

Select quotes coded as references to pollution (UW mental models interviews conducted summer 2015: A. Bostrom, M. Mossler, K. Crosman, and colleagues, with funding from NSF 1430781):

Interviewer: What factors, if any, might be changing our climate?

[Undergraduate male] “Um, lots of pollution, like you know CO2 releases, and other gases too. I mean I think you know a lot of them have been sort of, you know they’ve been reduced a lot, but you know, like, pfft, what do you call them, like the cyclohexane based sort of chemicals and stuff like that, I mean they aren’t super used a lot anymore, well in the U.S. at least, probably all the places in China still use them and other countries.”

From three other students:

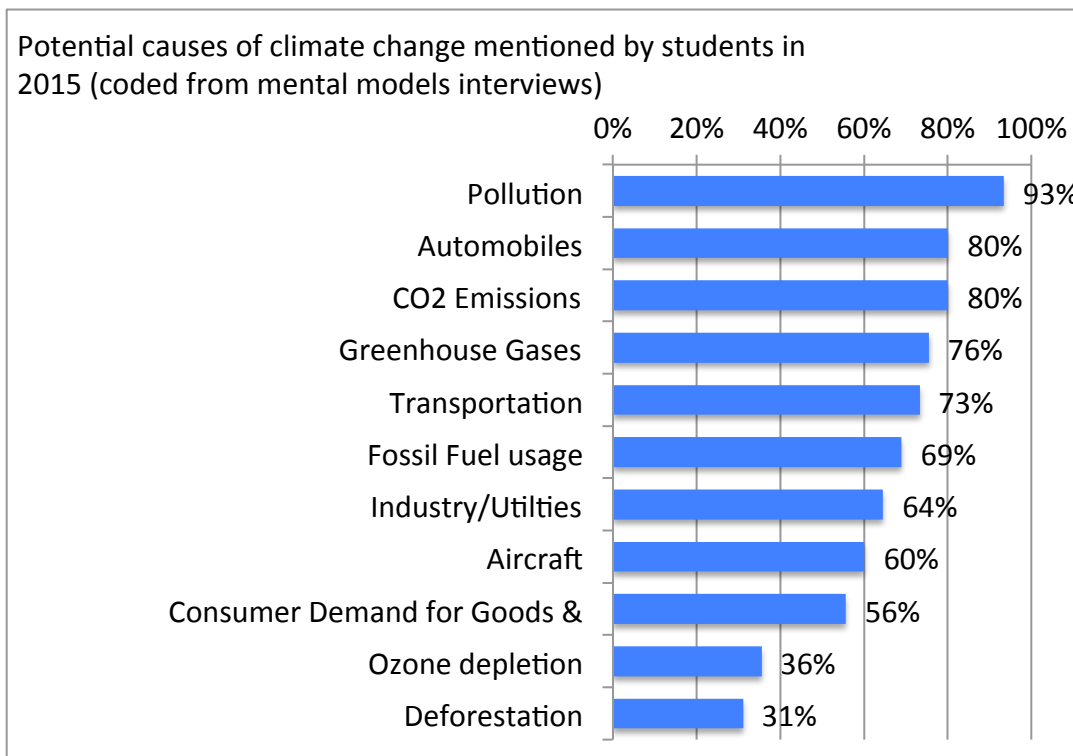
“Air pollution... Climate change... Yeah, maybe global...Um...I feel air pollution and temperature, like the increase of the temperature, global warming, they might not be equivalent because air pollution is like making the air to be very dirty. Air pollution will cause a lot of disease, but not necessarily the temperature getting higher.”

“So I think that the, the things that I mentioned that people are doing to try to reduce climate change reflect what thoughts you have created climate change, which is, um, like extreme pollution. [...] The greenhouse effect is, um, the, has to do with getting, um, things trapped within the atmosphere, and I think that those things are pollutants...”

“So the air pollution occurs because of the exhaust from the fossil fuels burning and carbon dioxide and carbon monoxide getting released in the air and that is causing the ozone layer to deplete and that’s why, that’s why it’s directly related to greenhouse effect.”

From a single student at different points in the interview:

- “fuels, when you burn them, they cause pollution...”
- “I mean, a couple of things which I can think of would be, um, pollution.”
- “...building industries in that area, er, which again lead to pollution.”
- “...mainly I feel it’s mainly got to do with pollution.”
- “... the level of carbon dioxide has been rising a lot and er, with pollution, mainly er, the pollution involves either carbon dioxide or carbon monoxide so those are a couple of things which could cause pollution to the environment and cause climate change.”



About the same proportion of public interviewees mentioned pollution in a 2008 public (arts fair) convenience sample in Seattle.

% of Total

N=1013, Mturk Apr2016

q16.6 Air pollution is a major cause of global warming.

q16.5		FALSE	Maybe False	Don't Know	Maybe True	TRUE	Total
Burning fossil fuels (e.g., coal and oil) is a major cause of global warming.	FALSE	2.4%	0.3%	0.4%	0.4%		3.5%
	Maybe False	0.5%	1.7%	0.9%	0.9%	0.2%	4.1%
	Don't Know		1.1%	2.7%	2.1%	0.3%	6.1%
	Maybe True	0.2%	0.8%	1.5%	17.4%	6.8%	26.7%
	TRUE	0.3%	0.5%	1.3%	11.8%	45.7%	59.6%
Total		3.4%	4.3%	6.7%	32.6%	53.0%	%

Gamma=0.832, p<0.001

N=1013, Mturk April 2016, % of total, *Gamma=0.839*

q40.2 If the world's modern factories, transportation and power plants stopped emitting carbon dioxide (CO2), how fast would the amount of CO2 in the atmosphere fall to what it was before those things were invented?

q40.1 If the world's modern factories, transportation and power plants stopped emitting the sort of pollutants that cause acid rain and smog, how fast would the amount of those pollutants in the atmosphere fall to what it was before those things were invented?		Hours to days (1)	Weeks to months(2)	Years (3)	Decades (4)	Centuries (5)	Never (6)	Total
Hours to days (1)	0.40%	0.30%	0.10%	0.20%				1.00%
Weeks to months(2)	0.10%	3.30%	1.50%	0.70%	0.40%	0.20%		6.10%
Years (3)		2.10%	17.90%	5.10%	0.90%			26.00%
Decades (4)		0.60%	5.30%	31.00%	5.00%	0.20%		42.20%
Centuries (5)		0.10%	0.50%	4.20%	14.60%	0.50%		19.90%
Never (6)		0.20%	0.20%		1.00%	3.50%		4.80%
Total		0.50%	6.50%	25.50%	41.30%	21.90%	4.30%	100.00%

% of Total, N=998, Mturk Apr2016

q40.3 Were it possible, stopping carbon dioxide (CO2) emissions worldwide now would

q40.2 If the world's modern factories, transportation and power plants stopped emitting carbon dioxide (CO2), how fast would the amount of CO2 in the atmosphere fall to what it was before those things were invented?		Speed up climate change (-1)	Have no immediate effect on climate or climate change (0)	Slow climate change immediately (1)	Stop climate change immediately (2)	Total
Hours to days (1)	0.10%		0.20%	0.20%		0.50%
Weeks to months(2)	0.10%		1.00%	5.00%	0.40%	6.50%
Years (3)	1.00%		5.40%	18.50%	0.60%	25.60%
Decades (4)	0.70%		11.10%	28.50%	0.90%	41.20%
Centuries (5)	0.30%		8.00%	12.90%	0.70%	21.90%
Never (6)			2.50%	1.60%	0.20%	4.30%
Total		2.20%	28.30%	66.70%	2.80%	100.00%