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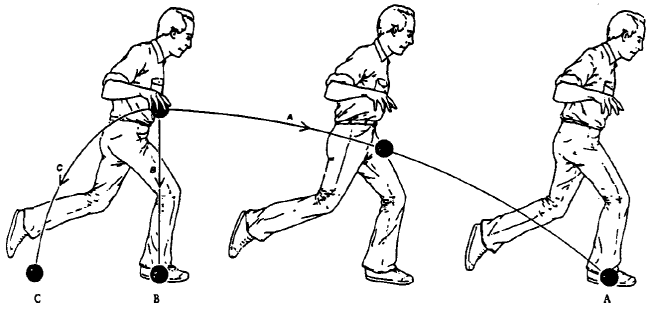
Hidden curriculum - lessons that are learned but not openly intended, such as the transmission of norms, values, and beliefs conveyed in the classroom and the social environment. Any learning experience may include unneeded lessons.

I couldn't find a list of examples of the hidden curriculum, so I am making one.

Feel free to join.

source	context	frequency	situation	lessons (propositions of interpretation)
my experience, (paraphrase)	grammar and high school, math lessons	few times per semester	student: *why are we learning this? Is there any use of it?* teacher: *If you won't learn this you can be cheated in the shop. How will you be able to count a change?* s: *but we will never use a quadratic formula for shopping!*	1. The teacher can't be so silly. He/She is a liar and it's again (see below) curriculum duty. 2. It's hopeless to discuss/talk about my position and purpose with the teacher (all adults?).
my experience, (paraphrase)	grammar and high school, various lessons	few times per semester	teacher: *Alright! I know it's a boring/unnecessary thing, but we have to do that since it's in the curriculum.*	1. The teacher is on our site. I just won't be too loud. 2. We have to do things that are unnecessary, even if we have better things to do.
my experience, (paraphrase)	grammar school, math lesson	once, but I guess it's quite a popular	teacher: *Zero is sometimes regarded as a natural number and sometimes is not. It's a topic in which professional mathematicians are engaged, and it's too hard for us to tackle it.*	1. There is some mathematical truth waiting to be discovered. It has nothing to do with the preferences of users.
Craig Barton How Craig Barton wishes he'd taught	university		Multiple-choice test.	Students learn what kind of answers are expected on tests. Like: "I think B because you *wouldn't see this in probability questions*." Craig did a test that checked that.

maths				
David Tall and his kid, A Child Thinking About Infinity	school	once	Kid wrote: *2↓3 = –1* He learned basic arithmetics on negative numbers using mercury thermometers. His answer was rejected without a feedback.	"I was amazed. I explained to the teacher what he had written, but she seemed embarrassed to be talking to a university mathematician. Back at home, I asked him if he was upset that the teacher marked it wrong. "No," he said, with a dismissive tone of voice, "she didn't understand."
Benny's Conception of Rules andAnswers in IPI Mathematics by S H Erlwanger	school, from 2nd to 6th grade	for Benny, it was a daily experience	• Switching ½ to 2/1 ("I think he usually was adding numerator to denominator, he knew that addition is abelian"). • 0.44 + 0.44 was equal to 0.0088, since "there are two decimals" and .2 + 8 was equal to 1.0 "I look at it like this: 2 + .8 is 1.0; put my 10 down; put my decimal in front of zero." He was able to get a good enough score somehow. .	• Rules are necessary in mathematics, because "if all we did was to put any answer down, [we would get] 100 every time. We must have rules to get the answer right." • **He believes that there are rules for every type of problem:** ("Infractions, we have 100 different kinds of rules.") • He thought these rules were invented "by a man or someone who was very smart." This was an enormous task because "It must have taken this guy a long time… about 50 years… because to get the rules he had to work all of the problems out like that…". • From the rule "the key has only one good answer" he inferred that all his answers are good (since ½ = 2/4 = …), but for some reason, they are not in the key - one has to guess what will be in the key. **He believes that his answers are correct, and the key has only one of the answers.** His task then

				becomes that of "**chasing answers" which agree with the key. He does this by altering his answers.** It was hard to unlearn all those rules. After a few lessons he was providing more answers correctly but still picture/physical interpretation, notation were completely different things to him.
Robin Hanson, in essay Better Babblers, anecdotal	university	regularly	"After eighteen years of being a professor, I've graded many student essays. And while I usually try to teach a deep structure of concepts, what the median student actually learns seems to mostly be a set of low order correlations. They know what words to use, which words tend to go together, which combinations tend to have positive associations, and so on. But if you ask an exam question where the deep structure answer differs from the answer you'd guess looking at low order correlations, most students usually give the wrong answer."	
-McCloskey, M. (1983). Intuitive physics. Scientific american, 248(4), 122-131.	university/high school/primary school	regularly		Students learn by applying abstract rules to generic exercises. But they were schooled to acquire new intuition about the physical world. btw Physics novices think about physics in fundamentally different ways from physics experts [Bransford et al. 1999]. Physics novices focus on surface features of problems rather than on the underlying concepts.

-			3% of high school and primary students answered A. Even after the Newtonian physics course.	They try to recall any formula that seems to match the surface features of the problem they have eencountered[Chi et al. 1981; Hardiman et al. 1989]. For example, physics novices focus on the physical objects in a physics problem (e.g., inclined planes, blocks, balls, words like“momentum”), and then they try to recall any formulas that match the variables and objects of the problem. However, physics experts focus on the principles that can be used (e.g. conservation of energy, work) and then use these principles to guide their use of strategies and formulas (Bransford et al. 1999).[1]
Better Babblers (overcoming bias), anecdotal	university	regularly	*[it seems that] the median student learns seems to mostly be a set of low order correlations. They know what words to use, which words tend to go together, which combinations tend to have positive associations, and so on. But if you ask an exam question where the deep structure answer differs from the answer you'd guess looking at low order correlations, most students usually give the wrong answer.* *Simple correlations also seem sufficient to capture the most polite conversation, such as the weather is nice, how is your mother's illness, and damn that other political party. Simple correlations are also most of what I see in inspirational TED talks, and when public intellectuals and talk show guests pontificate on topics they really don't*	

[1] Herman et al., 'Describing the What and Why of Students' Difficulties in Boolean Logic'.

			understand, such as quantum mechanics, consciousness, postmodernism, or the need always for more regulation everywhere. After all, media entertainers don't need to understand deep structures any better than do their audiences.	
Schoenfeld (1985)	school	regularly	Some students characteristically perform meaningless calculations on a problem, with ch no attention paid to whether or not the particular approach is justified, or progress being made. Instead, **students invoke schemata apparently based on such phenomena as recency or familiarity**.[2]	
My friend	Primary school	Once	Learning that negative times negatives gives positive.	Why? Because rearranging two minus signs one can draw a +. This is a neat memory trick. But no understanding is involved (compared to Benny).
Epp 2003, found in Herman et al.	University, logic course	noted once, happens probably regularly	Problems in boolean logic, e.g. interpreting IF as AND.	"Numerous studies have revealed that students' logical misconceptions may originate in the classroom as mathematics and science instructors frequently possess logical mis-conceptions that they propagate to their students [Goetting 1995; Harel and Sowder1998; Jungwirth 1985, 1987, 1990]. Other researchers suspect that students learn non-rigorous proof techniques by watching instructors demonstrate difficult concepts through a few examples of counterexamples rather than in-depth proofs [Epp 2003].

[2] Perkins, D. N., & Simmons, R. (1988). Patterns of Misunderstanding: An Integrative Model for Science, Math, and Programming. Review of Educational Research, 58(3), 303–326. doi:10.3102/00346543058003303

				Epp proposed that students develop misconceptions about propositional statements because many propositional statements are open to a variety of interpretations in everyday language [Epp 2003]. In everyday speech, statements are often ambiguous, since there are different acceptable interpretations for these statements in different contexts."[3]
"Describing the What and Why of Students' Difficulties in Boolean Logic"	University, Students who had earned B and C grades (1.7 to 3.3 on a 4.0 scale) on a digital logic course. N=17	once, but shows the general pattern	"INTERVIEWER: Can you walk me through how you would fill in this truth table? SUBJECT 10: So I could do a Karnaugh map, but I forgot how to do a three-variable Karnaugh map so I'm not going to. Subjects were proficient with manipulating the basic tools of Boolean logic. All subjects could correctly fill in a truth table when given a complex Boolean expression. All subjects could derive a Boolean expression for a given truth table. Subjects could even simplify Boolean expressions during this derivation."	"However, subjects demonstrated that **they did not fully understand the purpose of the different tools and representations of Boolean logic**. When asked to fill in a truth table based on a logical statement, Subject 10 said that he should fill in a Karnaughmap in order to fill in the truth table. The enumeration of cases to prove the correctness of a logical expression (proof by exhaustion) is a foundational law within Boolean logic, yet subjects often felt they had proved equivalence after enumerating only one or two cases. When the structure of the problem presentation forced subjects to fully enumerate all cases (e.g., fill in a truth table), subjects corrected mistakes that they had failed to discover when they used proof by incomplete enumeration. Although using exhaustive proof techniques helped subjects solve problems correctly, subjects were reluctant to use these proof techniques. Some expressed open dislike for using truth tables and **other "brute force" methods**."

[3] Herman et al., 'Describing the What and Why of Students' Difficulties in Boolean Logic'.

				It seems like bc sometimes they had luck they inferred that filling all cases of truth tables is not necessary. Students also **learned not to like** truth tables.
Friend (Karolina, Weronika W. friend)	2nd grade, primary school		Compulsory religión clases.	Karolina liked going to church. She played with the rosary with friends. Jesus on cross was considered a funny figure.

Draft

“Hidden curriculum” outside school

By that, I mean unintended lessons from a life in general, especially in situations when teaching intention was present. There are also situations when our reasons are flawed, but our behavior is just as if we knew perfectly well.
I am especially interested in context when adults decide to teach X and the result of this teaching is doing as if X was learned, but actually what was learned is different. Force eating is a great example of what I mean here - outcome agrees with adults intention (child eats), but

source	context	frequency	situation	lessons (propositions of interpretation)
https://www.theatlantic.com/family/archive/2018/06/marshmallow-test/561779/ [add: link to the original paper]	people in poor families	poor ppl all the time	Living in a poor family is living in conditions of uncertainty.	Use something now, since tomorrow you might not have this possibility.
Ziemowit, my friend	holidays with grandparents, while he was 5 years old	once	Grandpa force-fed Ziemowit.	Ziemowit claims he remembers what he thought back then vividly: [looking at his stomach] *aha, so I have to have a big belly* (in polish: “aha czyli muszę mieć duży brzuch [patrząc się na brzuch]”).
me and Paul graham	everybody in cities	all of us the time	Cities	

pluralistic ignorance		all of us the time		
anecdotal sources,	eg color blind ppl, autistic ppl, aphantasia, (and probably everybody in a mild version of it			

To do

Add examples from:

- https://math.vanderbilt.edu/schectex/commerrs/

Same output, different understanding:

- Classical mechanics is deceptively simple. It is surprisingly easy to get the right answer with fallacious reasoning or without real understanding.
  from: **Structure and Interpretation of Classical Mechanics: Chapter 7**
  https://www.gnu.org/software/mit-scheme/documentation/mit-scheme-user/Unix-Installation.html
- According to the wait but why do kids watching morally good characters doing bad things, would try to imitate them. It seems to me to be good/bad to be true, sources needed (wbw).
- You can try to do a little research: ask people about the definition of some relatively rare word. In my case, it was a pier (Molo in polish). People define it by some combinations of a position to the edge of the water reservoir (perpendicular), length (quite lengthy, otherwise is a pomost/mostek), lack of connectedness between opposite shore, material (it has to be wooden), being on the sea. Usually, we don't have to be precise, and most peers share most of the above characteristics. So when we say (output) pier we understand each other sufficiently well.

What about that?

- Scientists communicating with the media - recently IPCC guys checked what will be understood by some prepared bits of information. They were struck what 'garbage' was decoded (source: https://podcasts.ox.ac.uk/twelve-years-climate-disaster)

Add a story about my dog beef steak rescue kids (in pessimist archive ice).
Goodhart's law (measure becomes a target) is a subset of HC.

Generalize hidden curriculum as misplaced transfer of learning (?).

What misconceptions are coherent, which are random?

There are two diverging theories about the nature of a novice's conceptual knowledge. One theory argues that a novice's misconceptions are coherent and consistent [Carey 1999; Vosniadou and Brewer 1992], but the other argues that a novice's knowledge is fragmented and unpredictable [Clement 1982; diSessa et al. 2004; Wollman 1983].

Why is a hidden curriculum important?
It's useful in pedagogy. Maybe it will be useful in figuring out how thought processes work.
With the advent of bioengineering, we will have to be careful which traits we select. I think a hidden curriculum will be helpful since it's about flipsides of situations.

Hidden curriculum in politics
I just saw a tweet with a video where a person started yelling at the person with a t-shirt with a neo-Nazi band. Most comments were about demanding more aggression towards the Nazi guys. There is a hidden lesson behind this: you can be aggressive towards X. Other questions what if there is no intervention.