaom. Retrieved November 22, 2013, from: <http://gigaom.com/2013/08/29/some-advice-for-media-just-because-you-can-measure-something-doesnt-make-it-important/>
- Jacobsen, G. (2009). The Al Gore effect: *An Inconvenient Truth* and voluntary carbon offsets. Retrieved August 18, 2013, from: [http://www.erb.umich.edu/News-and-Events/colloquium\\_papers/JacobsenJMP.pdf](http://www.erb.umich.edu/News-and-Events/colloquium_papers/JacobsenJMP.pdf)
- Jennings, M.K., & Zeitner, V. (2003). Internet use and civic engagement: A longitudinal analysis. *Public Opinion Quarterly*, 67, 311-334.
- Justus, D. (2013, August 10). Leaning towards a better way to gauge consumer media interaction. PaidContent. Retrieved November 22, 2013, from: <http://paidcontent.org/2013/08/10/leaning-towards-a-better-way-to-gauge-consumer-media-interaction/>
- Karlin, B., & Johnson, J. (2011). Measuring impact: The importance of evaluation in documentary film campaigns. *M/C Journal*, 14(6). Retrieved August 16, 2013, from: <http://journal.media-culture.org.au/index.php/mcjournal/article/viewArticle/444>
- Kilger, M., & Romer, E. (2007). Do measures of media engagement correlate with product purchase likelihood? *Journal of Advertising Research*, 47(3), 313-325.
- Knight Foundation (2012). Digital citizenship: Exploring the field of tech for engagement. Retrieved November 23, 2013, from: [http://www.knightfoundation.org/media/uploads/media\\_pdfs/Digital-Citizenship-tech4engage-summit-report.pdf](http://www.knightfoundation.org/media/uploads/media_pdfs/Digital-Citizenship-tech4engage-summit-report.pdf)
- Krall, J. (2009). Using social metrics to evaluate the impact of online healthcare communication. *Journal of Communication in Healthcare*, 2(4), 387-394.
- Lee, A.M., & Lewis, S.C. (2012). Audience preference and editorial judgment: A study of time-lagged influence in online news. Paper presented at the 13th International Symposium on Online Journalism, Austin, TX.
- Leiserowitz, A.A. (2004). Before and after The Day After Tomorrow: A U.S. study of climate change risk perception. *Environment*, 46, 22-37.



- Lewis, C., & Niles, H. (2013). The art, science and mystery of nonprofit news assessment. Retrieved August 2, 2013, from: <http://irw.s3.amazonaws.com/uploads%2Fmeasuring-impact-final-pdf.pdf>
- Linch, G. (2012, January 14). Quantifying impact: A better metric for measuring journalism. Retrieved August 23, 2013, from: <http://www.greglinch.com/2012/01/quantifying-impact-a-better-metric-for-measuring-journalism.html>
- Lindstrom, C. (2013, August 2). Telling a story with numbers. Participant Media. Retrieved November 22, 2013, from: <http://www.participantmedia.com/2013/08/telling-story-numbers/>
- Lindstrom, C. (2013, August 10). FCC victory! Participant Media. Retrieved November 22, 2013, from: <http://www.participant-media.com/2013/08/fcc-victory/>
- Mandelli, A., Accoto, C., & Mari, A. (2010, April). Social media metrics: Practices of measuring brand equity and reputation in online social collectives. Proceedings of the 6th International Conference Thought Leaders in Brand Management, Lugano, Switzerland.
- Mayer, J., & Stern, R. (2011). A resource for newsrooms: Identifying and measuring audience engagement efforts. Reynolds Journalism Institute. Retrieved August 2, 2013, from: <http://www.rjionline.org/sites/default/files/theengagementmetric-fullreport-spring2011.pdf>
- Michelle, C., Davis, C.H., & Vladica, F. (2012). Understanding variation in audience engagement and response: An application of the composite model to receptions of Avatar. *The Communication Review*, 15(2), 106-143.
- Ministry of Foreign Affairs of Denmark (2005). Monitoring and indicators of communication for development. Retrieved August 2, 2013, from: [http://webzone.k3.mah.se/projects/comdev/\\_comdev\\_PDF\\_doc/Danida\\_ComDevt.pdf](http://webzone.k3.mah.se/projects/comdev/_comdev_PDF_doc/Danida_ComDevt.pdf)
- Murphy, D. & Balka, E., Poureslami, I., Leung, D.E., & Nicol, A., Cruz, T. (2007). Communicating health information: The community engagement model of video production. *Canadian Journal of Communication*, 32, 383-400.
- Napoli, P.M. (2011). *Audience evolution: New technologies and the transformation of media audiences*. New York: Columbia University Press.
- Neiger, B.L., Thackeray, R., Burton, S.H., Giraud-Carrier, C.G., & Fagen, M.C. (2013). Evaluating social media's capacity to develop engaged audiences in health promotion settings: Use of Twitter metrics as a case study. *Health Promotion Practice*, 14, 157-162.
- Nisbet, M.C. (2007). Introduction: Understanding the social impact of a documentary film. In Hirsch, K., Documentaries on a mission: How nonprofits are making movies for public engagement. Retrieved November 24, 2013, from: [http://www.cmsimpact.org/sites/default/files/docs\\_on\\_a\\_mission.pdf](http://www.cmsimpact.org/sites/default/files/docs_on_a_mission.pdf)
- Nolan, K. & Setrakian, L. (2013). Seeking the single-subject news model. A report from the Two Center for Digital Journalism at Columbia University. Retrieved December 31, 2013.
- O'Brien, H.L., & MacLean, K.E. (2009). Measuring the user engagement process. Paper presented at the Digital Life New World Conference, Boston, MA.
- O'Brien, H.L., & Toms, E.G. (2008). What is user engagement? A conceptual framework for defining user engagement with technology. *Journal of the American Society for Information Science and Technology*, 59(6), 938-955.
- O'Brien, H.L., & Toms, E.G. (2010). The development and evaluation of a survey to measure user engagement. *Journal of the American Academy for Information Science and Technology*, 61(1), 50-69.
- Pagani, M. & Mirabello, A. (2011-2012). The influence of personal and social-interactive engagement in social TV Web sites.



*International Journal of Electronic Commerce*, 16(2), 41-67.

- Paine, K.D. (2009). Goodbye, eyeballs. Hello, engagement. *Communication World*, May-June, pp. 21-24.
- Peterson, E.T., & Carrabis, J. (2008). Measuring the immeasurable: Visitor engagement. *Web Analytics Demystified*. Retrieved August 2, 2013, from: [http://www.webanalyticsdemystified.com/downloads/Web\\_Analytics\\_Demystified\\_and\\_Next-Stage\\_Global\\_-\\_Measuring\\_the\\_Immeasurable\\_-\\_Visitor\\_Engagement.pdf](http://www.webanalyticsdemystified.com/downloads/Web_Analytics_Demystified_and_Next-Stage_Global_-_Measuring_the_Immeasurable_-_Visitor_Engagement.pdf)
- Pew Research Center (2013). The role of news on Facebook: Common, yet incidental. Retrieved December 5, 2013, from: [http://www.journalism.org/files/2013/10/facebook\\_news\\_10-24-2013.pdf](http://www.journalism.org/files/2013/10/facebook_news_10-24-2013.pdf)
- Pilhofer, A. (2012, July 25). Finding the right metric for news. Retrieved August 2, 2013, from: <http://aronpilhofer.com/post/27993980039/the-right-metric-for-news>
- Pop, I. (2008). Web metrics for digital influence measurement. Retrieved August 2, 2013, from: <http://www.wseas.us/e-library/conferences/2008/spain/diweb-miv/diweb-miv28.pdf>
- Rappaport, S.D. (Ed.) (in press). *The digital metrics field guide: The definitive reference for advertisers, marketers, media brands and researchers*. New York: Advertising Research Foundation.
- Reeves, M. (2002, April 1). Measuring the economic and social impact of the arts: A review. <http://www.artscouncil.org.uk/media/uploads/documents/publications/340.pdf>
- Rezab, J. (2012). What are the most important social marketing metrics? Retrieved August 2, 2013, from: <http://www.socialbakers.com/blog/600-what-are-the-most-important-social-marketing-metrics>
- Richardson, B. (2011, December 1). Measuring community engagement: A case study from Chicago Public Media. Reynolds Journalism Institute. Retrieved August 18, 2013, from: <http://www.rjionline.org/blog/measuring-community-engagement-case-study-chicago-public-media>
- Roy, S. (2011). Overview report: Measuring media development. Report prepared for Internews, Media Map and the World Bank Institute.
- Schaffer, J., & Polgreen, E. (2012, May 30). Engaging audiences: Measuring interactions, engagement and conversations. Retrieved August 2, 2013, from: [http://www.j-lab.org/uploads/publications/engaging-audiences/EngagementReport\\_web.pdf](http://www.j-lab.org/uploads/publications/engaging-audiences/EngagementReport_web.pdf)
- Search, J. (2011). Beyond the box office: New documentary valuations. Channel 4 BRITDOC Foundation. Retrieved June 22, 2013, from: [http://www.documentary.org/images/news/2011/AnInconvenientTruth\\_BeyondTheBoxOffice.pdf](http://www.documentary.org/images/news/2011/AnInconvenientTruth_BeyondTheBoxOffice.pdf)
- Servaes, J., Polk, E., Shi, S., Reilly, D., & Yakupitijage (2012). Towards a framework of sustainability indicators for "communication for development and social change" projects. *International Communication Gazette*, 74, 99-123.
- Sharan, M., & Valente, T.W. (2002). Spousal communication and family planning adoption: Effects of a radio drama serial in Nepal. *International Family Planning and Perspectives*, 28(1), 16-25.
- Smith, A. (2013). Civic engagement in the digital age. Pew Research Center. Retrieved August 2, 2013, from: <http://pewinternet.org/Reports/2013/Civic-Engagement.aspx>
- Song, S. (2013, July 14). Proto-analysis of *Boston Globe* traffic on Facebook. Sonya's thoughts on news and tech (blog). Retrieved November 30, 2013, from: <http://sonya2song.blogspot.com/>
- Sprott, D., Czellar, S., & Spangenberg, E. (2009). The importance of a general measure of brand engagement and market behavior: Development and validation of a scale. *Journal of Marketing Research*, 46, 92-104.
- Stray, J. (2012, August 17). Metrics, metrics everywhere: How do we measure the impact of journalism? *Nieman Journalism*

- Lab*. Retrieved August 22, 2013, from: <http://www.niemanlab.org/2012/08/metrics-metrics-everywhere-how-do-we-measure-the-impact-of-journalism/>
- Tofel, R.J. (2013). Non-profit journalism: Issues around impact. Retrieved August 2, 2013, from: [http://s3.amazonaws.com/propublica/assets/about/LFA\\_ProPublica-white-paper\\_2.1.pdf](http://s3.amazonaws.com/propublica/assets/about/LFA_ProPublica-white-paper_2.1.pdf)
- Ulken, E. (2009). Measuring user engagement: Lessons from *BusinessWeek*. *Online Journalism Review*, Retrieved August 2, 2013, from: <http://www.ojr.org/p1696/>
- Vaughan, P.W., & Rogers, E.M. (2000). A staged model of communication effects: Evidence from an entertainment-education radio soap opera in Tanzania. *Journal of Health Communication*, 5, 203-227.
- Vivek, S.D. Beatty, S.E., & Morgan, R.M. (2012). Customer engagement: Exploring customer relationships beyond purchase. *Journal of Marketing Theory and Practice*, 20(2), 127-145.
- Vu, H.T. (in press). The online audience as gatekeeper: The influence of reader metrics on news editorial selection. *Journalism*.
- Wang, A. (2006). Advertising engagement: A driver of message involvement on message effects. *Journal of Advertising Research*, 46(4), 355-368.
- Ward, N. (2012, October 17). Un-juking the stats: Measuring journalism's impact on society. Retrieved August 22, 2013, from: <http://www.infomart.com/2012/10/17/un-juking-the-stats-measuring-journalisms-impact-on-society/>
- Whiteman, D. (2004). Out of the theaters and into the streets: A coalition model of the political impact of documentary film and video. *Political Communication*, 21, 51-69.
- Zuckerman, E. (2011, June 30). Metrics for civic impacts of journalism. Retrieved August 3, 2013, from: <http://www.ethanzuckerman.com/blog/2011/06/30/metrics-for-civic-impacts-of-journalism/>



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