

Why Alcohol & Coffee Taste Bad At First & Later Taste Good | Dr. Charles Zuker & Dr. Andrew Huberman

Kids don't seem to like certain vegetables but they all are hardwired to like sweet tastes. And yet you could also imagine that one of the reasons why they may eventually grow to incorporate vegetables is because of some knowledge that vegetables might be better for them. So is there a change in the receptors, the distribution, the number, the sensitivity, et cetera, that can explain the transition from wanting to avoid vegetables to being willing to eat vegetables simply in childhood to to early I'm gonna take the question slightly differently but I think it will illustrate the point and and I wanna just illus use the difference between the olfactory system and the taste system to make the point taste system. Five basic palettes. So it's our beam each of them has a predetermined identity. We know exactly what and veil these are attractive. These are aversive in the factory system. It's claimed that we can smell millions of different os yet for the most part none of them have an innate predetermined meaning in the olfactory system. Meaning is imposed by learning and experience even the smell of smoke. So I'm gonna give you I'm gonna make it differently. They are a handful of the millions of others that were claimed that that you could immediately tell me these are aversive and these are attractive vomit. So vomit it's not correct because I can assure you that their cultures and societies where things which are far less appealing than vomit do not evoke an aversive reaction. Really really sulfur would be maybe a universal. I'm not talking pheromones. Ok Pheromones are in a different category that trigger innate responses. But nearly every other is afforded meaning by learning and experience. And that's why you like broccoli and I despise broccoli because I remember my mother forcing me to eat broccoli same sensory experience. All right. This this accommodates two important things. In the case of taste you have neurons at every station that are for sweet for sour for bitter for salty and umami. It's only five classes. So it's not gonna take a lot of your brain if we can in fact smell a million others and everyone else of others had to have predetermined meaning there's not gonna be enough brain just to accommodate that one sense. And so evolution in its infinite wisdom ee evolve a system where you put together a pathway and a cortex olfactory cortex where you have the capacity to associate every other in a specific context that now gives it the meaning. No let's go back to the original question then. So other than clearly plastic mega plastic because

it's its fundamental basis and neural organization But this we just told you that you know predetermined hardware but predetermined hard wire doesn't mean that it's not modulated by learning or experience It only means that you are born like in sweet and dislike in bitter And we have many examples of plasticity beer being one example So why why do we learn to love beer is in a coffee is because it has an associated gain to the system and that gain to the system that positive valence that emerges out of that negative signal is sufficient to create that positive association And in the case of beer of course is alcohol the feeling good that we get after is more than sufficient to say I wanna have more of this And in the case of coffee of course is caffeine inactivating a whole group of neurotransmitter systems that give you that that high associated with coffee So yes the state system is changeable It's malleable and is subjected to learning and experience But unlike the olfactory system is restricted Yeah in what you could do with it because its goal is to allow you to get nutrients and survive The goal of the olfactory system is very different It's being used not in our case but in every animal species to you know identify friend versus foe to identify mate to identify ecological niches they wanna be in So it plays a very broad role that then requires that it be set up organized and function in a very different type of context This is about can we get the nutrients we need to survive And can we ensure that we are attracted to the ones we need and we averse to the ones that are going to kill us