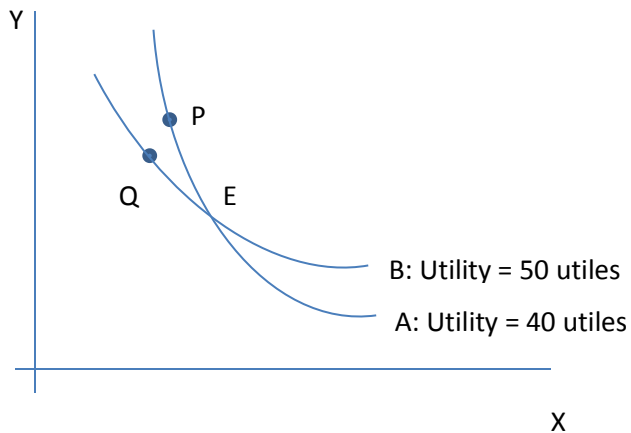


## Extra Reading 4 : Indifference Curves and Preferences

Bibaswan Chatterjee – ECO 182: Summer 2015

Why is it logically inconsistent to think of two indifference curves intersecting?



Consider two goods X and Y. From the preference ordering we know that all bundles on indifference curve B give 50 utiles, which is more than what the bundles on curve A give, i.e. 40 utiles. You like bundles which give you higher utility.

When the curves are drawn, suppose you (or I) draw them such that, the two indifference curves A and B intersect at point E. Now look at the bundles P and Q.

1. P and E lies on the same indifference curve B. So  $P \sim E$ .
2. P lies on a higher indifference curve than Q. So  $P \succ Q$ .
3. But Q and E lie on the same indifference curve as A. So  $Q \sim E$ .
4. If the preferences are transitive (and we assume they are), 2 and 3 tells us that  $P \succ Q \sim E$ , or  $P \succ E$ .
5. But then, the conclusion in 4, violates 1!
6. Bottom line: The curves should not have intersected at E.

Intersecting indifference curves is not acceptable. They do not intersect. As you can see from this example, intersecting the indifference curves just made our preference ordering a mess.