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Breaking down bias: A practical framework for the systematic evaluation of source bias

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Abstract

What is bias? A review of the library literature reveals no attempts to define the concept. Nor does it reveal systematic attempts to develop interventions that teach the identification and evaluation of bias. Current pedagogical approaches (checklists and bias charts) tend to assume a self-evident definition that categorises bias as unquestioningly bad and disqualifying. Current approaches, however, fail to recognise the cognitive complexity of decoding bias within a source. A decoding process includes identifying the type of bias, determining an objective baseline, recognising biased features, and analysing bias's impact. Based on work done from several fields—argumentation theory, media bias, media literacy, and history education—this paper proposes an operational definition of bias and a practical framework for conceptualising a process to identify and evaluate bias. This paper will explore the limitations of this framework, as well as existing source evaluation paradigms. If librarians want to prepare individuals to participate in a post-truth society, where disinformation weaponises bias by appealing to emotions and beliefs rather than facts, an inclusive and nuanced conception of bias is a necessary component of library instruction.

Keywords

bias; information literacy; pedagogy; source evaluation; US

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1. Introduction

1.1 Conventional wisdom

Biased information, as conventional wisdom tells us, is bad. As a kind of prejudice, bias implies a lack of objectivity, and a lack of objectivity implies distortion. This distortion can "introduce or raise the salience or apparent importance of certain ideas, activating schemas that encourage target audiences to think, feel, decide in a particular way" (Entman, 2007, pg. 164). The resulting epistemic uncertainty raises questions about a source's value in evidence-based argumentation or decision making. Given that, it makes sense librarians have taught students to assess information for bias. In a post-truth society, where disinformation and hyper-partisan media weaponise bias by appealing to emotions rather than facts, there is an added urgency in knowing how to evaluate a source critically. Teaching students to do this could be an opportunity for librarians (Cooke, 2017; Bonnet & Rosenbaum, 2020; Buckingham, 2019 Revez & Corujo, 2021), but whatever pedagogical interventions are designed, depend on how the profession conceptualises bias. Evaluating a source for bias is a more cognitively demanding task than most librarians teach.

1.2 What do librarians know about bias and its evaluation?

It is difficult to draw definitive conclusions about the profession's collective understanding of bias, as there is little evidence that the collective understanding of librarians is anything beyond basic knowledge. A review of the literature reveals persistent use of the term, but it does not reveal systematic attempts to define the concept in the context of any relevant scholarship. From the Association of College and Research Libraries' *Information Literacy Competency Standards* and the *Framework for Information Literacy* to studies on how students evaluate bias (McClure & Clink, 2009; Perry, 2018; Wineburg & McGrew, 2017), the meaning of bias is assumed to be self-evident. This includes the work of critical information literacy (Langin, 2021; Wittebols, 2020), though broadly concerned with how ideologies are codified in information practices and sources, it has not interrogated the concept of bias more thoroughly. Without a clear definition, conventional ones, like "prejudice in favor of or against one thing, person, or a group compared with another, usually in a way that is considered unfair" ("Bias," 2021), are implied. While there is nothing inherently wrong with this definition, its uncritical application in the evaluation process obscures the philosophical and practical complexities of identifying and evaluating bias in a source.

This simplistic and self-evident definition is apparent in the predominant tool used in source evaluation—the checklist. As Radom and Gammons acknowledge, "little research has been conducted on the effectiveness" of this methodology (2014, p. 335). So, it is difficult to conclude the checklist's ability to evaluate a source for bias. Simple statements, like the CRAAP Test's "Are there political, ideological, cultural, institutional, or personal biases?" (Blakeslee, 2004) or the CARS method's "Be on the lookout for slanted, biased, politically distorted work" (Harris, 2020), suggest that determining bias is similar to identifying features of authority (for example credentials) or accuracy (for example citations). This approach is easy to teach, and it aligns with research that students rely on textual features, such as a URL, to determine the objectivity of a website (Taylor & Dalal, 2014). Bias, however, is not strictly a feature. Bias is the way a feature is framed in deviating from some "unbiased" baseline. In their simplicity, checklists ignore several philosophical and practical implications in evaluating that framing. If bias can only be determined by comparing something to an "unbiased" baseline—which serves as a proxy for objective reality—by what measure should the baseline be defined? What forms—which can vary from source to source—should evaluators analyse and compare to that baseline? How can evaluators qualify bias's impact—which is not always "bad" or "disqualifying"—on a source's credibility and evidentiary value? Checklists may point toward potential answers, but they do not lead to a deeper understanding of bias in a source or as a general concept. Tools like the IF I APPLY method, which challenges learners to address confirmation bias (Phillips et al., 2019), and SIFT, which asks users to "[reconstruct] the necessary context to read, view, or listen to digital content effectively" (Caulfield, 2019), advance a more nuanced analysis of bias. But they also assume an innate understanding of the concept; it is time for a paradigm shift in the way librarians and educators teach bias that focuses on a more intricate and systematic approach.

1.3 What is missing?

Librarians are not wholly responsible for an uncritical approach to bias. In nearly every field concerned with bias's existence, it is a remarkably undertheorised concept. In the study of media bias, a field where a clear approach would be beneficial, "there does not appear to be a major theorist" (D'Allessio & Allen, 2000, p. 135). This is a historic and ongoing problem (Buckingham, 2019; Entman, 2007; Hackett, 1984). Even in rhetoric, which analyses how people use language to influence the behaviour of others, "there is no general method for determining bias in arguments" (Walton, 1991, p. 221). In media literacy education, a field devoted to the critical analysis of media, there is no systematic method for evaluating a source's bias. That field's use of the term "critical thinking," a necessary component of source evaluation, "seems to be used as an umbrella term for an unspecified conglomeration of mental processes by which people challenge media messages" (Potter, 2010, p. 680).

The lack of a clear theory does not mean a lack of scholarship. What it does mean is that defining and measuring bias is a philosophically challenging and practically difficult task. Researchers investigating the existence of systemic partisan bias in the news media, in particular, must make assumptions about what constitutes an unbiased reality and based on those assumptions, develop a baseline from which potential deviations can be assessed. What does an objective version of reality look like? Should it be based on a balance of various perspectives? Should it be based on the conventions of some unbiased ideal, such as journalism or scholarship? Or should it be based on the comparison of similar performances? In one form or another, researchers have used all of these methodologies (Groeling, 2013; Hackett, 1984; Niven, 2002; Schiffer, 2018). Addressing the ontological issues raised by this research demands a far more nuanced approach to the teaching of source bias. In addition to media bias studies, specialised work in philosophy and rhetoric can provide definition and clarity. Media literacy and history education can also guide the identification and evaluation of source bias. This scholarship gives form to a nebulous concept, but it also highlights how complicated teaching bias can be.

1.4 How can librarians rethink their approach to bias instruction?

This paper surveys the scholarship of bias to situate source evaluation in a grounded context. This material comes from a variety of fields. Research on media bias, particularly material on developing baselines, will be central to this effort. Specialised work in the study of argumentation can provide additional definition and clarity. Ideas from media literacy and history education can offer practical guidance on the identification and evaluation of bias. All this scholarship creates a practical framework on which librarians can develop new pedagogical interventions.

There are, however, a few caveats. First, this paper outlines essential elements needed for the practical evaluation of source bias; it is not a comprehensive primer on every aspect related to the concept. Many issues, such as how audience maximisation and profit motivate the selection and framing of stories, deserve more space than can be given in the following pages. If desired, much of the cited literature can facilitate a deeper dive into them. Second, this paper encourages the development of informed and critical pedagogy, not a specific evaluation methodology. For reasons that will be explored, no single measure (for example a checklist) can definitively measure the bias of reality. This limitation and its effect on the broad applicability of the framework's constituent elements will be discussed throughout the paper. Third, because the bulk of research on bias involves the search for partisanship in the popular news media, much of what will be covered is most directly applicable to the evaluation of popular sources like blogs, Wikipedia entries, and YouTube videos. Application to acts of disinformation, like "fake news," which borrow the conventions of journalistic and scholarly genres to overcome barriers of incredulity, is also possible (see Phillips & Burkholder, 2021). Applying this bias work to scholarly publications is more difficult. There are no reasonable claims that scholarly communication is plagued by such rampant partisanship, so no explicit work exists on evaluating academic sources for it. However, bias does emerge in academic sources and is studied in different forms: publication bias, outcome reporting bias, spin bias, and citation bias (Carroll, 2018). Conflicts of interest and their potential to impact research objectivity are also a concern (Friedman, 2005). Fourth, this paper focuses on the practicalities of decoding bias in a source; it is not a survey of what cognitive science says about source evaluation. The authors acknowledge that bias is not just a textual feature, and credibility is defined as the "believability of information" (Fogg, 2002, p. 122); and believability and bias are linked, as individuals are less likely to perceive bias if they agree with a source. Proposing solutions to overcome these cognitive biases is beyond the scope of this paper, but everything discussed should be viewed through the lens of that work.

Caveats aside, understanding how authors persuade audiences through bias, framing issues and priming responses is a vital skill for the 21st century. Information consumers need to be able to "determine what media messages have to be supplemented, counterbalanced, or thrown out entirely" (Paul & Elder, 2020, p. 43). Librarians must employ holistic and robust education to prepare students to truly uncover and understand bias.

2. The Bias Breakdown

2.1 What is bias?

To begin, librarians need an operational definition. J. Anthony Blair, a philosopher who has done work in argumentation theory, defines bias as "a kind of leaning, or an inclination, or a predisposition" (2012, p. 31). It is not a revolutionary take, but it is an inclusive one. By decentering prejudice and/or fairness, it avoids the simplistic dichotomy of bias's unquestioned "badness" and objectivity's unquestioned "goodness." A position of inclusivity is an important place to begin because bias—at least, to some degree—is always present in language-based communication. Language allows people to decontextualise elements of reality and recontextualise them in another form. It is a process fraught with bias since no language can ever fully detach itself from the social reality in which it is embedded (Hackett, 1984). This means the language that individuals use to formulate their worldviews and to interpret the worldviews of others is entwined with their own culture's values and beliefs. In addition to being a biased observer, no language fully describes the breadth of reality. It must be selective about what it describes. This sociocentric preference will always favor specific cultural values and beliefs; and competing views and interpretations may be excluded in service of those values and beliefs (Paul & Elder, 2020). The inescapable impartiality of language is fundamental to understanding bias, but that is insufficient for designing a practical teaching approach. Fortunately, Blair's work provides nuance. In analysing how the term bias is used, he identifies three use cases that are useful for conceptualising the differences between types of bias: "(1) bias that is bad and avoidable; (2) bias that is unavoidable, potentially dangerous, but for which one can compensate; and (3) bias that is contingent and good—or at least neutral" (2012, p. 24). A more granular approach can foster a more informed critique. Let us explore these cases in reverse order.

2.2 "Bias that is contingent and good"

Cases of "good" or "neutral" bias are difficult to find in popular and contemporary use, but they do exist (Blair, 2012). They involve cases in which there is no implied judgment. Consider a statement, like "Librarians are biased towards books." Bias is not framed as inherently good or bad; it simply is. Other cases of this type involve situations in which impartiality is associated with positive outcomes, such as generosity or empathy. Evaluation checklists do not explicitly account for bias that frames information in good or neutral ways. This is most likely because positive outcomes are not perceived to have a deleterious effect on a source's credibility or evidentiary value. More scholarship is necessary. For now, it will be largely excluded from this discussion.

2.3 "Bias that is unavoidable, potentially dangerous, but for which one can compensate"

In a study of news coverage from the 1972 presidential election, Richard Hofstetter calls this category, "structural biases" (1976). These biases are the unavoidable result of how language-based communication limits the representation of reality; they are not the direct result of partisanship. In the news-making process, Hofstetter argues, "the need to maintain an audience by dramatization of stories" and "the excessively brief time period that even the most important story can be given" encourages predictable patterns of behavior, causing newspaper genres to all exhibit similar biases in their representation of reality (1976, p. 33). Headlines are a good

illustration. Given limited time and space, they must be short and catchy while avoiding misinterpretation and ambiguity. To manage this, headlines have developed a specific grammar that includes active verbs in the present tense and no contractions, articles, or unidentified pronouns (St. Petersburg College, 2021). Yet, their structure still leads to misunderstandings (Marquez, 1980). Beyond a tendency towards audience maximisation, which creates a commercial bias that prioritises the selection of negative and novel stories, and sacrifices context (Schiffer, 2018), other biases in the news-making process—perpetuating the status quo, maintaining source access, emphasizing captivating visuals, reinforcing existing narratives, and ensuring fairness—can all influence choices in coverage (Gladstone et al., 2012). For an evaluation of bias to hold any authority, individuals must account for structural biases.

Of course, teaching individuals to parse the difference is complicated. Structural biases, Hofstetter notes, could be shared by outlets with similar ideologies, making it impossible to distinguish if the bias is part of a source's construction or a partisan agenda (1976). Headlines, for instance, could be co-opted and used to frame issues in ways that further partisan ideologies (Andrew, 2007; Blom & Hansen, 2015; Ecker et al., 2014). Also, news is not the only form of information with structural biases. Every genre, from encyclopedia entries to tweets to "fake news" stories to scientific journal articles, has them. Designed for their respective audiences and purposes, they will exhibit similar biases in the representation of reality. Those audiences and purposes might evolve, creating new structural biases. Keeping track of every genre and its limitations is daunting in its scope. In teaching individuals about various source types, librarians should teach sources as social acts, embedded in their social and rhetorical purposes (Burkholder, 2010). This might help evaluators to identify their structural biases. That said, covering the breadth and variety of them during instruction will be a challenge.

2.4 "Bias that is bad and avoidable"

This is the type of bias evaluation checklists are most concerned with detecting. But what makes it "bad"? At the most basic level, it is partisanship that violates some normative standard of behavior: "...when it consists of prejudice or pre-judgment, when it causes close-mindedness, or when it leads to distortion, misrepresentation, or unfairness—then it is bad" (Blair, 2012, p. 31). Sloan and Mackay offer an expanded list of behaviours:

- Partiality;
- one-sidedness;
- unbalanced selection or presentation;
- tendency or inclination that prevents a fair or balanced approach;
- temperamental or emotional leaning to one side
- favoritism that distorts reality;
- personalized, unreasoned judgment; and
- predisposition or preference (2007, p. 6).

When the above behaviors are interpolated in a source, they constitute what Hofstetter calls "political bias" (1976). Because he was looking for political ideologies in news coverage, that description makes sense. This paper, however, will use a term with a more inclusive scope, partisan bias, to include biases related to politics, race, ethnicity, sex, gender, religion, age, and (dis)ability. In the study of media bias, partisan bias must be "volitional" (Williams, 1975, p. 192), and the reality portrayed must be "systematically (not randomly) distorted" (Groeling, 2013, p. 133). Since excessive partisanship violates journalistic obligations to truth and accuracy, an emphasis on purposeful distortion makes sense. To Blair, though, intentionality is irrelevant: "I do not think it useful to dwell on the motives of those who display bias, because the effects are no less pernicious if the bias is unintentional than if it is deliberate" (2012, p. 3). Prioritising effect over intention is important. Some authors may consciously employ their partisan biases to stoke resentment. Others may unconsciously use biases that have been normalised by their

culture. That does not excuse their actions, but intention to misrepresent should not be the only cause for evaluating a source. With this definition, expressing an opinion, advocating a position, or having a conflict of interest could be considered a potential violation. The evaluation process should help individuals judge the severity.

It is possible to mitigate the potential effects of "bad" bias. Librarians, in fact, may currently teach about them. Style guides recognize how bias can affect accuracy and credibility. The AP's *Stylebook* offers detailed guidance on keeping writing concise and bias-free (Associated Press, 2020), and the APA's "General Principles for Reducing Bias" (American Psychological Association, 2021) outlines clinical methods for minimising it. Despite attempting to limit bias with awareness and purpose, journalistic and scholarly endeavors can never eliminate it entirely (Bedessem & Ruphy, 2020; Dominic & Jayanthi, 2020; Hanna, 2004; Post, 2015; Richardson & Polyakova, 2012).

The monolithic definition of bias so often assumed in library instruction is an uncritical take that may not foster a deep understanding of the concept's breadth or implications. The above framework accounts for different types and effects, allowing for a more nuanced approach to the identification, evaluation, and incorporation of biased perspectives. What it does not provide for librarians, though, is guidance on navigating the cognitively demanding process of identifying and evaluating bias in a source.

3. Identifying and Evaluating Bias

3.1 Determining a baseline

Bias in a source can only be evaluated by consciously comparing its bent, inclination, or predisposition to a baseline that represents an unbiased reality—a detail checklists completely ignore. No such baseline actually exists. It must be manufactured, which raises several questions. What constitutes an objective version of reality? What should be included or excluded? The individuals answering these questions are never disinterested arbiters about what counts as reality. As previously discussed, language aligns with a culture's dominant social, economic, and political forces. Those forces prescribe practices that define and reinforce what that culture believes to exist, be good, and be possible (Therborn, 1980). This means different groups may vary in the way relevant baselines are defined. To detect media bias, researchers could define a baseline that comports with the principles and practices of ethical journalism. To teach general processes of source evaluation, librarians could define generic baselines that are applicable in multiple instructional scenarios. Normative standards, like these, are necessary for meaningful evaluations of source bias. However, defined by ideological biases of a culture, these baselines are not unbiased. Nor are they universal. Creating a single baseline that adequately captures all relevant elements of reality is impossible. Schiffer makes this point concerning election coverage: "How could we possibly quantify the entire election—the underlying conditions and all relevant campaign phenomenon—into a single measure that somehow can be converted into the 'proper' proportion of coverage slant for a given election" (Schiffer, 2018, p. 25)? Paradoxically, unbiased baselines are also subjective. Zeldes, Fico, Carpenter, and Diddi caution that "even in the event that subjective qualities such as tone achieve reliability within a study, it is unclear whether such reliability is transferable to other researchers doing other studies" (2008, p. 569). "In the absence of some independent test of validity," write Groeling and Kernell, "the researcher is left with the task of defending one set of arbitrary coding rules against alternatives that yield different distributions of good and bad…news, and hence, different conclusions about bias" (1998, p. 1065). Lastly, as approximations of reality, baselines only allow evaluators to infer bias. They are assessing an end product, not every decision that went into its creation. Despite these difficulties, some measure is necessary to evaluate individual source bias systematically. Otherwise, individuals informed by their own cognitive biases may use personal baselines to make self-serving

evaluations, revealing exactly what the evaluator wants to find, accepting or rejecting evidence based solely on individual worldviews.

Over the years, media bias researchers have used a variety of baselines to approximate an unbiased reality. Many of those methodologies are extremely complex. This paper discusses three foundational approaches—balance, non-balance, and comparative performance—and the challenges of applying them to the evaluation of a single source.

3.1.1 Balance baseline

A balance baseline assumes equal quantity and quality of coverage (that is candidates, politicians, policies, events, etc.) are signs of objectivity. Unequal quality and coverage are presumed to be signs of partisanship. Balance is commonly used in large-scale studies because "the assumption that both sides should be treated equally over time and across issues comports nicely with agreed-upon ideals of good journalism" (Schiffer, 2018, p. 19). Column inches, time, and word usage are typically counted to determine balance (Hackett, 1984).

Balance baselines are not without their disadvantages. They represent an ideal of what overall coverage should look like. In practical terms, what does it mean to be treated equally? What does it mean to be treated fairly? "Most studies on media bias," writes David Niven, "have not been able to distinguish between unequal coverage and unfair coverage" (2001, p. 35). Part of the difficulty involves underlying contextual factors that might affect the equivalent treatment of subjects.

> What if one of the candidates is more qualified? Should both candidates still get equal coverage? Is fair coverage presenting the range of the parties' opinions regarding a situation? What if one side is the position of most of our leaders and has the support of renowned experts? (Niven, 2002, pp. 73–74).

This could be because of structural biases in the journalistic process (Schiffer, 2006). In political coverage, Kuklinski and Sigelman suggest a "paradox of objectivity," in which structural biases, such as the need to maintain access to politicians in power, may appear unbalanced even though they technically mirror "reality" (1992). Additionally, balance is difficult to define outside the realm of partisan politics (D'Allessio & Allen, 2000). Should "both sides" of every issue be covered, if the preponderance of evidence supports a particular "reality"? Does giving equal time or space to individuals denying climate change or disseminating racist propaganda make a source unbiased? Finally, a broad and balanced perspective of how a subject is handled is difficult to ascertain from a single source. Though it can be useful in certain circumstances, evaluators must prove that balance is appropriate given the context.

3.1.2 Non-balance baseline

A non-balance baseline represents a "non-ideological" ideal of how a source should be constructed (Schiffer, 2018). Typically, this is based on the commonly held principles of journalism or science that model what objectivity should look like in theory and practice. Coverage could also be indexed to a perspective that is supported by the preponderance of the evidence, such as the scientific consensus on climate change (Schiffer, 2018). Whatever standard informs this baseline, partisan bias becomes the degree to which performance strays from expectation. Since it makes fundamental assumptions about what constitutes an acceptable version of reality, a non-balance baseline is far more complicated to implement than one based on balance.

Librarians are familiar, at least implicitly, with non-balance baselines. Tethered to the objectivity of academic argument, evaluation checklists direct individuals to identify indicators (for example

a clearly stated purpose, a clinical tone, provable facts) typical of high-quality sources, such as journal articles, scholarly monographs, and mainstream news stories. Deviations from this baseline, either in the absence of key features or the inclusion of problematic ones, are implied to harm the source's credibility. The Ad Fontes Media Bias chart uses a similar approach, applying an ideal conception of journalistic objectivity as a baseline to classify outlets as left/center/right (Ad Fontes Media, 2021). Both checklists and charts have been criticized for their reductive takes on a complex process (Benjes-Small & Elwood, 2021; Lenker, 2017). Given the popularity of these tools, the use of non-balance baselines in source evaluation appears promising.

There are, however, several disadvantages of non-balance baselines. The normative behaviors they describe are context-specific. If searching for media bias is the goal, finding behaviors that violate journalistic practice makes sense. Applying that same baseline to something like a tweet is a problem. A tweet's primary function is not to present objective news, so it is unreasonable to judge its bias as journalistic malpractice. Instead, defining a baseline in terms of consensus might seem like a better option. That presupposes the ability to create baselines—tied to mutually agreed-upon beliefs, morals, values, and ethics—about every topic. In a study of shifting media coverage of the Vietnam War, Hallin categorised political discourse into three concentric spheres: consensus, legitimate controversy, and deviance (1989). Within the sphere of consensus, there is widespread public agreement on an issue. Within the sphere of legitimate controversy, members of the public have reasonable disagreements. Within the sphere of deviance, the public rejects issues because of their baseless or taboo nature. The boundaries of these spheres are permeable; and as public opinion shifts, issues may move between the various levels. In a highly polarised and dynamic media landscape, it is difficult to ascertain in which sphere an issue may reside at any given moment. The COVID-19 pandemic offers an excellent example. Fueled by partisanship, public opinion on vaccine efficacy or mask mandates has moved between all three spheres. Whether they describe behaviours or consensus, non-balance baselines are more useful to experts than novices. Experts possess the requisite knowledge and experience to judge deviation appropriately. Novices must learn the baselines before any deviations can be determined. Though the application of non-balance baselines may seem intuitive, it is far from simple.

3.1.3 Comparative performance

Comparing performances is a more involved means of evaluating bias. It is the analysis of media coverage "in which political leaders … have produced comparable results or engaged in comparable behavior" (Niven, 2002, p. 74). Coverage of politicians from periods when there are similar levels of unemployment is a good example. Even-handed coverage is the expectation. Partisan bias reveals itself in the comparison of differences in elements, such as time, space, and tone. This kind of baseline is dynamic and contextual, depending on the individual or event chosen. It demands that evaluators look beyond a single instance or source and understand bias in a broader context.

Source evaluation methodologies with analogous processes exist. Lateral reading, the act of searching for information about a source while reading it, is one example (Wineburg & McGrew, 2017). Meola's contextual approach to website evaluation, which looks at information "located within its wider social context" to compare and corroborate claims (2004, p. 338), and Caulfield's SIFT Method, which asks evaluators to "trace claims, quotes, and media back to the original context" (2019), are two others. In their way, each of these approaches establishes a baseline through comparison.

In the evaluation of a single source, comparative performance has limitations. The most evident is the amount of material needed for a comprehensive understanding of the standard and deviation. Comparison can be useful for discerning issues related to authority and accuracy. An

individual's credentials can be corroborated. Claims can be corroborated. Understanding what the preponderance of evidence indicates about what constitutes an unbiased take on an issue is more complex, requiring more time and effort. In some cases, baselines formed through comparison could also be tethered to widely-held, biased perspectives. The invisibility and pervasiveness of privileged narratives, such as heteronormativity or whiteness, means they often become the standard by which issues are communicated.

Each of these baselines offers a fundamentally different approximation of reality that has its strengths and weaknesses. Whatever is chosen must align with an evaluator's purpose. Are they looking for balance? Are they measuring it against some expected behaviour? Or are they comparing performances? Whatever is chosen must be explicitly learned, purposefully constructed, and intentionally applied.

3.2 Analyzing bias's presence

Choices in a source's construction have the power to frame content, providing evaluators something to compare against a baseline. So, what forms can bias take in a source? A meta-analysis of the media bias research by D'Alessio and Allen found that bias is typically categorised in three ways: gatekeeping ("the preference for selecting stories from one party or the other"), coverage ("the relative amounts of coverage each party receives"), and statement ("the favorability of coverage toward one party or the other') (2000, p. 133). Such distinctions, however, are used "to describe methodological approaches in, and limitations of, the existing literature rather than to distinguish categories of choices by news producers" (Groeling, 2013, p. 134). Teaching broad methodological approaches may not be helpful in the evaluation of a single source, which relies heavily on the identification of specific partisan cues. All the cues and choices, both obvious and subtle, that are part of a source's construction need to be rendered more precisely.

The easiest cues to describe are the visible rhetorical choices used in a source's construction. They have the power to frame the content in harmful ways. Checklists, unfortunately, do not define what forms bias may take. A potential reason for this may be the academy's preference for objectivity. The conventions of scholarship work to limit the presence and impact of bias in any source. Bias only exists as a violation of scholarly conventions; it is not defined on its own terms. Media bias scholar Robert A. Hackett recognizes this problem and argues for making "bias and objectivity, as rhetorical and practical norms, themselves the object of investigation, rather than the standards by which we evaluate other content" (1984, p. 253).

Media literacy efforts, fortunately, offer some guidance. MediaSmarts, a media literacy education group, suggests presentational cues in which partisan bias might be found: headlines, labels given to people/places/things, placement, word choice and tone, quoted sources, statistics, and photos/captions/camera angles (Johnson, 2016). FAIR, a media watchdog group, suggests a more conceptual approach, asking evaluators a series of questions to place specific cues in context:

- Who are the sources?
- Is there a lack of diversity?
- From whose point of view is the news reported?
- Are there double standards?
- Do stereotypes skew coverage?
- What are the unchallenged assumptions?
- Is the language loaded?
- Is there a lack of context?
- Do the headlines and stories match?
- Are stories on important issues featured prominently? (2012)

All these approaches give evaluators something to compare to a baseline of journalistic standards and practices, but what if an evaluator is looking at something other than news? Sources of any media form, from tweets to YouTube documentaries to memes, can be biased. Librarians should adapt or expand any list of cues to recognize the particulars of each genre's construction, but they must recognise that the values and meaning of certain cues are not static across every example or circumstance. Word choice and tone may indicate bias, but in different circumstances, they may not. Determining the difference can only be achieved by analysing a source within the context of its larger purpose. Librarians should also recognise that certain cues may be the result of structural biases. A journalist producing a sixty-second broadcast news package, for example, can only include so much detail. While visible cues may seem easier to identify, they may still be convoluted to evaluate.

The biases caused by gatekeeping, via the selection and omission of information, are pragmatically difficult to identify. In evaluating selection, media bias researchers have encountered the problem of the unobserved population. D'Alessio and Allen explain:

> If one considers the universe of all stories as a population and the list of those that are covered as a sample, the presumption is that, because the 'sampling' procedure is carried out by individuals with opinions, the selection therefore will be biased. This is only a presumption, however, as the 'population' is not only unknowable but unidentifiable. What would be 'all the news in the world?' And, in the absence of population data, although it is safe to presume that gatekeeping bias occurs, it is impossible to know, or even estimate, its magnitude (2000, p. 136).

In the construction of a single source, an author may be motivated by a partisan agenda to select specific details. Yet, without knowing the full range of possibilities an author could have chosen from, it is an onerous task to prove. It is equally hard to determine bias by omission. Still, as the Center for Media Literacy (CML) stresses, the ability "to recognize and name missing perspectives is … a critical skill as we negotiate our way each day through our mediated environment" (Center for Media Literacy, 2008). The CML's only recommendation, nonetheless, is to ask: "Are any ideas or perspectives left out? How would you find what's missing?" (2008). These are important questions, but they make the process seem deceptively simple. To detect bias, in general, "one must have deep understanding of the historical situation, and … a substantial amount of background and contextual knowledge about the issue" (Vella, 2020, p. 102). In a culture that marginalises minority voices, evaluators may not possess sufficient knowledge to determine what is missing. They may only have the toxic narratives of that culture to help them make sense of what is being presented or omitted. They can consult other sources, but seeking out marginalised voices, even for diversity, introduces additional biases that must be evaluated and/or reconciled. Becoming proficient in these activities requires knowledge, experience, and practice.

Research does not provide a definitive answer on whether every biased feature or omission has an equal effect. The framing power of headlines can potentially prime certain interpretations (Ecker et al., 2014), and information processing may also be affected by images or camera angles (Boetzkes, 2019). Further investigations into the priming effects of other cues are needed. But even if librarians define a baseline and count features, how exactly do those features impact a source's trustworthiness and evidentiary value? Is a source's overall bias simply the sum of its biased parts? Is it something more complicated?

3.3 Qualifying bias's impact

Qualifying bias's effect on a source's overall credibility and evidentiary potential is arguably the most important step of the evaluation process, yet it is the most under-conceptualised. Given

the many obstacles this paper has discussed, there seems to be no apparent interest in analysing impact. Media bias researchers are mostly focused on verifying bias's existence, not describing its impact. For other researchers, including librarians, there is little incentive to qualify this impact. Bias is antithetical to academic arguments, casting doubt on the veracity of stated claims. The easiest course of action is to reject any instance of it—regardless of type, form, or severity. This zero-tolerance policy is present in evaluation checklists and the Ad Fontes Bias Chart. The former asks evaluators to locate bias without providing guidance on how to interpret it. The latter assumes that all sources produced by the same outlet are similarly suspect. In both cases, there is no concern for nuance. All bias is disqualifying. While zero-tolerance can be a helpful heuristic in library instruction, it does not provide the means to explore situations like what researchers found in a study of the *New York Times*'s coverage of the Al-Aqsa Intifada:

> Even though the *Times'* coverage produced a picture that could be construed as slanted in favor of Israel, these presentational features did not occur alone. Their occurrence in tandem with other features that exhibited no such slant necessarily qualifies claims of bias. While slant undeniably exists, it needs to be looked at not in one isolated feature of presentation but in the interstices across features, across time and across the repeated patterns of coverage in the numerous newspapers that comprise the US press (Zelizer et al., 2002, p. 303).

Much of this bias is structural (for example greater access to Israeli information sources than Palestinian) rather than partisan, but this finding is not broadly perceived as a contradiction of the paper's general trustworthiness. This makes sense if it is accepted that "since bias inheres in communication…the relevant norm is not zero bias, but rather some degree of tolerable bias" (Williams, 1975, p. 193). Acknowledging bias's existence, even in reputable sources, is an important step. Otherwise, nearly every piece of potential evidence would need to be dismissed. How might tolerable limits be determined? The most obvious solution would be to define them for every information genre. The sheer variety and dynamic nature of these genres, unfortunately, make this an onerous and unproductive exercise. A more practical solution exists, but it demands a shift in how librarians conceptualise the evaluation process.

Instead of automatic disqualification, the idea of tolerance can encourage a nuanced and positive approach to evaluation that does not judge a source's evidentiary value solely on its reliability. There is little precedent in the literature of media bias, media literacy, or information literacy (IL) for this kind of approach. History education and the analysis of bias in primary documents, on the other hand, can aid librarians with exploring this concept. History is constructed from biased perspectives, all of which need to be evaluated and incorporated into a broader understanding (Lang, 1993). Rather than immediately rejecting anything of murky provenance, sources are evaluated within their historical and cultural contexts to reveal their strengths and weaknesses. Understanding evidence in this way, writes Le Cocq, "should enable pupils to acknowledge that even if a source no longer provides reliable evidence for their previous conclusions, it may well provide useful evidence about another issue" (2000, p. 54). A source's tolerable limits of bias and its value, in other words, are context dependent. If the bias is framed appropriately, any source can be used regardless of the severity. Consider how martinlutherking.org, a website created by a white supremacist group, is filled with intolerable levels of racist propaganda (Collins & Toomey, 2018). Yet, it could still serve as valuable evidence in understanding Neo-Nazi rhetoric. In this way, establishing a baseline and identifying cues only need to create a general—not a definitive—sense of bias's impact. To make appropriate choices, evaluators must learn the expectations of the situations in which they are constructing arguments (Burkholder, 2019). Much like everything else in the bias of evaluating bias, this process takes time and practice.

4. Conclusion

Do librarians need to rethink how they discuss and teach bias? If we are only instructing individuals to construct objective academic arguments, then probably not. It may be reductive, but a zero-tolerance policy works in most circumstances encountered in the academy. If we are instructing students to construct arguments with a wide range of sources and in a wide range of contexts, then the answer is an emphatic yes. Evaluating for and examining bias does not begin and end in academia. Within their personal, professional, and civic lives, people use a mixture of sources to make sense of the world. Each of those sources—pieces of print journalism, segments on cable news, posts on social media, pages of popular websites, etc.—limit bias in different ways. They cannot be ignored simply because they fail to meet an academic standard. Individuals need a systematic way of identifying and assessing the level of bias in a piece of evidence. Only then can individuals determine when information must be augmented, corrected, or disregarded.

Each of these actions is complicated by issues to which this paper has only briefly mentioned. First, cognitive biases make it hard to evaluate bias objectively. “Readers and viewers respond to programs and publications,” writes James T. Hamilton, “as if they view media bias as a function of how different a program is from their ideology” (2004, p. 73). In other words, people use their own biases as ideological baselines to identify and interpret a source’s bias, accepting what confirms their beliefs and labeling everything else bias. Online filter bubbles, created by algorithmic personalisation, only serve to reinforce personal biases and baselines. Second, the post-truth era’s distrust of institutions and disregard for facts erodes faith in any baseline that purports to describe objective reality. “Lies, fallacies, and doublespeak,” writes McComiskey, “are recognized as false and unethical rhetorical strategies because they can be compared unfavorably to reasoned opinions and universal truths” (2017, pp. 7–8). Without that baseline, McComiskey continues, “language becomes purely strategic, without reference to anything other than itself” (2017, p. 8). There can be no distinction between truth and lies, making any evaluation of bias impossible. More work needs to be done on how librarians might intentionally address these issues.

Though it does not answer every question or address every problem, the definitions and strategies outlined in this paper lay the foundation for these efforts. This framework can establish an agenda for investigating bias in all sources, including the genres of scholarship. Determining type, developing a baseline, identifying cues, deconstructing partisan intention, and understanding tolerable limits are all cognitively demanding tasks; evaluators must be allowed to practice each of these skills individually and collectively. The time needed to accomplish all of this is considerable, and—limited to brief interactions at the reference desk and one-shots in the classroom—a luxury not afforded to many librarians. Yet, if librarians want to impart some special insight about identifying and evaluating bias, we must invest the time in creating a stronger pedagogical strategy. Without one, our learners’ knowledge gaps will perpetuate, and bias will remain an enigmatic concept.

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