The vocabulary of a three-year-old: Sound bite pedagogy in our conversations about poverty

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Sound-bite pedagogy is no cure for the complex interaction of social, economic, and instructional factors that determine the outcomes of contemporary American schools.

Richard Rothstein, “Bilingual Education: The Controversy”

Most critical readers are aware of the distortions implicit in the definition of a sound bite; we¹ know that these eminently repeatable nuggets of information are necessarily stripped of context, their nuance flattened. And yet they circulate, finding their way into our conversations and our public discourse. These memorable little lessons often begin with “There’s a study that found...” However skeptical many of us have become of claims that begin in this way, the claims are nonetheless pervasive and, I would suggest, rhetorically powerful. Take, for instance, a sentence uttered during a congressional hearing by “reading czar” Dr. G. Reid Lyon, an influential force behind the Reading First, the literacy program mandated by No Child Left Behind. ² “An affluent three-year-old has a stronger working vocabulary than the welfare parent of a three year old. That is true” (U.S. House, 2002). Spoken by a renowned expert to the federal legislature, the implications of such a statement are hard to overestimate.

¹ I will speak of “we” and “us” throughout this article, referring specifically to the large and diverse group of readers who comprise the audience of popular media and the sound bites to which I refer here. I must include myself, as someone who participates in the reading and hearing—and at times, reproduction of—these memes.
² Lyon’s official role was chief of the Child Development and Behavior branch of the National Institute of Child Health and Human Development.
That it was uttered during a 2002 hearing of the House Education and Workforce Committee hints at the possible material consequences of such utterances. This, of course, does not make the statement true, nor does it point to the rhetorical history of this “third hand factoid,” as one linguist called it (Nunberg, 2002), or the larger narrative into which it fits. Nonetheless, this factoid’s rhetorical force led it to crop up over the course of over a decade in multiple federal deliberations, articles in national news venues and publications by respected education organizations.\(^3\) We can only imagine into how many conversations about poverty and education it has been injected. Closer examination of the source of the sound bite will reveal that it is a distortion of the research it cites and will answer the question of why such an insupportable claim might have gained traction even among experts. That is precisely the project of this chapter, in which I will consider where our sound bite came from, why it persists, and what the statement itself, as well as its persistence in public discourse, teaches us. I will answer the first question by examining the putative source of Lyon’s factoid—a landmark study of language acquisition conducted by Betty Hart and Todd Risley—and then tracing the distortions by which

\(^3\) A partial list of its nearly-verbatim appearances across venues and genres includes: citations in congressional hearings and summits on early childhood education (Whitehurst, 2001; Neuman, 2004), and learning disabilities (U.S. House, 2002); in national media, including the *New York Times* (Dewan, 2010) and *Baltimore Sun* (Libit, 2002); in publications and presentations from education organizations including ASCD (Barton, 2004) and the U.K.’s National Literacy Trust (Attenborough & Mather, 2005); books released by education publishers including Prentice Hall (O’Hara & Pritchard) and SAGE (White & Evans), and in university education courses (see, for example, Rosenfield 2012) and dissertations (see, for example, Karmacharya 2007).
it was rendered into the influential sound bite about “welfare parents.” To answer the second question, I will contextualize the figure in the historic narrative from which it derives credibility and force, one that has long influenced Americans’ views of people who live in poverty. Ultimately, we will see, the sound bite version of the study inherits from a long and powerful tradition of pathologizing poverty that dates back centuries and has been shaped by determinist theories that we now refer to as social Darwinism. What it teaches us, we will see, is that despite having been debunked, those ideas continue to shape conventional ways of explaining poverty. Ironically, sound bites like this often appear in conversations about improving education for students living in poverty even though the messages they convey about poverty arguably neutralize those efforts and sap political will for change. The inject a status-quo bias into the conversation, defusing demands for change by suggesting that our class structure reflects some natural order of things and that individuals have been impartially sorted into socioeconomic groups based on their merit.

To attribute the sound bite in question to Lyon is not entirely fair, as he was one among dozens of scholars, government officials and journalists who have uttered virtually the same words since 2001—so many that I am unable to determine its exact origin. The original source that each speaker cites, however, is clear: the work of Betty Hart and Todd Risley. Getting their start during the Johnson administration’s “War on Poverty,” they noticed that the effect of interventions like Head Start tended to “wear off” by later elementary years, leaving poor children behind their more affluent peers. In their research, they sought to determine why that was and how it might be addressed in order to put the children on an equal academic footing
The findings that would come to be popularly known, and often cited, as “the 30-million word gap” were published initially in 1992 in the journal *Developmental Psychology* for a specialist audience before being released as the mass-market book *Meaningful Differences* three years later. Eight years after that, Hart and Risley published still another version of their findings in *American Educator*, the journal of the American Federation of Teachers that reaches a diverse audience of 750,000 readers including teachers, school and district administrators, policymakers, and other education professionals. It was reprinted one month later in *Education Review*, reaching a similar audience in the U.K. That Hart and Risley continued to publish versions of their study over the span of a full decade, and in such diverse venues, indicates the immense demand for their findings; it also allows for an examination of the rhetorical adjustments they made for each new audience; like most reports of research, Hart and Risley’s original publication was aimed at an audience of fellow specialists in their field. Following the strict generic conventions of scientific writing, that article would have made for tedious and even inscrutable reading for an audience comprised of more readers outside the field of developmental psychology. In order to appeal to the more diverse audience of *American Educator*, their work required what Fahnestock (2008) calls “accommodation.” These accommodations, including adjustments to the length, focal points, reported data and prose of the article inevitably, perhaps subtly, change the information being reported. In this

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4 The “word gap” is perhaps an even more pervasive sound bite emanating from Hart and Risley’s research, though an in-depth discussion of it is beyond the scope of this chapter. Although it cannot be called a distortion of their findings in the same way as the sound bite I am considering can, the finding has been brought into question by scholars including Dudley-Marling and Lucas (2007, 2009) and Michaels (2013).
case, they provided an opening in which the distorted version of their findings advanced by Lyon and so many others could seem credible.

At the root of such accommodations is the most basic necessity of any text: in order to be read at all, it must appeal to the audience it is addressing. In order to attract a more diverse popular readership, science writers often deploy what Fahnestock (1998) describes as a “deontological” appeal, capturing the readers’ attention by attaching a study’s findings to existing values of the readers; it is “the adjustment of new information to an audience’s already held values and assumptions” (Fahnestock 1998 p. 334). In popular reports deploying this appeal, then, findings often appear to bolster prevailing assumptions, rather than bringing them in to question. In popular reports authored by the researchers themselves and by journalists, Hart and Risley’s findings are accommodated such that they seem to tell a segment of readers, “you were right.” Take, for instance, the London Guardian column that reports one of the study’s conclusions, that what they called “everyday parenting” is immensely influential in children’s language development. The journalists reports this finding as a confirmation of commonsense, calling it a “statistical analysis of what we all observe” when we see “the poor harassed mother walloping her child in the supermarket.” Again emphasizing the deontological appeal of the findings, she asserts that the study merely “confirms what we all secretly know already” (Toynbee, 2004). The latter assertion begs the question of what exactly is this knowledge that we all share but must keep a secret? The columnist describes it as the fact that “the child is branded for life” by their mother’s language; that a child’s “class destiny” is “cemented” in place by their mother’s behavior. Beneath this suggestion is another kind of
common sense: adults living in poverty are inadequate parents. Linguist and commentator Nunberg (2002) criticized the claim about adult vocabulary upon which our soundbite, and Toynbee’s column, rests. He points out that it is a flawed reading of the research, adding that “it’s telling that this found a credible soundbite.” As he notes, the claim is at once fallacious and influential, and the coexistence of these two facts about it is indeed “telling.” It speaks to the powerful sway that “already held assumptions” exert in our interpretation of findings from research, overpowering skepticism and even, it might not be too much to suggest in this case, common sense. After all, anyone who has interacted with a three-year-old should take a good deal of convincing before believing that an adult who truly had the linguistic resources of a toddler could successfully navigate errands such as grocery shopping. And yet, the assumption that allows us to believe that the poor are severely lacking in vocabulary is a powerful one that runs deep in our culture. The history of this assumption reveals, too, that the underlying assumption is about the more general competence or merit of the poor. These assumptions are bundled in a narrative about poverty that dates back centuries, conveying an image of deep generational inadequacy. In the next sections, I will consider evidence that the “factoid” itself is a distortion before examining this narrative and how it enables such information to circulate, offering insidious lessons about poverty and the poor, regardless of its actual validity.

Nunberg raises the question of how this claim about poor parents “gained a credible soundbite,” and the first part of the answer lies in the series of accommodations that Hart and Risley’s study underwent across three versions of their work. The first version, published in 1992 in the academic journal Developmental Psychology was titled “American Parenting of
Language-Learning Children: Persisting Differences in Family-Child Interactions Observed in Natural Home Environments.” Consistent with the conventions of science journals, this version included a lengthy description of the method by which parents’ language was recorded, coded, and translated into data. Here the reader learns that the observers recorded only words addressed directly to the child. On this measure, Hart and Risley (1992) recorded a range of the number of different words spoken to the child over the course of an hour, and their conclusions regarding vocabulary size are limited to recorded words addressed to children. On this measure, they found a strong correlation between different words spoken and family socioeconomic status (SES), as well as between those words and the child’s IQ at age three. No claims were made about vocabulary size, and given the scope of the study—focusing on words addressed directly to the child—this makes sense. Here, the word “vocabulary” is used only to describe words themselves and children’s acquisition thereof—and even in this sense it only appears twice. In fact, the concept of “vocabulary” is never reified in this article as an individual’s store of words, a “thing” that we each possess. The reader is left with the twin understandings that the focus of the study is utterances and interactions, not people and their knowledge or ability, and that because the researchers did not collect conversations between adults in the house, any claims about adult vocabulary would be untenable. And yet, our sound bite is about precisely that. The distortions that made this possible begin with a slippage in the use of the term “vocabulary” across subsequent versions of the study.

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5 The researchers used the Stanford-Binet test to measure I.Q. They are careful to note, in the first sentence of the IQ section, that “we consider an IQ score at age 3 to provide a valid estimate of the amount a child has learned in 36 months of life rather than an estimate of the child’s capacities” (143). A footnote refers readers to another study that addresses the questions of “what intelligence is, whether it is, how it might develop, and what IQ tests seem to be measuring” (170).
In the second published version of the study, the 1995 book *Meaningful Differences in the Everyday Experiences of Young American Children*, Hart and Risley also carefully describe their method for determining “different words spoken to the child,” which has now been termed simply “vocabulary.” That word, in turn, was defined as “the stock of words (or signs) available to a person or a language community” (p. 97). In this instance, it seems that what we are talking about here is not just the number of words spoken on particular occasions, but in fact the subjects’ working vocabularies—the words they know and are able to use. This use and definition of “vocabulary” suggests that the study might offer a measure of the working vocabulary of children and parents alike, although the data set they are using has not expanded or changed. The book offers a chart, in fact, that is likely the immediate source of our sound bite. It includes “recorded vocabulary size” of parents and children in each group, seeming to allow a comparison of the three year old in the “professional” category (with 1,116 words) to the parent in the “welfare” category (with 974 words) (PAGE#). A glance at this chart without context suggests that the former does indeed have a larger vocabulary than the latter. And yet, the chart is steeped in context here, and that context offers a caveat against making claims about working vocabulary. In the context of the methods section, the word “recorded” deflates any such conclusion. In that description, the authors acknowledge that while the observers spoke with parents after the observation, these conversations were not recorded and thus were not reflected in calculations of parent vocabulary size (PAGE#). Moreover, when they were recording, the researchers explicitly “did not encourage adult-adult conversation” in order “to avoid having to transcribe” excessive adult talk (99). It seems clear, then, that the
researchers had no intent of measuring adult vocabulary.⁶ And, undoubtedly aware that any extrapolation about adult vocabulary size from this data would be insupportable, and working against the earlier suggestion that the findings might address the question of “working vocabulary,” Hart and Risley maintain their sharp focus on the subject of study: children’s vocabulary growth and how it relates to the utterances they hear from their parents.

The six-page version of the same findings published in *American Educator* left little room for such context. Where readers of specialist publications like *Developmental Psychology*, wanting to be able to determine for themselves the validity of the research, would demand detailed descriptions of the researchers’ methods and a full report of the data, the larger and more diverse readership of *American Educator* would likely find this uninteresting. In this version, results and conclusions are highlighted, where methods and data are shortened and backgrounded, appealing to generalist readers’ interest in how the study relates to their worldview, or might prove useful in their work. The abridged methods section replaces descriptions of variables and codes with the simple statement that “our ambition was to record ‘everything’ that went on in children’s homes—everything that was done by the children, to them, and around them” (p. 111). In the two prior works the authors had taken care to define what they meant by “everything,” conceding that it was not, of course, actually *everything*. That

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⁶ Additionally undermining any claim to have captured a comprehensive picture of parents’ vocabulary, Hart and Risley report that the observer followed—and recorded—the child rather than the parent, thus presumably missing a certain number of parent utterances (176). Moreover, even the most basic consideration of validity would ask the question of sample size, which in the case of words spoken is dramatically skewed: “The most stable difference between families,” the authors report, “was in the amount of talking that went on” (235). An extrapolation about vocabulary size, when one group uttered so many fewer words, would hardly withstand scrutiny.
is not the case here, and despite the quotation marks that lightly caution against taking the word literally, the scope of the study is subtly overstated from the start.

In another necessary but nonetheless noteworthy accommodation to the shorter length of articles in this venue, the data section also abridged. Following the generic conventions noted by Fahnestock (1998), the data that supports the authors’ conclusions has been included, while the data that mitigates it has not. The multiple factors in which there was little or no difference between the practices of low and the high SES parents have disappeared from this version. The selection of data in this, the most widely circulated version of Hart and Risley’s findings, erases the fact that the similarities between groups actually outnumber the differences. This spotlight on difference is consistent with a pattern in statistics and scientific research observed by Donna Hughes (1995), who asserts that such a practice contributes to a reification of difference that shapes the way we imagine “the Other,” who, in this case, is comprised of parents receiving government assistance. By portraying “welfare parents” as decidedly and dramatically different from their “professional” counterparts, the authors conjure the image of a chasm separating classes. That very image, in fact, is captured in three illustrations that comprise one and half of the eight pages of the article: two groups of people are dwarfed by a massive canyon between them. From our vantage point, we can see that the canyon spells out “words.” Vocabulary is portrayed, textually and visually, as a virtually impassible division between the classes.
Although no claims about comparative vocabulary size are made in the body of the article, another visual speaks to that issue: reprinted from the book, the chart comparing “recorded vocabulary size” of parents and children in each SES group is hard to miss. It fills a significant portion of the article’s limited space (one-third of a column, out of a total of eight columns). The numbers are the same as in the book: under “professional,” the child’s recorded vocabulary size is 1,116 words, and under “welfare,” the parent’s recorded vocabulary size is 974 words (p. 7). The context, however, is importantly different. If, indeed, as the description of methods asserts, “everything” that happened in the home had been recorded, the conclusion that these numbers reflect subjects’ working vocabulary seems reasonable; the cautionary context offered by the book, a description of methods that would thwart such conclusions, is absent from this short article. In fact, the chart is reproduced without any commentary. As a result, readers have room to infer what they like from it—and one such inference is the subject of this chapter: “An affluent three-year-old has a stronger working vocabulary than the welfare parent of a three year old.”

Across these versions of study, then, capitulations to audience demands (real or imagined) result in a number of distortions necessary for our factoid to appear credible. A slippage in the use of “vocabulary,” the erasure of detailed descriptions of methods, the limited selection of data, and the visual texts of decontextualized charts and dramatic illustrations all contribute to a sense that the study offers a measure of adult participants’ working vocabulary. Having removed mitigating data—factors in which “welfare parents” were indistinguishable from “professionals,” that purported difference in vocabulary appears to be more certain, and
more dramatic, than the data in fact supports. The “welfare parents” portrayed on one side of
the chasm seem hopelessly far away from having what might be considered a “normal”
vocabulary, an image that primes readers to accept a conclusion that might otherwise seem
impossible: millions of adult Americans are navigating their lives, and raising their children,
equipped with the linguistic ability of a toddler. This combination of sometimes subtle
distortions speaks to Nunberg’s question of how our sound bite ever appeared credible. It does
not, however, explain its popularity. Why does this particular factoid recur so persistently in our
conversations about poverty? The first part of that answer lies in the lessons that it teaches us
about that subject. Those lessons, it turns out, have operated within our culture’s discourse for
centuries.

Scrutiny of the vocabulary of people living in poverty has been the subject of conjecture
and study at least since philosopher George Campbell suggested, in 1776, “As the ideas which
occupy the minds of the poor are few, the portion of the language known to them must be very
scanty” (qtd in Dudley-Marling 2007). Sir Cyril Burt, writing in 1937 as chair of psychology at
London’s University College, attributed academic failure largely to poor mothers’ language use:
“The mother’s conversation may be chiefly limited to the topics of cleaning, cooking, and
scolding . . . the vocabulary that the child absorbs is restricted to a few hundred words, most of
them inaccurate, uncouth, or mispronounced, and the rest unfit for reproduction in the
schoolroom” (qtd in Gould, 1996, p. 312). Thirty years later, United States Representative
Martha Griffiths carried the same narrative forward when she asked Congress, “Do you really
feel that it is a good idea for a woman with a 400-word vocabulary to remain at home with 13
illegitimate children?” (qtd in Williams, 1995, n. 117). By the time Lyon claims that “welfare mothers” have the vocabulary of a three-year-old, the sentiment is time-honored. Such a persistent, sharp focus on vocabulary points to another longstanding view: in this narrative about poverty, vocabulary operates as a surrogate for intelligence. Such statements about adult vocabulary size that may at first appear to be about educational failure or slightly diminished capacity actually point to profound cognitive disability. In the IQ model of intelligence, which, despite being more or less debunked, continues to influence conversations about cognitive ability (recall that differences in IQ at age three was one of Hart and Risley’s notable findings), intelligence is measured on a scale of “mental age.” The original taxonomy of these disabilities, developed in 1912 and applied by psychologists and educators across the nation for decades, classified people who test at the bottom of the intelligence scale thus: “idiots could not develop full speech and had mental ages below three; imbeciles could not master written language and ranged from three to seven” (Gould, 1996, p. 188). Both groups of people were relegated to institutions, and, for decades, were subject to compulsory sterilization (Trent, 1995). Although the idiot/imbecile taxonomy is no longer in use, our factoid suggests that it continues to haunt our conversations about intelligence: the parallel between the assertion that “welfare mothers have the vocabulary of a three-year-old” and “idiots could not develop full speech and had mental ages below three” is perfect enough to be downright eerie. Taking Hughes’ point about that the social construction of otherness is often used to justify domination, and recalling the history of institutionalization and sterilization, we must note the further implications for the autonomy and reproductive freedom of adults receiving government assistance.
Factoids like this one contributed to what Asen (2002) observed in federal deliberations about welfare reform: similar examples of “disabling images” of the poor that circulate in popular and political discourse (10). Although I take his choice of the word “disabling” to be intended in the broadest sense of “damaging” or “disempowering,” the word choice is particularly apt in this case, and suggests lessons that our sound bite teaches us about the causes of poverty in the United States. The image of the poor that we get here is of a subject with a mind that is fundamentally different from, and inferior to, the imagined norm. Simply put, the poor are portrayed as cognitively disabled, and image that, as Baynton (2001) notes, has long been “called upon to clarify and define who deserved, and who was deservedly excluded from, citizenship.” Disability operates as, as Mitchell and Snyder (2000) put it, “the master trope of human disqualification” (p. 3). To treat these people differently, the logic goes, is not to violate our national conviction that “all men are created equal;” it is rather to make a necessary concession to the realities of nature and biology. By allowing, perhaps encouraging, us to imagine the poor as disabled, sound bites like this one make the existing class structure seem, however regrettable, perfectly natural and inevitable. If poverty is caused by innate, intractable biological difference, after all, then it is the poor themselves—or rather, their shortcomings—who are responsible for their poverty.

This view of class structure is, of course, the cornerstone belief of late nineteenth and early twentieth century notions about social and biological determinism that are now often referred to as social Darwinism. These philosophies, such as Andrew Carnegie’s “Gospel of Wealth,” all hinged on the belief that poverty was the result of a character (or genetic) flaw. It
is no accident that these philosophies emerged at the end of the nineteenth century alongside the first giant industrial corporations, such as Carnegie’s U.S. Steel, and the resulting increase in the wealth gap. Indeed, they were often advanced as an explanation of that gap. Stephen Jay Gould (1996) summarized the underlying claims of such determinism as the conviction that “social and economic roles accurately reflect the innate construction of people” (p. 52). Sir Cyril Burt put it bluntly when he asserted, in 1943, “the wide inequality in personal income is largely, though not entirely, an indirect effect of the wide inequality in innate intelligence” (qtd in Gould, 1996, p. 314). This, I am suggesting is the same assumption that operates just below the surface of our sound bite. The determinist worldview has been strongly disavowed by modern social science and its structural analyses of poverty, but its tenants continue to influence what we will believe, and repeat, about poverty. As part of American commonsense, it teaches us an important lesson: what really needs improving is not economic or educational systems, but the poor themselves (see Katz). True to the deontological appeal at work in so many accommodations of science, what appears to teach us something in the sense of expanding our understanding of the world in fact only confirms our existing assumptions and beliefs. The notion that the poor must be improved if we are to end poverty shapes the lives and experiences of anyone touched by welfare reform, “no excuses” education practices and any number of other policy initiatives targeting poverty. That is to say, our factoid is not an idle bit of untruth, but rather part of a discourse that significantly affects the lived experience of millions.
If historical patterns hold, we will continue to view such distorted bits of scientific knowledge as objective reflections of natural reality, and that reality, it might seem to become increasingly clear, might be that people living in poverty are simply not like “us.” Cropping up within conversations whose purpose is to plan and enact such change, such as hearings, summits, and reports about improving education for students living in poverty, this sound bite and others like it insidiously undermines those efforts. In this sense, it operates as what Reinsborough and Canning (2010) would call a “control meme:” an encapsulated, viral bit of cultural information that “succinctly marginalizes, co-opts, and limits the appeal of social change ideas” (37). The assertion that “welfare parents” have the vocabulary of three year olds does just that: it subtly teaches stakeholders that institutional improvement is irrelevant and pointless, sapping political will and sabotaging any attempt at systemic change.

Works Cited


