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To cite this article: Claudia Kozman (2017) Measuring Issue-specific and Generic Frames in the Media's Coverage of the Steroids Issue in Baseball, *Journalism Practice*, 11:6, 777-797, DOI: [10.1080/17512786.2016.1190660](https://doi.org/10.1080/17512786.2016.1190660)

To link to this article: <http://dx.doi.org/10.1080/17512786.2016.1190660>



Published online: 10 Jun 2016.



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MEASURING ISSUE-SPECIFIC AND GENERIC FRAMES IN THE MEDIA'S COVERAGE OF THE STEROIDS ISSUE IN BASEBALL

Claudia Kozman

This study explored frames in the coverage of the steroids issue in baseball through a content analysis of traditional and new media. Using issue-specific and generic frames, it proposed a hybrid measurement tool that combines both approaches. Findings of the principal component analysis indicate the media framed the steroids issue primarily in terms of conflict and policy. Significant differences emerged between traditional and new media, on the one hand, and between the news and sports media, on the other. Besides these frames, the media also presented the steroids story as a public opinion and morality issue, using organizational officials, the public, and the media to convey these frames.

KEYWORDS baseball; content analysis; framing; new media; steroids; traditional media

Introduction

Performance-enhancing drugs have been around various professional sports for a long time, but particular focus has been directed only toward specific sports, among which is baseball. Throughout its decades-long history in Major League Baseball (MLB), the issue of steroids use has never gained as much notoriety as in the beginning of the twenty-first century, when former Most Valuable Player in the National League Ken Caminiti admitted to using steroids and claimed in a 2002 *Sports Illustrated* cover story that half of all professional baseball players used them. A year later, leaked court documents pointed to alleged steroids use by one of the league's most prominent baseball players, Barry Bonds. Federal investigations of steroids use by professional athletes connected to the Bay Area Laboratory Co-Operative (BALCO) came shortly after a baseball player died of then-legal steroids supplement, ephedra. Although the ephedrine Baltimore Orioles' Steve Bechler had been taking was for weight loss, it nevertheless attracted attention to the harmful effects supplements caused. These investigations, combined with published grand jury testimonies of Bonds in the *San Francisco Chronicle*, drew the attention of not only the media but also the authorities. Governmental involvement was prominent through congressional hearings in which several star baseball players testified, and when two US presidents—George W. Bush and Barack Obama—drew the public and media's attention about the dangers of steroids use in their official speeches.

Using framing analysis as its theoretical structure, this study examines how traditional and new media covered the steroids issue in MLB in a 10-year span that covers events between 2005 and 2014. For purposes of this study, the steroids issue refers to the use

Journalism Practice, 2017

Vol. 11, No. 6, 777–797, <http://dx.doi.org/10.1080/17512786.2016.1190660>

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of steroids in baseball. Due to similar organizational constraints, economic pressures, and audience satisfaction, traditional media might adopt certain frames, which we could expect to be different from those emerging from bloggers who are not subject to the same elements that influence journalists' construction of meaning through frames. Similarly, the news media might have different news production priorities they do not share with the sports media. In another alternative, lack of diversity in the media's framing of the issue would present to the public a homogeneous agenda that has the ability to define the boundaries within which individuals think about steroids use in baseball.

Although decades of research have made framing the fastest growing theory in the field (Weaver 2007), there is still much vagueness that engulfs it due to the many theoretical and methodological approaches that have been applied to the study of framing, leading to inconsistencies in the conceptualization of media frames (Scheufele and Tewksbury 2007). This study attempts to unify major conceptual approaches that can provide framing with a reliable base that is both measurable and replicable by drawing on Matthes and Kohring's (2008) conceptualization of a frame as a cluster of framing elements and Semetko and Valkenburg's (2000) study of generic frames. Using these two approaches as a theoretical basis, this study proposes to measure frames by combining issue-specific and generic framing measurement tools in an improved model.

The value in examining the particular case of steroids in MLB is its ability to shed light on the media's treatment of a sports problem that transcended the entertaining nature of sports to become an important policy issue due to the dangers it poses on the health of users and its violations of the sacred values of fairness and integrity that sports are built on.

Conceptual Framework

Framing Theory: Origins and Frame Types

The frames individuals employ to understand information came to the attention of academics in the early to mid-1970s, with the work of Goffman (1974) in sociology and Tversky and Kahneman (1974) in behavioral economics. Since Goffman's (1974) in-depth study of framing analysis from a sociological perspective, this theoretical structure became a focal interest of various academic fields. In one of the earlier uses in economy, for instance, frames were understood through the concept of prospect theory, which showed how subtle word changes trigger individuals to make different decisions (Kahneman and Tversky 1979). In the communication field, scholars gravitated to framing relying on Goffman's (1974) analysis as the conceptual basis for the study of frames in the media. Interest in studying frames made framing the fastest growing theory in the field (Weaver 2007), and one of the two most used theories in mass communication research communication journals between 1956 and 2000 (Bryant and Miron 2004). Although research studies have been abundant, scholars are still inconclusive about what frames or framing means (Entman, Matthes, and Pellicano 2009). The reason, Weaver (2007, 144) suggests, could be the "ambiguity" and "comprehensive nature" of the term *framing*. With roots in sociology, psychology, and communication, frames and framing have been used loosely, with different definitions leading to different results that have only the word "framing" in common (Reese 2007). Precisely, one problem constantly associated with framing research has been the inconsistencies in the conceptualization of media frames (Scheufele and Tewksbury 2007). Despite the methodological issues

that have characterized it in its earlier days, framing has nevertheless become an all-encompassing theoretical paradigm that can be examined through various inductive and deductive approaches (D'Angelo 2002; Entman 1993).

Issue-specific frames. In the deductive area, Matthes and Kohring's (2008) novel methodological approach offered a conceptualization of frames as clusters of frame elements relying on Entman's definition of framing. According to Entman,

to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described. (Entman 1993, 52)

This definition, Entman, Matthes, and Pellicano (2009) contend, tells us what frames do. Functional specifications allow researchers "to draw clearer measurements and inferences that distinguish framing from themes, arguments, assertions, and other under-theorized concepts" (176).

Matthes and Kohring (2008, 263) understood a frame as "a certain pattern in a given text that is composed of several elements," where elements are framing devices that refer to previously set components and not the simple appearance of words. Using Entman's (1993) definition, they identified frame clusters with the existence of four elements: problem definition, causal interpretation, moral evaluation, and treatment recommendation. Applying this conceptualization to the study of biotechnology in the media, they focused on issue-specific frames that provide details about the issue at hand. Andsager (2000) also used Entman's definition, measuring frames through a concept map that relied on the frequency and co-occurrence of specific words. Miller and Riechert (2001) and Miller, Andsager, and Riechert (1998), in turn, used a similar concept by highlighting different frame terms and then identifying the larger frames through a process they called "frame mapping." Tankard (2001, 101) also advocated the idea of frame elements, calling them the "list of frames approach," where he and his colleagues conceptualized "several focal points for identifying frames."

Generic frames. While issue-specific frames allow for "great specificity and detail," generic frames offer a systematic platform for comparison across issues, frames, and topics (de Vreese, Peter, and Semetko 2001, 108). Using generic framing themes, Semetko and Valkenburg (2000) measured five frames that have been prevalent in literature: conflict, attribution of responsibility, economic, human interest, and morality. Research shows these frames have been dominant in news stories, either occurring simultaneously (Neuman, Just, and Crigler 1992; Semetko and Valkenburg 2000) or separately (Hertog and McLeod 2001; Lawrence 2010; Miller and Riechert 2001; Shah, Domke, and Wackman 2001). Similarly, de Vreese, Peter, and Semetko (2001) used established frames to examine media coverage of the euro in European countries, although they only focus on the conflict and economic consequences frame. Yet another study that relied on known generic frames is Nisbet, Broussard, and Kroepsch's (2003) research on media coverage of stem cell research. In their content analysis, they use previously defined framing categories, which they call framing devices, to produce a generic framing typology that is applicable to science only, thus it is both generic and issue-specific (Nisbet, Broussard, and Kroepsch 2003). The most dominant frames were generic ones that have dominated general news: conflict,

ethics/morality, in addition to two more issue-specific frames, policy background and scientific background (Nisbet, Broussard, and Kroepsch 2003).

Semetko and Valkenburg (2000) borrowed their frame categories from Neuman, Just, and Crigler (1992), who devised a multi-method research design to identify the frames. Although they found both the media and the public used these generic frames to discuss the issues, the media's stories were different in that they were "antiseptic," cleansed of all morality and empathy, and focusing instead on the 5Ws of journalism (Neuman, Just, and Crigler 1992, 76).

Among the common generic frames, the conflict frame has dominated most studies. Miller and Riechert (2001) contended that conflicts and social collisions are natural in society and quickly get on the news agenda. Hertog and McLeod (2001) also saw conflict as the major concept in most frames. Another type of framing that is identical to the conflict frame is game-framing or horserace coverage that is prevalent in domestic policy and campaign news (Lawrence 2010).

Besides conflict frames, the morality frame is also important. Research on value framing (Brewer 2003; Shah, Domke, and Wackman 2001) has stressed how values in media frames affect the public's perception of an issue. Shah, Domke, and Wackman (2001) asserted that politicians use ethical values to promote their issue frames, whereas the media rely on material values in their framing of these same topics. Both parts of value framing resonate with Neuman, Just, and Crigler's (1992) moral (ethical) and economic consequences (material) frames.

From a methodological standpoint, both Semetko and Valkenburg (2000) and Matthes and Kohring's (2008) conceptualization of framing elements that cluster together to form a dominant frame is a useful approach that takes the subjectivity out of framing, as coders are not aware of the type of frame they are looking for, and are instead coding the small, manifest elements to later extract the latent frame (Van Gorp 2010).

Re-conceptualizing Media Frame Analysis: A Hybrid Approach

The hundreds of studies that have tackled frame analysis as a theory have diverged more often than not. While each group of scholars highlights the importance of its approach, few studies have attempted to combine both. The usefulness of a combined framework is simple as the two types of frames serve different purposes. Although they seem to overlap at times, their main functions are separate. Whereas issue-specific frames reveal what aspects of an issue were selected and what were left out, generic frames tell us more about the way the media package any issue. That is, the former are functional descriptions of an issue (Entman, Matthes, and Pellucano 2009), while the latter are the outer packaging.

Nisbet and Huye (2006, 11) put it best when they stressed that "frames ... should not be confused with specific policy positions. Individuals can disagree on an issue but share the same interpretative frame." An ethics/morality frame, they contend, is an interpretive one that places the issue in terms of moral tenets, without pointing to any one direction (Nisbet and Huye 2006). In the same vein, this study argues that generic frames take more of an interpretive, packaging role that could work in tandem with any issue-specific frame, without taking a stance or defining the problem at hand. Perhaps the most suitable way to look at it is that these are two framing approaches that reveal two different *functions* of a media text. Where one analyzes how a specific issue has been presented to the public

by *selection* and *salience* (Matthes and Kohring 2008), the other focuses on the journalistic values that characterize all media texts (Semetko and Valkenburg 2000).

The proposed hybrid approach would expand Entman's questions as conceptualized by Matthes and Kohring (2008) to include Semetko and Valkenburg's (2000) measurement of generic frames. The result is still the idea of a frame as a cluster of framing elements, but it would now include additional elements.

The rationale behind this approach draws from studies indicating that even issue-specific frames have the ability to transfer from one issue to another similar one. Nisbet (2010) indicates scholars tend to "reinvent the wheel" in each study instead of relying on a previous "generalizable typology" that they could apply to a new issue. Thus, the ultimate goal is to create a generalizable framing typology of sport issues that carries across different topics and issues in sports, but also applies to any area of communication studies. Additionally, it builds on previously established conceptualizations of framing theory, instead of creating a new and untested definition. It also allows for replication because it uses clear and definite measures of frames that are tested using a systematic content analysis method.

Although Boydston and Glazier (2013) did create a combined framing approach, this study differs from theirs in that (1) the approaches are based on one of the most prominent *functional* definitions of framing (Entman 1993), (2) although issue-specific, these approaches could be applied to any other topic area should one wish to develop an issue-specific coding scheme as in Matthes and Kohring (2008), (3) they involve news values to understand the packaging of generic frames, and (4) they are latent variables to extract the larger issue-specific frames.

The first research question examines the frames of the combined approach:

RQ1: What types of frame did the combined measurement extract?

Framing Research in Sports

Research in sports and communication has also used framing in a variety of manners. A considerable number of studies have used framing in its generic sense—mostly meaning packaging or representing—to complement another theory they are investigating (e.g. Byrd and Utsler 2007; MacKay and Dallaire 2009; Mastro, Blecha, and Atwell Seate 2011; Sanderson 2008b).

Among the studies that rely primarily on framing are those that have used it in relation to identity, specifically gender (e.g. Antunovic and Hardin 2013; Huffman, Tuggle, and Rosengard 2004; Kian and Clavio 2011), race, nationalism, aging, disability, and alcohol and drug use (e.g. Angelini, Billings, and MacArthur 2012; Eagleman 2011; Kerr 2014; Ličen and Billings 2012; Lewis and Proffitt 2012).

One rare study that has used previous conceptualizations of framing theory as they relate to generic frames is Quick's (2010) use of the health belief model to guide his analysis of broadcast media's coverage of steroids in sports. Among the different frames the study identified, the most common were barriers to steroids use, which predominantly focused on the illegality of using steroids, as opposed to the economic, health, or political consequences (Quick 2010). Lee, Kim, and Love's (2014) content analysis also used the concept of generic frames, mainly episodic and thematic frames, to reveal how the print media framed the Gay Games in a thematic manner (Lee, Kim, and Love 2014).

Aside from studying traditional media, sports scholars have been particularly interested in understanding new media, which include blogs and various social media. This interest is largely due to the recent “seismic shifts” that new media have brought upon the sport communication field (Clavio 2010, 393). Starting in the late 1990s, the sports media witnessed a setback in their monopoly of sport information as teams began communicating directly with their fans, sidestepping the role played traditionally by mainstream media (Boyle and Haynes 2004). Research on blogs in sport communication has focused on gender stereotypes (Antunovic and Hardin 2013), sexualized images of athletes in popular blogs (Clavio and Eagleman 2011), athletes’ self-presentation on blogs (Sanderson 2008b), as well as fan interaction with blogs (Kassing and Sanderson 2009; Kwak, Kim, and Zimmerman 2010; Sanderson 2008a).

Studying blogs alongside mainstream media is essential to our understanding of the sports media landscape. As blogs increasingly become a source of news for the fans, assessing the frames they use in contrast to those in traditional media allows us to gain insight into the daily practices of citizen journalists. The following research questions examine the differences in frames in the various media:

RQ2: Is there a difference in the types of frame used between traditional and new media?

RQ3: Is there a difference in the types of frame used between the news and sports media?

Method

This study is a content analysis of traditional and new media in elite outlets and popular sports blogs. The decision to sample elite media and popular blogs is a parsimonious approach and is based on the concept of the homogeneity in the news agenda of media (Moon 2008). Research shows elite media have the ability to set the agenda of others as a result of standard routines and journalistic norms (Dearing and Rogers 1996; McCombs 2004; Moon 2008; Reese and Danielian 1989).

Traditional Media

The traditional media sample consists of traditional news media (print and broadcast) and sports media (online versions of traditional networks). For purposes of this study, the term “traditional” refers to an established media organization, and not platform of delivery (traditional platforms of print/broadcast or digital-only platforms). As they are based on existing traditional media, the online versions of sports media are part of the traditional media sample. Since in the age of media convergence digital editions of print and broadcast media are built on the traditional versions and enhanced for online use (Singer 2003), studies have opted for using either the print or online format (Meraz 2011a, 2011b).

Print media. The print media sample includes *The New York Times*, *The Washington Post*, and the *San Francisco Chronicle*, which have been consistently ranked among the top American newspapers in recent history (Alliance for Audited Media 2005, 2013). *The New York Times* and *The Washington Post* are elite media that function as agenda setters and representatives of other media (Danielian and Reese 1989; Weaver, McCombs, and

Shaw 2004), and have been used in a plethora of communication studies (e.g. Dearing and Rogers 1996; Denham 2012; Haigh 2008; Kian and Hardin 2009; Lee and Choi 2009; Lewis and Proffitt 2012; Mastro, Blecha, and Seate 2011; McCollough 2006; McCombs and Shaw 1972; Moon 2008; Schiffer 2006; Seltzer and Mitrook 2009). The *San Francisco Chronicle* played a major role in uncovering the steroids issue in the time frame considered in this study, and has been sampled in mass communication and sports studies (e.g. Cooky, Dycus, and Dworkin 2013; Denham 2004; Haigh 2008; Lee, Kim, and Love 2014).

Broadcast media. The broadcast media sample consists of transcripts from the two American national networks, CBS and NBC. ABC was excluded because it shares the same sports department and content with *ESPN*. These broadcast media are the only national networks in the United States and are thus included to offer a view of how networks report on this issue (Behr and Iyengar 1985; Ha 2011; McCombs and Shaw 1972; McCollough 2006; Moon 2008; Quick 2010; Schiffer 2006).

Sports media. The sports media sample initially included the Web portals of *ESPN* (*ESPN.com*), *Sports Illustrated* (*SI.com*), and *Fox Sports* (*Foxsports.com*). The popularity of *ESPN*, *Fox Sports*, and *Sports Illustrated* as leading media devoted entirely to sports was the main reason for their selection in this study. Their success as traditional media outlets is also reflected in their websites, which were consistently ranked among the top 10 US internet sport sites according to ComScore Network (as cited in Kian and Clavio 2011; Kian and Hardin 2009). The most popular site for the majority of the time period in this study, *Yahoo! Sports*, was not chosen because it does not belong to a traditional news media organization like the others do.

ESPN.com has been sampled in a variety of sport communication studies (e.g. Butterworth 2013; Kian and Clavio 2011; Kian and Hardin 2009; Lee and Choi 2009; Lewis and Proffitt 2012; McCollough 2006; Whiteside, Yu, and Hardin 2012). *Sports Illustrated* has also been sampled in both its print magazine format (Byrd and Utsler 2007; Denham 1997, 2004; Eagleman 2011; Haigh 2008; Nakamura 2005) and online format, *SI.com* (Kian and Clavio 2011; McCollough 2006). *Foxsports.com* was discarded because it yielded only a few articles, as the website did not retrieve material from previous years. Including it would have resulted in a methodological error since the other websites covered the entire period under study, barring the author from rationalizing using only recent history from *Foxsports.com*.

New Media

The new media sample in this study consists of stand-alone sports blogs that are not based on traditional media: *Deadspin*, *The Big Lead*, and *SB Nation*. *Deadspin* and the *Big Lead* have been used in sports communication studies as two of the top-ranking sports blogs (Clavio and Eagleman 2011; Lisee and McDonald 2012; Whiteside, Yu, and Hardin 2012). *SB Nation* is one of the most popular Web portals for sports, sitting among the top sports blogs in Technorati's ranking in 2013, before it folded. Technorati, which ranked blogs according to their popularity and authority in the blogosphere, has been used in various mass communication studies (e.g. Leccese 2009; Meraz 2011a, 2011b).

Time Frame

The time frame for this study is between March 1, 2005 (the first congressional hearings) and November 6, 2014 (a day after the *Miami Herald* reported Alex Rodriguez's Drug Enforcement Agency confession).

Data Retrieval

Data for print and broadcast media came from the LexisNexis Academic Database, with the exception of the *San Francisco Chronicle* whose data were obtained from the News-Bank Access World News database. Data for all online media came from their Web pages.

The initial search yielded a total of 5379 stories. A systematic random sampling procedure of every seventh article/post was used to reduce the population to a representative sample at a 95 percent confidence level and 3.5 margin of error. For LexisNexis and News-Bank, the search terms were "steroids" and "baseball" within the time frame of the study. As for new media, consistent with previous studies of blogs (Meraz 2011b; Schiffer 2006; Whiteside, Yu, and Hardin 2012), the search box in each online media outlet was used to retrieve news articles and blog posts using the term only "steroids" since the majority of the websites have basic search functions that do not allow specifying date or word combinations. After compiling an initial list of articles, the next step was to check if they fit the study criteria (about baseball, and within the time frame). After discarding irrelevant articles, the final number of stories was 477. Irrelevant articles included stories that were not related to the topic (e.g. a story about steroids use in cycling that mentions MLB), letters to the editor, book reviews, and so forth.

Unit of Analysis

The unit of analysis was the news story in traditional media, and blog post with a written text, and not an image/video alone.

Coding Categories

Each story/post was coded for: media outlet, story date, byline (staff, wire, mixed, etc.), section/desk (sports, news, etc.), story length, and issue-specific and generic frames.

Framing Variables

Issue-specific frames. The issue-specific framing elements are adapted from Matthes and Kohring's (2008) study on biotechnology and consist of: problem definition, causal interpretation, moral evaluation, and treatment recommendation. As the first of its kind, this study had no codebook to use for issue-specific variables. It, therefore, operationalized common framing elements based on an informal, inductive examination of relevant news stories, as well as relying on previous content analyses of issue-specific frames in politics. This is deemed an appropriate method to formulate framing elements in the absence of established research (Nisbet, Broussard, and Kroepsch 2003). In this study, problem definition consisted of topics and actors. Topic choices were: medical, economic, policy, morality, effects, and public opinion. Actors were those in: government, sports, science,

business, the public, and media. The causal interpretation element consisted of actors who were deemed either responsible for the cause, the solution, risks, and benefits of the steroids issue (Matthes and Kohring 2008). Causal actor variables were the same as those of actors. Moral evaluation variables consisted of the risk and benefits of the issue since these variables provided direct moral evaluations (Matthes and Kohring 2008). Risk variables were health, moral, and economic, and benefit variables were health, economic, and fan enjoyment. The fourth framing element, treatment recommendation, consisted of three variables: recommendation for policy against steroids use, policy for league-regulated steroids use, and recommendation for personal players' freedom to make their own choices.

Generic frames. To measure generic frames, a series of 15 questions are devised, the answer to which is coded either as yes or no (Semetko and Valkenburg 2000). These questions attempt to measure one of the five frames: conflict, responsibility, human interest, morality, and economic consequences (Appendix A). Examples of questions are: Does the story refer to winners and losers? (conflict); Does the story attribute responsibility for its cause to a group? (responsibility); Does the story bring a human face to the event? (human interest); Does the story contain any moral message? (morality); Does the story mention the costs or expenses of the issue? (economic consequences).

Intercoder Reliability

To establish intercoder reliability, three coders—two university graduates and the author—were trained to code 50 articles (10 percent of the study). The sample was drawn using stratified systematic sampling where all 10 media were included. After two training sessions and pilot coding, the coders worked on the sample independently. Krippendorff's α -agreement, a reliability measurement that corrects for chance agreement (Hayes and Krippendorff 2007), yielded a mean of 0.908, with values ranging from 0.79 to 1.0 for all 44 variables. After establishing intercoder reliability, the study sample was split evenly among the three coders who proceeded with the coding.

Findings

The sample in this study ($N = 477$) mainly consisted of traditional media articles (85.7 percent, $N = 409$), led by *ESPN* (29.6 percent, $N = 141$) and *The New York Times* (19.5 percent, $N = 93$), ahead of the *San Francisco Chronicle* (11.7 percent, $N = 56$), *Sports Illustrated* (10.7 percent, $N = 51$), *The Washington Post* (8.4 percent, $N = 40$), CBS (3.6 percent, $N = 17$), and NBC (2.3 percent, $N = 11$). As for the blogs, the majority of the stories came from *Deadspin* (9 percent, $N = 43$), followed by *SB Nation* (2.7 percent, $N = 13$), and *The Big Lead* (2.5 percent, $N = 12$).

The stories in the sample came primarily from the sports departments/sections (88.5 percent, $N = 422$), whereas the news department contributed 8.6 percent ($N = 41$) to the sample. A small percentage (2.9 percent, $N = 14$) of the stories belonged to other departments, such as the editorial desk, business desk, and week-in-review desk, among others.

The average length of the stories, measured in number of words, was 752.3 ($SD = 555.9$). Story length varied from 39 words to 3635 words per story.

RQ1

RQ1 examined the types of frames the combined measurement tool yielded. To extract latent frames, the author performed a principal components analysis using varimax rotation on the 40 framing variables (Semetko and Valkenburg 2000). Principal components analysis is a data reduction method that is most useful for decreasing the number of questions that measure similar concepts (Jolliffe 2002; Lee, Huang, and Hu 2010). After discarding problematic variables that either did not meet the basic assumptions of a principal components analysis or did not provide useful components, the resulting analysis retained 28 variables and yielded nine components (Table 1). The largest of these frames is "Economic prospects", followed by "Policy", "Morality", "Causal conflict", "Public opinion", "Scientific-medical", "Human interest", "Business" and "Media". Similar to Semetko and Valkenburg (2000), each component represented the mean of the factors making up the individual construct. This means that the range of values any one of these three variables could take was between 0 (no frame) and 1 (frame present). As Table 1 shows, the naming of the frames is based on the individual framing elements that make them up. For example, the "Economic prospects" frame included four elements that focused on the economic side of the issue, such as economic consequences of steroids use, discussing steroids use as an economic topic, and so forth. The "Causal conflict" frame, for instance, consisted of frames that conveyed disagreements between sides and disapproval of the issue, as well as blaming individuals or groups for causing conflict, hence the name "Causal conflict."

RQ2

RQ2 examined the differences between traditional and new media. To measure how the combined tool fared, the author used the Mann–Whitney *U*-test instead of a MANOVA since the assumption of the homogeneity of variance and covariance were violated. Results in Table 2 indicated media type—whether traditional or new media—had a significant effect on the policy frame, causal conflict frame, public opinion frame, and business frame.

RQ3

As for the differences between the news and sports media, results of the Mann–Whitney *U*-test (Table 3) indicate media type—whether the news or sports media—had a significant effect on the policy frame, causal conflict frame, morality frame, and business frame.

Discussion

This study sought to examine how the media framed the issue of steroids in baseball by content analyzing a sample of traditional print and broadcast media, online sports media, and sports blogs. During the 10-year period under study, traditional media dominated the conversation about steroids use with an extensive coverage of the different events that framed the issue for both the public and polity. While established sports media covered the story in its entirety, the news media also contributed. The importance of the issue was mainly reflected in the frames the media used to discuss steroids use in baseball. Besides discussing economic consequences, policy issues, and the conflict they

TABLE 1

Principal component analysis using varimax rotation for 28 framing variables

	Economic prospects	Morality	Policy	Causal conflict	Public opinion	Scientific-medical	Business	Media	Human interest
ECONOMIC: Consequences	0.930								
ECONOMIC: Loss/gains	0.902								
RISK: Economic	0.811								
TOPIC: Economics	0.632								
MORALITY: Morality reference		0.775							
RISK: Moral		0.765							
TOPIC: Morality		0.720							
MORALITY: Moral message		0.582							
MORALITY: How to behave		0.462							
CAUSAL: Politics			0.932						
ACTORS: Politics			0.918						
TOPIC: Policy			0.675						
CONFLICT: Disagree				0.880					
CONFLICT: Disapprove				0.872					
RESPONSIBILITY: Cause				0.620					
ACTORS: Public Opinion					0.831				
TOPIC: Public Opinion					0.801				
CAUSAL: Public Opinion					0.717				
CAUSAL: Science						0.807			
ACTORS: Science						0.788			
TOPIC: Medical						0.622			
BENEFIT: Health						0.546			
ACTORS: Business							0.924		
CAUSAL: Business							0.920		
ACTORS: Media								0.888	
CAUSAL: Media								0.864	
HUMAN: Human face									0.769
HUMAN: Sympathy									0.743

The blank cells represent factor loadings that are below 0.3, and which were suppressed during the analysis run.

TABLE 2

Mean scores of new measurement frames in traditional media and blogs with Mann–Whitney *U*-tests

	Traditional media Mean (SD)	Blogs Mean (SD)	Total Mean (SD)
Causal conflict	0.8655 (0.273)*	0.7451 (0.373)*	0.8484 (0.292)
Policy	0.6243 (0.418)***	0.2108 (0.320)***	0.5653 (0.430)
Business	0.3924 (0.459)***	0.1471 (0.312)***	0.3574 (0.449)
Media	0.3289 (0.417)	0.1647 (0.328)	0.3197 (0.406)
Public opinion	0.2217 (0.323)**	0.1078 (0.240)**	0.2055 (0.315)
Morality	0.1741 (0.237)	0.1882 (0.260)	0.1761 (0.240)
Scientific-medical	0.1388 (0.239)	0.1066 (0.229)	0.1342 (0.237)
Human interest	0.1149 (0.264)	0.0735 (0.216)	0.1090 (0.258)
Economic prospects	0.1149 (0.265)	0.0551 (0.177)	0.1064 (0.255)

* $p < 0.01$; ** $p < 0.005$; *** $p < 0.001$.

Policy frame ($U = 6602$, $p < 0.001$).

Causal conflict frame ($U = 11,784$, $p < 0.01$).

Public opinion frame ($U = 11,316.5$, $p < 0.005$).

Business frame ($U = 10,130$, $p < 0.001$).

TABLE 3

Mean scores of new measurement frames in the news and sports media reported with Mann–Whitney *U*-tests

	News media Mean (SD)	Sports media Mean (SD)	Total Mean (SD)
Causal conflict	0.8894 (0.250)**	0.8141 (0.319)**	0.8484 (0.292)
Policy	0.6359 (0.414)***	0.5064 (0.435)***	0.5653 (0.430)
Business	0.4032 (0.453)*	0.3192 (0.443)*	0.3574 (0.449)
Media	0.2903 (0.403)	0.3442 (0.407)	0.3197 (0.406)
Public opinion	0.2258 (0.312)	0.1885 (0.318)	0.2055 (0.315)
Morality	0.1954 (0.241)	0.1600 (0.238)*	0.1761 (0.240)
Scientific-medical	0.1394 (0.239)	0.1298 (0.237)	0.1342 (0.237)
Economic prospects	0.1256 (0.275)	0.0904 (0.236)	0.1064 (0.255)
Human interest	0.1244 (0.277)	0.0962 (0.241)	0.1090 (0.258)

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.005$.

Policy frame ($U = 234,72.5$, $p < 0.005$).

Causal conflict frame ($U = 25,056$, $p < 0.01$).

Morality frame ($U = 254,64.5$, $p < 0.05$).

Business frame ($U = 25,343$, $p < 0.05$).

caused, framing the story in terms of morality, effects on the players and the game, and putting the public at the heart of the issue supports the idea that for all the media involved, steroids use in professional baseball is a significant matter for American society.

All the media outlets in this sample packaged the steroids issue in baseball as a conflict-ridden problem that held certain actors responsible for its cause or solution. This comes as no surprise considering the difficult stages the issue went through over the 10 years this study focuses on. Between congressional hearings, perjury indictments, federal investigations, MLB suspensions, Players Union (MLBPA) struggles, and parents' outcry at the steroids-induced suicides of high school players, there were always at least two sides of the story. The media made full use of the conflict frame, something that has always

ranked high on the media agenda (Hertog and McLeod 2001; Lawrence 2010; Neuman, Just, and Crigler 1992; Semetko and Valkenburg 2000).

Besides conflict, the media gave paramount attention to policy. Here, also, this frame was the second-most frequent frame across all types of media. Beyond the ranking, however, the significance of policy matters changed dramatically between traditional media and blogs. As already mentioned, the frequency of policy stories is closely related to the high number of officials the media used in their coverage. Whereas traditional media's frequent adoption of the policy frame is understood in the light of journalists' tendency to cover their beats and all its happenings, the bloggers' case was different. With neither such access to officials, nor a desire perhaps to conform to journalists' norms of newsgathering, the blogs were not as intent on using policy frames. However, the fact that they did use the policy frame as the second-most frequent frame could mean that bloggers also could not refrain from conveying the frames of dominant sources in the issue. Another explanation would be bloggers took their cues from traditional media who used policy frames consistently. Without a direct test for causality, however, the latter reasoning remains open to alternative interpretations. Tagging the issue on the sacredness of America's youth and the purity of sports, the government was able to romanticize the story, thus attracting media attention and forcing the policy agenda of the issue. This is also reflected in the public opinion frame that all media in this study used with almost identical frequency. Scientists, lawmakers, and parents put the public good at the heart of the issue, often framing steroids use as a major threat to the youth, and discussing the negative impact it has had on young players.

In addition to conflict and policy frames, the media relied on business and organizational officials as central actors with large influences. Their role mainly stems from the BALCO case—which kick-started the crackdown on steroids in sports, leading federal officials to Barry Bonds and other high-profile baseball figures—and later on pharmacies and clinics busted for illegal steroids use, such as Biogenesis, the Florida clinic tied to the New York Yankees' Alex Rodriguez. Another business-related central figure in baseball was former senator George Mitchell who was commissioned by MLB to investigate steroids use in the game as the head of his independent investigation company. After several months of work, he produced the Mitchell Report, which tied a big number of players in all 30 MLB clubs to steroids use (MLB 2007). Taken together, the BALCO case, the Mitchell Report, and the steroids clinics defined the steroids issue as business actors who were responsible for the causes and the solutions to the problem.

In covering steroids, the media also put themselves at the center of the issue, using frames that highlighted the role journalists played in defining the problem of steroids use and in presenting the media as responsible for bringing about solutions for the issue. The fact that the media frame was used more often than the morality frame or the medical frame suggests the significant role the media played in highlighting the issue. This role largely rests upon a few media outlets whose thorough investigation of steroids raised the salience of the issue on the policy agenda. The most notable of these were: the Associated Press reporter finding a bottle of the steroids precursor androstenedione in the locker of the St. Louis Cardinals' Mark McGwire in 1998; *Sports Illustrated's* articles that led to the Anabolic Steroids Control Act of 1990 (Denham 1997); the *San Francisco Chronicle* reporters' book that put the steroids issue at the forefront of sports problems; and *Sports Illustrated's* reporters accompanying federal agents from the US Drug Enforcement Agency in their raids on wide-ranging internet pharmacy pipelines in Albany and Orlando.

Another frame that emerged from the analysis is the morality frame, which received mediocre importance in the media. Highlighting the moral aspect of steroids use was not an important frame for all media in this sample. In fact, the rare times the media used morality, they did so as a simple mention of cheating and lying, which lacked the in-depth discussion that other frames received. Here, the news media were more likely to use the morality frame than sports media. The reason for this finding could be that the sports media, led by *ESPN* and *Sports Illustrated*, were more interested in the hard-hitting facts of the issue than the value frames that the news media preferred. Without previous literature to support this finding, however, the interpretation remains confined to the boundaries of this study. One plausible explanation would be sports media's proximity to those they cover. As insiders, sports journalists develop close ties with sports figures at the beat, making it awkward to pass judgment on the players by discussing the immorality of steroids use. The difficulty in achieving the perfect balance between reporting objectively about sports mishaps and sustaining a positive relationship with the sources comes from the extensive time reporters spend with teams, which inherently allows sports reporters to identify with their sources (Lowes 1998). Although sports journalists in the news media sample, such as *The New York Times*, *The Washington Post*, and the *San Francisco Chronicle*, are also part of the sports beat system, creating an antagonistic relationship with sources might not be as grave a problem for them as it might be for sports media whose entire existence depends on sports coverage. Even if the news media do make considerable revenues off their sports sections, and might therefore be reluctant to alienate their sources, they have several topic areas to cover outside of sports, and might feel less pressure to conform to the rules of the sports beats.

Blog frames in this sample lend themselves to an interesting analysis. Following the same pattern of traditional media for frame importance rank, the blogs, however, did differ in many aspects. Perhaps the most surprising one is their minimal attention to public opinion. Although blogs could be considered—borrowing from Abraham Lincoln's Gettysburg address—"of the people, by the people and for the people," they did not put much weight on the public, neither to talk about how steroids use affects the public nor to provide causal attribution to it. The expectation that bloggers should represent the people comes from their role in today's media landscape, one that aims at counteracting the monopoly of traditional media and their overreliance on elites to convey their frames. Where mainstream media lack diversity of sources, bloggers have the ability to include diverse viewpoints because they are less likely to face the organizational constraints that traditional journalists face (Carpenter 2008). Here, the blogosphere provides the public with a space where "people can express and discuss their opinions at minimal expense" (Lee 2007, 747), a luxury they are not allowed in traditional media.

The steroids issue in professional baseball presents a special, perhaps rare, occasion where mainstream media played an active role in pushing for policy against steroids use in the game. Although baseball sentimentalists whose words legitimized the steroids culture instead of condemning it did exist in the media, the fact remains that as a whole, traditional media emphasized the need for corrective policy. Through the use of their own reporters to investigate the issue, the extensive coverage they dedicated to rampant steroids use in baseball, and highlighting the negative aspects of steroids use, the media shed light on the issue, framing it as a conflict-ridden policy matter. Although blogs did contribute to the media conversation, their role remained marginal, overshadowed by established elite and sports media. Whether bloggers were able to reach the public and affect opinion

despite their narrow coverage of the issue is a study of effects beyond the scope of the current research.

Conclusion

This study attempted to understand how the media framed the issue of steroids in baseball by examining the issue-specific frames that described the problem and the generic frames that provided an overall picture that is applicable to other similar issues in the media.

Since its earlier days, the story of steroids in baseball presented to the media the rare opportunity of covering an issue that surpassed the entertaining nature of sports, crossing over to politics. With the involvement of public and private sectors, the government and businesses, politicians, sports officials, science experts, and lawyers, the issue could have spread out over different frames and actors. But it did not. Regardless of the various phases the issue went through during the 10 years in this study, the media were united in their view of the story: a conflict-ridden policy issue. Although differences emerged among the media, whether it was in the amount of attention they gave the story, or the actors they used to advance it, they nevertheless acted as a homogeneous group in framing the steroids issue.

Besides providing an understanding of how the media package issues, frames can also yield significant information about the news values that are most prominent in today's media. Conflict frames stress the problematic side of an issue, reinforcing the balance and objectivity routines that the western style of journalism thrives on. In their attempt to bring balance to the story, traditional media highlighted the conflict between the sides. While conflict does not necessarily translate into entertainment, the opinionated and at times sarcastic nature of blogging in this study used the disagreements between the different sides involved in the steroids story as a chance to humor the public with its commentary.

From a methodological perspective, the goal of this study is to propose a measurement tool of issue-specific and generic frames. By simplifying the measurement processes of the two types of frames, the unified instrument retained the individual framing elements for both issue-specific and generic frames, while eliminating overlapping elements. Using the two types of frame allows us to reach the specificity needed to understand how the media framed steroids use in baseball, and at the same time, establish a measurement scheme that can be replicated in other studies. Examining two different aspects of an issue allows for methodological standardization and replication that lead to a deeper understanding of the theory in question (DeFleur 1998). Similar to Nisbet, Broussard, and Kroepsch (2003), who combined issue-specific and generic frames to produce a framing typology that is applicable in the entire field of science, this study also proposes the unified framing instrument as a standard approach to measure frames in different sports-related stories. Apart from replications in studies about steroids in baseball, the new approach works as well in other issues in sports, provided these issues transcend the entertaining nature of sports and intersect with public affairs. In the last few years, the sports world has witnessed several significant issues that may have taken off as sports stories, but were quick to cross over to involve the various sectors of society, such as domestic violence and concussions in football.

Beyond the sport communication field, this measurement tool can be useful for studying frames in various fields that share some elements in common with the sports/health story of steroids use. Keeping the conceptual basis of the instrument intact, researchers can adapt the particularities of some of the variables to the issue at hand.

As with all research, this present study had its limitations. First is the small sample size of blogs. Sampling more blogs within the time frame of the study would be useful in order to increase the number of blog posts to match the traditional media sample. The second limitation is the extraction of frames in a principal component analysis, which does not always result in a clear decision about the number of meaningful frames needed to explain the groupings theoretically (Matthes and Kohring 2008). Lastly, the time frame this study considered focused on a 10-year period in which attention on the issue intensified with the increase of steroids-related incidents as well as baseball and the government's investigation and resulting punishments. There were, however, earlier incidents that sparked the conversation on steroids use. Future research could widen the study time frame to include the 1990s as well.

ACKNOWLEDGEMENTS

The author would like to thank *Journalism Practice's* anonymous reviewers and editors for their helpful suggestions. Also special thanks to Indiana University faculty Lesa Hatley Major (PhD, Louisiana State University), Jae Kook Lee (PhD, University of Texas), Sung-Un Yang (PhD, University of Maryland), and Galen Clavio (PhD, Indiana University), for their support, advice, and useful comments throughout the various steps of this study.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author.

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Appendix A

Generic Variables

The frames are adapted from Semetko and Valkenburg (2000):

- (1) *Conflict*: This frame reflects disagreements between two or more groups. Example: Congress threatens to subpoena players who declined to testify:
 - Are there disagreements between two or more groups (such as individuals, teams)?
 - Does the story refer to winners and losers?
 - Does one side disapprove/reproach another?
- (2) *Responsibility*: This frame presents the problem in such a way as to attribute responsibility for its cause or solution to an individual or a group. Example: MLB officials meet to discuss implementing a new drug-testing policy:
 - Does the story attribute responsibility for its cause to a group?
 - Does the story suggest a group has the solutions?
 - Does the story suggest the problem requires urgent action?
- (3) *Morality*: This frame presents the issue in terms of moral tenets. Example: A player cheating the game by using illegal steroids:
 - Does the story contain any moral message?
 - Does the story make references to morality (such as cheating)?
 - Does the story offer specific social recommendations about how to behave?
- (4) *Economic consequences*: This frame presents information in terms of economic and financial losses and gains. Example: Fines for players testing positive:
 - Does the story present the issue in terms of financial/economic losses or gains?
 - Does the story mention the costs or expenses of the issue?
 - Does the story suggest there might be economic consequences related to pursuing or not pursuing a course of action?
- (5) *Human interest*: This frame focuses on individuals or groups and how they are affected by the issue, usually putting an emotional twist to the story. Example: A player asking forgiveness from the fans, acknowledging he made mistakes.
 - Does the story bring a human face or an emotional angle to the presentation of the event?
 - Does it include vignettes/anecdotes that generate sympathy and compassion?
 - Does the story discuss the private lives of the people?