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Decontextualized Language: A Problem, Not a Solution

James Paul Gee

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James Paul Gee

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Why do children from some minority groups and children living in poverty do poorly in school   5
when compared to white middle-class children? Researchers have offered a large number of different
answers to this question. One of the most popular answers has been based on the notion of "decontex-
tualized language." This article argues that this widely influential answer is wrong and misleading,
because it is based on a poor theory of how human language works. In turn, I will suggest a better
theory of language with which to pursue the question.   10

Keywords: context, decontextualized language, language, learning, literacy

DECONTEXTUALIZED LANGUAGE

Why do children from some minority groups and children living in poverty do poorly in school
when compared with white, middle-class children? Researchers have offered a large number of
different answers to this question (Miller, 1995). One of the most popular answers has been   15
based on the notion of "decontextualized language" (for the theoretical background behind the
decontextualized language answer, see Goody & Watt, 1963; Havelock, 1986; and Olson, 1977,
1996; for work in education that has used the decontextualized language answer, see Cummins,
1984, and Snow, 1991 among a great many others; for critique along different lines from that
developed here, see Brandt, 1990, and Street, 1984).   20

The point of this article is to argue that this widely influential answer is wrong and misleading,
because it is based on a poor theory of how human language works. In turn, I will suggest a better
theory of language with which to pursue the question (see Gee, 1996, 1999). I hope the article will
have relevance not only to people interested in the school success of poor and minority children,
but also to people interested in students whose native language is not English. In my view, as a   25

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Q1

linguist, we cannot intelligently discuss educational issues in regard to these students unless and until we have a good theory about what is involved in learning language and literacy in and out of school. Furthermore, in a sense, all learning in school is language learning, since learning content (whether science, math, social studies, or what have you) involves learning new ways to use oral and written words.

30 **Q2**

   Before I can state the decontextualized language answer, I first need to lay out its key background assumptions. These assumptions are as follows: The vast majority of children acquire a native language at home among the members of their community. These children all learn to use this language effectively in face-to-face communication with parents, peers, and others. Face-to-face communication is "contextualized language." What this means is that, in face-to-face communication, a good deal of meaning comes not directly from the words and sentences uttered, but from the "context," that is, from facial expressions and gestures, intonation, pausing, a shared physical and social setting, and shared knowledge, background, and culture in terms of which people come to draw inferences in similar ways.

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   In face-to-face communication, words and phrases can have vague meanings and still work perfectly well, thanks to the fact that the shared context adds in whatever meaning may be unclear from the actual words and phrases used. For example, if I say to you, as a mutual friend passes by, "She looks a lot better today," it is the physical context that helps determine to whom the pronoun "she" refers and shared background knowledge that tells us what the comparative term "better" means here in the sense of what had been worse about the woman before. In fact, in many cases, being too explicit can be rude, because it assumes that the people with whom we are communicating don't share the physical and social setting we are in, which they clearly do in face-to-face communication, or share common knowledge, background, and culture with us, as they usually manifestly do.

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   In certain situations—writing and reading essays is often taken as a prime example—the shared context of face-to-face communication is missing. The words, phrases, and sentences of the text must carry nearly the whole burden of communication. If they are vague, shared context will not make up for that fact, as it does (or, at least, as much as it does) in face-to-face communication. Furthermore, it is part of the convention of some forms of language—again, essays are a good example—that the communicator (in this case, the writer) is not supposed to assume any great deal of shared knowledge, background, or culture with the reader, since the reader could be anyone, including someone the writer does not know at all. Such explicit communication in language—communication where the communicator puts as much meaning explicitly in the words, phrases, and sentences of the language as possible, and assumes as little as possible about the receiver of the language—is called "decontextualized language."

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   Finally, we need to point out that the distinction between contextualized and decontextualized language is not the same as the distinction between speaking/listening and writing/reading. Some forms of speech (e.g., everyday informal conversation) are heavily contextualized, some are less so (e.g., lectures to a college class). Some forms of writing are heavily contextualized (e.g., love letters) and some are not (e.g., essays). Decontextualized forms of both speech and writing figure heavily in school, the more so as the child advances through the grades.

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   So, having stated these background assumptions, we can now state the "decontextualized language" answer as follows: All children get lots and lots of practice at home and in their communities with contextualized language. However, some children, in their homes and communities,

experience many more models of, and get a lot more practice with, decontextualized language than do other children. This is because they are surrounded by adults and older peers who, thanks to their allegiance to and success in schools, themselves have good control over decontextualized forms of language and use such language in a variety of different social practices (within and in front of, their children at an early age). Since so much of schooling is centered around decontextualized language, these children are heavily advantaged in school.

There is a good deal of research documenting practices in middle and upper-middle-class homes that stress early practice with decontextualized language for quite young children (e.g., Heath, 1983; Snow, 1986; Scollon & Scollon, 1981; Taylor, 1983). For example, when reading books to their children, parents from such homes often ask the child over and over again, in repeated readings, to explicitly name animals, sounds, actions, and objects in the books that both parties already know quite well (e.g., "What's that? A pig. What's a pig say? Oink Oink."). Or, for another example, parents from these homes often ask young children to give explicit reports on one or more of the day's activities at the dinner time table (e.g., "What did you do at Aunt Mary's with Mommy today?"). Parents often scaffold these productions with requests for explicit labeling and clarifying information. And, of course, such parents often supply their children, well before school starts, with lots of books, including information books and not just stories.

Furthermore, these advantaged children's homes and communities continue to offer them lots of models of, and practice with, decontextualized language as they progress through school (they don't stop when their children enter school), and less advantaged children's homes and communities do not. Thus, the advantaged children continually get a "double dose" of support (from home/community and school) for decontextualized language, while other children must rely more solely on school alone. Thus, the rich get richer and the poor get poorer: figuratively, in the sense that advantaged children do better and better in school, while disadvantaged ones do worse and worse; literally, in the sense that the advantaged children go on to get better paying jobs, the disadvantaged children less well paying jobs, in a society that judges intelligence and competence for professional jobs in terms of one's control over decontextualized language (the language of school, textbooks, academic disciplines, and the professions).

Thus, the decontextualized answer claims that children from some minority groups, poor children, and some English-as-a-Second-Language children get too little support (in terms of models and practice) from their homes and local communities in decontextualized language, early on and throughout their school years. The school does a poor job at making up for the head start and continuing support more advantaged children get from their homes and communities. Very often, the school fails to allow less advantaged children to ever catch up, even through and after high school, thereby serving a role in the reproduction of social hierarchies, as children from more advantaged homes get more and better schooling and better jobs, and, in turn, pass on their advantage to their own children.

The decontextualized language story is very compelling and it contains some important truths. But it is flawed in two respects. The first flaw is this: it fails to tell us why schools do not or cannot teach disadvantaged children decontextualized language (and the variety of different practices in which it is recruited) and why it does not or cannot catch them up with their more advantaged peers, despite the home and community support such children have. The second flaw is this: There is no such thing as decontextualized language. Dealing with the second flaw (obviously a serious one with the story) will help us deal with the first one, as well.

SOCIAL LANGUAGES

In order to state why decontextualized language does not exist, I need first to offer a different set   115
of background assumptions than the set I offered above for the decontextualized language answer.
This new set of assumptions, ones that are, I argue, more linguistically accurate, are these: Speech
and writing are never just in English (or some other language) "in general." There really is no
such thing as "English in general." Rather, any talk or text is in a *specific style of language* (or
a mixture of styles). For any language, like English or Russian, there are a great many different   120
styles.

Let's first, then, distinguish between *vernacular styles* of language and *non-vernacular styles*
(Labov, 1972a, 1972b). Save in the case of massive social disruption, every human being acquires
a native language in his or early years. People use their native language initially and throughout
their lives to speak in the vernacular style of language, that is, the style of language they use when   125
they are speaking as "everyday" people and not as specialists of various sorts (e.g., biologists,
street-gang members, lawyers, video-game adepts, postmodern feminists, etc.).

Nearly everyone comes to acquire non-vernacular styles of languages later in life, styles used
for special purposes, such as religion, work (e.g., a craft), government, or academic specialties.
Let us call all these different styles of language "social languages" (Gee, 1996, 1999; they are   130
sometimes called "registers") and say that, while everyone acquires a vernacular social language
(a different dialect for different groups of people) connected to his or her native language (e.g.,
English), people usually go on, as well, to acquire different non-vernacular social languages con-
nected to different social groups, for example, one person may become adept at the language of
Christian fundamentalist theology and someone else at the language of modern mathematics.   135

The process of acquiring a vernacular form of one's language is, at least in my view (following
Chomsky, e.g., see Chomsky, 1986, 1995), biologically specified. That is, children are aided by
"innate knowledge" about language in the acquisition of their native language (just as certain
species of birds, when learning to build their nests, are aided by "innate knowledge" of what their
nests look like). Thus, children acquire the vernacular form of their native languages through   140
exposure to data, but do not need overt instruction and/or correction.

One sign of biological support for a skill is the fact that members of a species do not sig-
nificantly vary in the acquisition of this skill. And, indeed, all human children, regardless of
gender, race, class, or any other difference (barring severe mental retardation or social disrup-
tion) acquire their native language fully and well. For example, it never happens that Johnnie, a   145
English speaker, acquires relative clauses, but Janie, another English speaker, does not, because
she is just less talented than Johnnie at first language acquisition. Of course, such lack of variation
is not true of people acquiring mathematics or learning to play a musical instrument, skills whose
acquisition are not biologically supported by a species specific capacity.

It is important to realize, as well, that every later non-vernacular social language that a person   150
acquires, whether this be the language of Christian fundamentalist theology or nuclear physics,
builds on the grammatical resources of one's vernacular. Thus, since all humans have a biological
endowment that aids them in the (unconscious) acquisition of the core grammatical apparatus of
their native language, and this apparatus is the foundation for the acquisition of the grammars of
any later social languages, there are no grammatical reasons why any child should have difficulty   155
acquiring the grammar of any social language. For example, it is often said that nominalizations
are common in the more formal speech and writing of certain academic disciplines (e.g., "the *spin*

of electrons"), but nominalizations are also part of any English speaker's vernacular language (e.g., "The *rocking* of the boat made me sick") and are readily translated into other languages.

However, acquiring different social languages—that is, different styles of language for different social purposes—is also cultural process that goes well beyond the support human biology gives us for the basic grammatical apparatus (the "core grammar") of our native language (Gee, 2001). In fact, acquiring any social language (including originally our vernacular dialect) requires one to learn how to recognize certain *patterns* of lexical and grammatical resources and how to match them to certain *communicative tasks* or *social practices*.

To make matters clearer, consider the two sentences below:

1. Hornworms sure vary a lot in how well they grow.
2. Hornworm growth exhibits a significant amount of variation.

The first sentence is a vernacular style of language. The second sentence is in an academic social language (that is, a style of language connected to certain specific academic disciplines). How does one know that sentence 2 is in a different style than (or is a different social language from) sentence 2? Sentence 2 does not contain any grammatical devices that are not part of anyone's vernacular dialect. What sentence 2 does that distinguishes it from sentence 1 is that it *combines grammatical resources of a certain type in a certain characteristic way for certain characteristic purposes.*

Sentence 2 uses a particular style of language in which verbs naming dynamic processes (e.g., "grow" and "vary") are regularly turned into nouns naming abstract things (e.g., "growth" and "variation"). This style of language does not use affective markers like the adverb "sure" in sentence 1 (such markers express an emotion or attitude). In this style of language a vague phrase like "a lot" must be replaced by a more explicit one like "significant variation" (where "significant" has a fairly precise definition in areas like biology). In this style, too, subjects of sentences are very often not simple nouns (like "hornworms"), but nominalizations (like "hornworm growth") expressing a whole clause worth of information (i.e., hornworms grow) as an abstract concept. But what is crucial is that these linguistic features, in fact, tend to go together—to pattern together—in this specific form of language.

The technical way to put the matter is this: what distinguishes one social language from another is the way different grammatical (and discourse) resources **collocate** (co-locate, correlate, pattern together) with each other. I may have all the grammatical resources I need, but I still need to know how they "hang together" and when and where to use them to "pull off" a recognizable style of language (a social language), e.g., the language of a particular branch of biology or type of urban street gang.

Let me give an analogy here. I may own coats, pants, shirts, ties, and shoes of all different sorts. These are my resources. But I may not know, for a given event or situation, how they are supposed to go together, that is, what coat, pants, shirt, tie, and shoes I should wear together to be "accepted" as having dressed "correctly" for the event or situation. When we are talking about language, the resources are partly a "gift" from our human biology (that helped us acquire them), but the knowledge of how to combine them to be "accepted" as having used the "correct" language in a physics classroom is not. That has to be learned. Of course, what counts as "acceptable" and "correct" in terms of clothes or styles of language is a matter of social convention (and can change).

The patterns of grammatical elements that a social language uses are *functional* in the sense that they are used to carry out certain communicative functions or engage in certain social practices in a given domain or area (Halliday, 1994). Thus, in many branches of science nominalizations (like "growth" and "variation" instead of "grow" and "vary") are used, because these branches of science (for better or worse) often study dynamic and ever-changing processes (like growing and varying) by turning them into abstract things (like growth and variation). 205 In turn, these branches of science go on to study the abstract relationships that exist among these abstract things (Halliday & Martin, 1993). This is why relational and copula-like verbs (verbs like "exhibits") are so common in this style of language. At the same time, these branches of science claim objectivity and mark this, in part, by eschewing the use of affective markers (like "sure"). 210

What this means, then, is that people can acquire the grammar of a certain social language, like the one in sentence 2, only if they come to recognize how certain grammatical devices and patterns of those devices correlate with (match up with) certain sorts of communicative functions, social practices, and even attitudes and values in a given domain or area "owned and operated by" a certain discourse community (i.e., a group of people who share and "police" these functions, 215 practices, attitudes, and values). Put another way, what this means is that a sentence like 2 above is understood—and can only be understood—by being *contextualized* within the functions, practices, attitudes, and values of the discourse community that uses the sort of social language of which sentence 2 is a part. Though I will turn below to my explicit arguments as to why there is no such thing as decontextualized language, the kernel of the argument is already here. 220

But before I turn to the arguments about the non-existence of decontextualized language, there is one more crucial point I need to make here: Acquiring a non-vernacular social language like the language of some branch of physics or some type of urban gang, is a process of learning new social conventions (learning new ways to pattern together one's grammatical resources for certain social purposes, like learning what clothes go with what other clothes for a given event 225 or situation). *This is a sociocultural process that nearly all people undergo throughout their lives*—whether this involves acquiring the social language of a church, a craft (like mechanics or carpenters), a gang, a special interest (e.g., bird watching), a profession, a government agency, or an academic area, and so and so forth.

Furthermore, and importantly, there is no evidence whatsoever that humans vary in their basic 230 ability to acquire non-vernacular social languages. Since the child struggling in school with the beginnings of the language of science (in one of its many forms) may very well have already acquired, say, a great deal of mastery of the language of multiplayer real-time-strategy video games, the child's problem is not that he or she cannot acquire social languages beyond his or her vernacular, but, rather, that something is going wrong with this process in school (and we are 235 returned to one of the problems with the decontextualized language answer, stated in a different way).

This lack of variation would indicate that while the particular ways in which physics combines grammatical resources (as against, say, literary criticism, law, or street gangs) is not biologically specified, physics being too late on the evolutionary scene for this process to have gotten bio- 240 logical support, *the general ability to discover such patterning in language and correlate it with particular communicative functions and social practices* probably is biologically supported. This is to say that humans have a biologically supported capacity to match grammatical patterns (like the one in sentence 2 above) with contexts of use. This is matter which has been little studied, since Chomskian linguistics has paid attention only to the structural aspects of language and not 245

its social and cultural aspects. But it would, indeed, be surprising if it were not true, since the wider ability to match patterns with contexts is really just the basic ability to acquire culture, and that surely is part of our human biological capacity (and not that of robins, say).

ALL LANGUAGE IS CONTEXTUALIZED LANGUAGE, PART 1

Having stated the new background assumptions meant to replace those of the decontextualized   250
language answer, I can now turn to why there is no such thing as decontextualized language (though the basic reason should already be pretty clear). I will do this in three parts. In this section, I will once again, use the example sentences in 1 and 2 above, repeated below.

    1. Hornworms sure vary a lot in how well they grow.
    2. Hornworm growth displays a significant amount of variation.   255

    Sentence 1—the vernacular sentence—is the type of language that is often said to be "contextualized." Sentence 2 is the type of language that is often said to be "decontextualized." But, in reality, both sentences draw much of their meaning from "contextualization," though the process works somewhat differently in the two cases. Let us just compare the phrase "vary a lot in how well they grow" in 1 with the phrase "significant amount of variation" in 2.   260
    "Vary a lot in how well they grow," in sentence 1, must be understood in relation to a standard set by the activities of the speaker. This is the context against which this phrase must be understood or contextualized. The speaker, let us say, has done a school project on hornworms or, at least, read about them. As part of this activity, the speaker has taken some hornworms as prototypes of "well grown" hornworms (perhaps, ones that develop fast into big hornworms).   265
The hornworms the speaker has taken as prototypes of good growth we assume are ones almost anyone else in our culture would have taken as prototypes (e.g., the fast growing big ones and not, say, the one's with biggest eyes). Compared to these hornworms, others are "less good" and the speaker is saying there are lots of hornworms that develop more slowly or grow less big than the prototypes. The speaker need not say any of this. It can, in many situations (though, of course,   270
not all), be taken for granted as shared background knowledge.
    Now let's consider the phrase "significant amount of variation [in growth]" in sentence 2, the supposedly more explicit sentence. This phrase, too, must be understood in relation to a standard, but here the standard is not set by the speaker's activities alone, but by the activities, norms, and values of a particular discourse community, in this case, a community of a particular type of   275
biologist. *What counts as the sorts of variation worth measuring (in regard to growth) and what counts as significant, and how significance is measured (e.g., statistically), are settled by appeals to how a particular discipline (as a type of discourse and social practice community) does things.* Biologists of a certain sort have decided that certain things are worth measuring in certain ways. None of this is likely whatsoever to be explicitly stated in a report, say, in which sentence 2 might   280
figure, whether that report was uttered or written by a student or a professional. It is all part of the taken-for-granted context in which a sentence like sentence 2 is uttered or written and against which it must be understood.
    Both sentences need to be contextualized to be understood. Neither is "decontextualized." It won't do to argue that a text in which a sentence like 2 would occur will spell out all the necessary   285

background knowledge for "significant amount of variation." It almost certainly will not—it certainly need not—rehearse the history of how significance and variation have come to be defined and fought over in biology. Even professional papers in biology use certain statistical devices, for instance, without spelling out why that given statistic is valid. In most cases, a sentence like 2 will be uttered or written for readers who already know what they need to know to understand it, just as everyday vernacular speech is fashioned by taking into consideration what the listener already knows. 290

All speech and all writing, regardless of what social language is being used, is designed with a particular recipient or type of recipient in mind. When we use our vernacular, we design our speech for people we actually personally know or we assume that the person with whom we are communicating, if we don't know them personally, is a person, more or less, "like us" (where "us" is interpreted socially and culturally not just individually). When we use a given academic social language, we assume the person with whom we are communicating, in speech or writing, is a certain type of a person, for instance, in one case, a certain type of biologist or, in another sort of case, the type of person who can understand and appreciate "popular science." It is because of this recipient-design nature of all speech and writing that language-in-use is always integrally caught up with assumptions about (and ways of enacting and recognizing) *socially and culturally situated identities*. 295 300

ALL LANGUAGE IS CONTEXTUALIZED LANGUAGE, PART 2

Language of the sort that is held to be "decontextualized" is, in fact, very often more contextualized—even more vague—than vernacular language of the sort that is held to be "contextualized." There are good reasons for this. To see them, consider the sentence below (adapted from Halliday and Martin 1993, p. 77): 305

   3. Lung cancer death rates are clearly associated with an increase in smoking.

A whole bevy of grammatical features mark this sentence, like sentence 2 above, as part of a distinctive academic social language (though without more connected text we can't actually tell exactly which one). Some of these are the ways in which a heavy subject ("lung cancer death rates"), deverbal nouns ("increase" and "smoking"), a complex compound noun ("lung cancer death rates"), a "low transitive" relational predicate ("are associated with"), passive or passive-like voice ("are associated"), the absence of agency (no mention of who does the associating), an abstract noun ("rates"), and an assertive modifier to the verb ("clearly") pattern together in this sentence. 310 315

Sentence 3 is no more explicit than vernacular language. It is no less contextualized. It is simply inexplicit and contextualized in a different way. Though we tend to think of academic writing and speech as clear, unambiguous, and explicit in comparison with speech, sentence 3, in fact, has at least 112 different meanings! What is odder still is that anyone reading sentence 3 (at least anyone in our culture) hits on only *one* of these meanings (or but one of a select few) without any overt awareness that the other 111 meanings are perfectly possible. 320

How can sentence 3 have so many meanings and why do we all, nonetheless, hit on one and, in fact, exactly the same one? This fact is due to the grammar of the sentence. The subject of sentence 3 ("Lung cancer death rates") is a complex compound noun. There are a number of 325

different ways in which such a compound noun can be "parsed" (that is, in which its parts can be put together). Furthermore, "rates" can be taken to mean either "number" or "speed." There are, then, at least, four possibilities here:

4a. [lung cancer] [death rates] = rates (number) of people dying from lung cancer = how many people die from lung cancer   330

4b. [lung cancer] [death rates] = rates (speed) of people dying from lung cancer = how quickly people die from lung cancer

4c. [lung] [[cancer death] [rates]] = rates (number) of lungs dying from cancer = how many lungs die from cancer   335

4d. [lung] [[cancer death] [rates]] = rates (speed) of lungs dying from cancer = how quickly lungs die from cancer

The first two meanings above (4a-b) parse the phrase "lung cancer death rates" as "lung-cancer (a disease) death-rates," that is "death-rates from lung-cancer," where "rates" can mean number of people dying or the speed of their death from the disease. The second two meanings (4c-d)   340 parse the phrase "lung cancer death rates" as "lung cancer-death-rates," that is "cancer-death-rates for lungs," where, once again, "rates" can mean number of (this time) lungs dying from cancer or the speed with which they are dying from cancer. This way of parsing the phrase is analogous to the most obvious reading of "pet cancer death rates" (i.e., "cancer-death-rates for pets," that is, how many/how fast pets are dying from cancer). Of course, everyone reading this   345 paper probably interpreted "lung cancer death rates" in terms of 4a. Our question is why?

Now consider the verbal phrase "are clearly associated with" in sentence 3. Such rather "colorless" relational predicates are typical of certain social languages. Such verbal expressions are ambiguous in two respects. In the first place, we cannot tell whether "associated with" indicates a relationship of *causation* or just *correlation*. Thus, does sentence 3 say that one thing causes   350 another (e.g., smoking causes cancer) or just that one thing is correlated with another (smoking and cancer are found together, but, perhaps, something else causes both of them)?

In the second place, even if we take "associated with" to mean *cause*, we still cannot tell what causes what. You and I may know, in fact, that smoking causes cancer, but sentence 3 can perfectly mean that lung cancer death rates *lead to* increased smoking. "Perhaps," as Halliday   355 remarks, "people are so upset by fear of lung cancer that they need to smoke more in order to calm their nerves" (Halliday & Martin, 1993: pp. 77–78). It is even possible that the writer did not want to commit to a choice between *cause* and *correlate*, or to a choice between smoking causing cancer or fear of cancer causing smoking. This gives us at least the following meaning possibilities for the verbal phrase "are clearly associated with":   360

5a. cause
5b. caused by
5c. correlated with
5d. writer does not want to commit herself

Now, let's finish with the phrase "increased smoking." This is a nominalization, compacting   365 the information of a whole sentence ("smoking increases") into a noun phrase. Does it mean "people smoke more" (smokers are increasing the amount they smoke), or "more people smoke" (new smokers are being added to the list of smokers), or is it a combination of the two, meaning "more people smoke more"?

We can also ask, in regard to the death rates and the increased smoking taken together, if 370
the people who are increasing their smoking (whether old smokers or new ones) are the people
who are dying from lung cancer or whether other people are dying as well (e.g., people who
don't smoke, but, perhaps, are "associated with" smokers). Finally, we can ask of the sentence
as a whole, whether it is represents a "real" situation ("*because* more people are smoking more
people are dying") or just a hypothetical one ("*if* more people were to smoke we know more 375
people would die")? This gives us at least seven more meaning possibilities:

6a. increased smoking = people smoke more
6b. increased smoking = more people smoke
6c. increased smoking = more people smoke more
6d. the same people are smoking and dying   380
6e. the people smoking and dying are not all the same
6f. the situation being talked about is real (*because*)
6g. the situation being talked about is hypothetical (*if*)

We now have considered 4 possible meanings for the subject ("lung cancer death rates"),
4 possible meanings for the verbal phrase ("are clearly associated with") and 7 possibilities for 385
the complement ("increased smoking"). You can take one from list A and another from list B
and yet another from list C and get a specific combination of meanings. This gives us $4 \times 4 \times 7$
possibilities, that is, 112 different possible meanings.

All of these meanings are perfectly allowed by the grammar of sentence 3. And, in fact, there
are other possibilities I have not discussed, e.g., taking "rates" to mean "monetary costs" or "lung 390
cancer death rates" to be the rates at which lung cancer is dying. And yet—here's our mystery
again—nearly everyone reading this paper hit on just one of these many meanings and the same
one (or, at worst, considered a very few of the possibilities). Why?

The answer to the mystery here may be perfectly obvious to you, but I want to suggest that,
nonetheless, it is important for how we view language and language learning. We all hit on only 395
one (and the same one) of the 112 meanings because we have all been part of—we have all been
privy to—the ongoing discussion or *conversation* in our society about smoking, disease, tobacco
companies, contested research findings, warnings on cartons, ads that entice teens to smoke, and
so on and so forth through a great many complex details.

Given this conversation as background, sentence 3 has one meaning. Without that 400
conversation—with only the grammar of English in one's head—the sentence has more than
112 meanings. Obviously, however important grammar is, the conversation is more important.
It leaves open one meaning (or a small number of possibilities, like allowing that sentence 3 also
covers people getting lung cancer from secondary smoke).

A more technical way to put this point is this: meaning is not merely a matter of decoding 405
grammar, it is also (and more importantly) a matter of knowing which of the many inferences
that one can draw from an utterance are *relevant* (Sperber & Wilson, 1986). And "relevance" is a
matter deeply tied to context, point of view, and culture. One knows what counts for a given group
of people at a given time and place as "relevant" by having been privy to certain "conversations"
those people have heretofore had. If there had been a major conversation about environmentally 410
induced lung cancer in a nervous society, then sentence 3 could perfectly well have been taken to
mean that the prevalence of lung cancer is causing many more people to turn to smoking to calm
their nerves (2a + 3a + 4b).

So far, then, we have concluded, from this and the preceding sections, that we speak and write not in English alone, but in specific *social languages*. The utterances of these social languages, whether they be our vernacular or any later social language, have meaning thanks to being embedded in specific *social practices and conversations*. Academic social languages, that is, those social languages used in school and in academic disciplines, require one to contextualize them in terms of the practices, values, norms, and conversations of a particular academic discourse community. In a sense, such language is more deeply, not less deeply, contextualized than vernacular language. The reason for this is simple: people using such languages (like people using any specialist social language, including video game players or gang members) want to accumulate knowledge, assume insiders know it, and move on with their chose activities.

To teach someone the meaning of sentence 3—or any sentence for that matter—is to embed them in the conversational sea in which sentence 3 swims. To teach someone the sort of social language in which sentences like sentence 3 occur is to embed them in the conversations that have recruited (and which, in turn, continually reproduce) that social language. Minus that context, sentence three has way too many meanings.

ALL LANGUAGE IS CONTEXTUALIZED LANGUAGE, PART 3

Our first two arguments that decontextualized language does not exist are similar. They amount to demonstrating how context is and must be used to understand language of the sort that is typically said to be decontextualized. Our third argument is a bit different. This argument relies on the fact that meaning is always "situated" in the sense of being based on specific experiences we have had and practices with which we are (or are not) familiar.

Words and phrases, in use, do not have general meanings, but "**situated meanings**" (or "**assembled meanings**"). Words and phrases are associated with different situated meanings in different contexts, different social languages, and different domains of social practice (e.g., physics, theater, street gangs, courts of law, etc.). For example, consider what happens in your head when I say, "The coffee spilled, get a mop" versus "The coffee spilled, get a broom" versus "The coffee spilled, can you restack it" (Clark, 1989, 1993). In each case, you actively assemble a different situated meaning for "coffee" (as liquid, grains, or containers), a meaning fit for or customized for the situation you are actually experiencing.

The "concepts" or "meanings" with which words are associated are *assembled* out of diverse features, on the spot, in terms of the contexts and domains of social practice within which they are being used (Barsalou, 1999a, 1999b; Clark, 1997; Glenberg, 1997; Glenberg & Robertson, 1999). Different contexts and domains trigger different assemblies. Sometimes these assemblies are fairly routine and automatic thanks to having been done more or less in the same way on many past occasions; other times they require new work to come up with novel assembles for new contexts or domains.

Let me develop a bit more what I mean by saying that "concepts" or "meanings" are assembled on the spot (and for the spot, so to speak). In the context of our "everyday" experience, if we are asked a question like "How far does the light go?" while staring at a lamp, we are liable to answer: "Not far, only as far as I can see the light illuminate an area near the light source". In this case, we assemble a meaning for "light" that is something like "illuminated region".

In the context of physical science, on the other hand, we would answer the question quite differently and assemble a different meaning. In the case of physics, there are a number of different assemblies that could be associated with "light," one of which is "rays" ("lines of light") that travel indefinitely far and which can reflect off of surfaces. In terms of this assembly, we would answer to our question: "The light travels forever unless it reflects off a surface." Of course, there are other assemblies for "light" in yet other domains. For example, in the context of theater, "light" is associated with assemblies dealing with things like "lighting effects." Further, new assemblies do and can arise as domains change and interact or as new situations arise.

Situated meanings are, crucially, *rooted in embodied experience*–one has to "see" the meaning as a pattern extracted from the concrete data of experience (Barsalou, 1999a, 1999b). To do so one must have had lots of practice with experiences that trigger the pattern. Situated meanings are not "definitions". If one can not situate the meaning of a word or phrase, then one has only a verbal or definitional meaning for the word or phrase. Such verbal meanings, while they can facilitate passing certain sorts of tests, are of limited value when language has to put to use within activities.

The experiences in which situated meanings are rooted are ones we have had as embodied perceivers of the material world and as participants in various and sundry social practices, including rhetorical practices. Consider, for example, the following case of a high school student's first and second draft of a paper on "Albinism" (the two drafts were separated by a good deal of work on the part of the teacher):

First Draft:
Then to let people know there are different types of Albinism, I will tell and explain all this.

Second Draft:
Finally, to let people know there are different types of Albinism, I will name and describe several.

In the first case, the student appears to have formed situated meanings for "tell" and "explain" that have to do with telling a story and explicating the "big picture" ("all this") through that story. This is, of course, an activity the student has experienced a great many times, including in his "everyday" life outside of school subjects. However, the social practice here is not storytelling, but classification. If one has experienced the activity of classifying in academic domains of certain types, one would not be tempted to use "tell" and "explain" as this student has done in the first draft (note that "tell" and "explain" have other situated meanings in terms of which they could occur within a classificatory practice—for example, a teacher could write on a student essay: "You first need to tell your readers what the different types of Albinism are and then to explain how these types are distinguished").

On the other hand, one can readily situate more appropriate meanings for "name" and "describe" consistent with a classificatory social practice (though one can situate wrong ones for "name" and "describe," as well, of course, as in: "Scientists name different types of Albinism differently"). To do this one needs not to have seen anything, *but to have experienced certain sorts of acts of classification within certain sorts of domains that use classificatory social/rhetorical practices*.

I should note, as well, in passing, that even the student's second version is not quite right in terms of many academic domains' ways with classifying ("people" is wrong, and "name" is just a bit off—something like: "There are different types of Albinism. Below I list several of these

and describe them" would have been yet better). This example, simple as it is, tells us how subtle a process situating meaning can be.   500

So when anyone is trying to speak/write or listen/read within a given social language within a given domain of practice, the crucial question becomes, *what sorts of experiences (if any) has this person had that can anchor the situated meanings of words and phrases of this social language*? Otherwise, one is stuck with a merely general and verbal understanding (the sort that, alas, is often, nonetheless, rewarded in school, though useless in the world).   505

CONCLUSIONS

There is no space here to offer an answer to the question as to why children from some poor and minority families, as well as certain sorts of English-as-a-Second-Language speakers, fare poorly in our schools, an answer which would replace the decontextualized language answer. Nor was that my purpose in this paper. Rather, my purpose was to expose the limitations of the   510
decontextualized language answer and to lay out a different set of assumptions about language, literacy, and learning.

But any answer based on the assumptions developed here will have to come to terms with the fact that learning in school, from the primary grades on, is a matter not of learning "English" or "literacy" in general, but, rather, of learning specific social languages tied to specific com-   515
municative tasks and functions. In turn, these tasks and functions are tied to specific discourse communities, social practices, interests, norms, and values (e.g., those of certain branches of science or, in some cases, just "school science").

Learning any new social language, whether this is the style of language connected to particular sorts of literacy practices (e.g., what the Scollon and Scollon 1981 called "essayist literacy," that   520
is, the norms, values, and practices associated with essays) or the style of language connected to a particular domain in science, requires three key things. First, it requires the learner to learn how certain "ways with words" (patterns of grammar) match up with certain communicative functions and social practices. Why and where does one appropriately say "Hornworm growth exhibits a significant amount of variation" rather than "Hornworms sure vary a lot in how well   525
they grow"? In turn, this requires immersion in the communicative functions and social practices of people who use this sort of language. Large does of language out of context won't do (i.e., decontextualized language is the problem, not the solution). Only in this way can students gain situated meanings and not just general dictionary definitions that are of little or no use.

Second, people who use language like "Hornworn growth exhibits a significant amount of   530
variation" take on, as we have seen above, certain sorts of attitudes, values, norms, interests, expectations, even passions (which ironically they don't overtly express in some of their social languages). This amounts to what we can call a s*ocially-situated identity*. Any social language involves such a socially-situated identity, since when anyone speaks or writes in a given social language (or mixture of them), to understand them, we need to know *who* is speaking or writing,   535
in the sense of what sort of person with what sorts of values and attitudes is speaking or writing (e.g., a scientist, gang member, or policeman of a certain sort), and *what* they are doing, in the sense of what sort of function or social practice are they trying to bring off (Wieder & Pratt, 1990).

Learners cannot learn the socially-situated identity that goes with a social language and its associated social practices if such a identity is not coherently developed for them. And such an   540

identity can only be coherently developed as part and parcel of the creation of a coherent and meaningful community of practice ("culture," "discourse," whatever term we want to use) in the classroom. A community of practice (Lave, 1996; Lave & Wenger, 1991) networks learners collaboratively in terms of shared knowledge and overlapping skills in the pursuit of certain sorts of endeavors and practices in terms of which they must share certain values, norms, attitudes, interests, aspirations, and even passions.

Learners cannot learn the socially situated identity that goes with a social language and its associated practices if such an identity conflicts with the other socially situated identities they take on as members of other social and cultural groups using other social languages. This means that the community of practice created in the classroom must honor and allow for bridging across multiple identities. If the identity required to be (and speak, write, and think) like a science student in this classroom here and now requires me, however tacitly, to disown, dishonor, or feel poorly about my other identities and social languages (including languages other than English), then all bets are off—we have a perfect recipe for failure.

In the end, many children fail in school, because schools create no meaningful contexts. Some children get these contexts and their concomitant socially situated identities at home or otherwise outside school, some do not. The problem of school failure is not that certain children fail to master decontextualized language. It is that, for some children, language at school is decontextualized.

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