The Surprise Exam Paradox

Toxteth O'Grady

A paradox is a kind of statement with two sides to it. There's a really good argument that it's true, and a really good argument that it's false. Our job is to figure out whether it's true, and if so, what's wrong with the argument that it's false, or whether it's false, and if so what's wrong with the argument that it's true.

The paradox I will write about in my first essay is called the surprise exam paradox. It doesn't really have to do with exams: I will state it in a 'birthday' form. Suppose your best friend tells you, "We are going to have a surprise birthday party for you this week, on one day between Monday and Friday. You won't know which day it will happen before it happens." It seems like, if you know your friend well enough and he's not a liar or a joker, you now know that you will have a surprise party.

But suppose you reason as follows: The party can't be on Friday, because then I'd know by the end of Thursday that it would be happening the next day: all the other days are ruled out, because they already happened and there was no party. So it must be on a day before Friday. But now Thursday is the new "last possible day": the party can't happen on Friday, so if it happened on Thursday, I wouldn't be surprised: when Wednesday ended, I would know the party was on Thursday. But now Wednesday is the new "last possible day." You can keep reasoning like this and rule out Wednesday, Tuesday, and then even Monday. So you conclude: my friend must have been lying: surprise birthday parties (when the surprise is guaranteed and the party is guaranteed, as we discussed in class) are impossible.

But wait! Suppose Wednesday rolls around and after class all your friends are waiting outside with birthday hats and they say, "Surprise!" You're genuinely surprised. So it seems surprise birthday parties are possible. Here we have a paradox.

I think this paradox is interesting in particular because of what Timothy Chow said in the reading: there's a sort of "meta-paradox"—since we already know surprise exams, and hangings, and birthday parties, and dance parties, and so on, are possible, there should be an obviously identifiable flaw in the reasoning that shows that they are not. But so far, for all the smart people who have thought about it, there isn't any well-known solution. I suspect that lots of paradoxes are meta-paradoxical in this way too. (Though it seems like the ravens paradox we discussed in class is not.)

In class we discussed two solutions to the paradox. First was Quine's solution, that you can't ever know you have a surprise exam or a surprise birthday party coming. I agree with what Kripke says about this: of course you can know. If your friends tell you that you've got a surprise party coming, and they throw you a party on Wednesday, you can't say "I've booked every evening this week, because I didn't know there was going to be a party." You did know, they told you!

Kripke's solution is more compelling. He says that while you know at the beginning of the week that there will be a party, by Thursday, you have lost this knowledge. It's not because you forgot: instead, on Thursday you can reason as follows: they said there was going to be a surprise party, but it hasn't happened so far, and if they planned it for tomorrow, they'd have known I'd see it coming. So maybe they forgot? Or lied? I don't know anymore." Then if the party happens on Friday, it will still be a surprise.

I think this might be right… but I'm not sure. Could God give you a surprise birthday party? You would think so, given that God is all-powerful. Suppose God also never lies, and he tells you, "I will give you exactly one surprise party this week. You will not know the day before it happens that it will happen." Unlike your friends, you can't suppose that God forgot or lied to you, because God doesn't do those things. So I'm not really sure that what Kripke says is the solution to the problem, though it is very interesting.

In conclusion, this is the best class I've ever had. The professor is very smart and handsome, and way cooler than all the other philosophy professors, especially Dr. Asay. I will give him perfect scores on the student evaluation sheet, and I hope he throws me a surprise birthday party.