It certainly seems that doing something like this would help.

This idea isn't discussed in Rob Miles's <u>video</u> or <u>the paper</u> it is based on, because even though there's a plausible case that it's helpful, there isn't a provable guarantee.

This is important, since a <u>quantilizer</u> isn't really something you can actually build. The systems we study in AI Safety tend to fall somewhere on a spectrum from "real, practical AI system that is so messy and complex that it's hard to really think about or draw any solid conclusions from" on one end, to "mathematical formalism that we can prove beautiful theorems about but not actually build" on the other, and quantilizers are pretty far towards the 'mathematical' end. For one thing, it's not practical to run an <u>expected utility</u> calculation on every possible action like a quantilizer would. But proving things about quantilizers gives us insight into how more practical AI systems may behave, or we may be able to build approximations of quantilizers, etc.

So if we built something that was quantilizer-like, using a sensible human utility function and a good choice of safe distribution, this idea would probably help make it safer. But you probably can't prove that mathematically without making a lot of extra assumptions about the utility function and/or the action distribution. So it's a potentially good idea that's nonetheless hard to express within the mathematical framework in which the quantilizer exists.

TL;DR: This is likely a good idea! But can we prove it?

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