

summary So research is science the problem with that is I can say to you it's science but you're all going to have a different view of what sciences and your views of what sciences and what other people those who study these things their views of what sciences they're very wide apart they're very different in other words the common view of what science is not the real view of what sciences there was a big debate about what is science and there are there are two disciplines that I mentioned there one's epistemology in one's ontology they're a part of this debate and the general word for the name for the debate you might call it all the philosophy of science ok now just some working definitions this word epistemology comes from a Greek word episteme this to me a Greek word it's anything to do with knowledge all right so if you when you see the word epistemology just think knowledge ok that's your first thing think knowledge so what are the questions that we can ask about knowledge first of all there's the question what counts as knowledge what counts as knowledge and usually what counts as knowledge it gets contrasted with what is belief what is belief so to say you know something is supposedly stronger than saying that you believe something so you might all believe something different but your knowledge could be the same well that's one way I wouldn't I wouldn't I wouldn't go too hard on that I was you but that's the sort of way that these words get used all right so we've got this question of what counts as knowledge. Now the question of what counts as knowledge as a branch of epistemology that leads us once we say what we think knowledge is then we then have to go on and say how you acquire it how you get knowledge how you gain knowledge and one possible answer to that is that this is what science is about gaining of knowledge that's one answer and then there's this whole question of when you've got knowledge how good is it and you all know that we had Newton's theory of gravitation and everybody thought that was pretty good until Einstein came along and Newton's theory of gravitation was just wiped out totally we don't use that or need that anymore. We now have another theory of gravitation totally different so Newton's gravitation is gone it's gone in the sense of the theory and the importance of the theory doesn't mean we don't use it practically for a whole lot of stuff when people get blasted off to the moon and the Chinese space program that's going very actively at the moment the mathematics that they'll do there will be Newton's physics Newton's mathematics but nevertheless we know that it's wrong we know that it doesn't work in certain circumstances but it works well enough to seem people to the moon okay so epistemology anything to do with knowledge what's ontology we thought system ology was awkward enough you want to try ontology is about what there is what exists ie what you've got to explain all right what you've got to explain I'll give you an example in the physical sciences there's really only two things that they've got matter and energy as in waves matter and energy physics says there's matter and energy and we're going to explain their okay so if somebody comes along and says I saw a ghost over there this white thing just sort of thought I saw a ghost well science can't really address that unless there is matter or energy you could believe in ghosts or gods or whatever you want to believe in but science can't look at that because science is restricted itself to matter and energy as waves science can investigate heat because when I walked over here it was very warm and I could even feel it on my umbrella yep science can investigate that all right but if I have some sort of strange idea that there is a God giving us Heat science can't investigate that because it's not matter or energy so ontology is about what there is to investigate and ontology becomes really important in relation to the social sciences let

me show you an example which I sometimes use let's say in physics we're going to do a little demonstration we're going to drop this thing and it will go down there at a certain rate won't it will accelerate that way we know that and we can calculate when it's going to hit the floor right so if we know it starts here we know the distance we can accelerate okay let it go now it didn't hit the floor did it so if we're doing physics how does physics explain that it didn't hit the floor you see the problem I sucked you in I said to you right we're talking physics here this thing when I drop it it's going to go down and we can calculate when it hits the floor and that's true we can and that's fine and we could do lots of these things and we could measure it and it would all be good but in this particular case when it went down I grabbed it now if science is about trying to produce predict the future if science is about trying to predict the future what account can you give what account can you give to explain my grabbing it what explanation can you give the problem is that you can't give an explanation from physics because my grabbing it didn't come from physics it came from me so you've got this big difference between the explanation and physics and the explanations that come that are about people right about people and that's the difference between explanations in the physical sciences and explanations and the social sciences and guess what in your business research you are in the social sciences you're trying to explain things that are to do with people and that's a heap harder than trying to explain things in physics much more of a challenge so you think people sometimes think business research part of social science must be easy actual fact it's probably about as difficult as research gets to do it well ok so let me just summarize we've looked at the various ways that you can you can classify research we talked about four different approaches to classifying research we focused on the fact that research comes from science by way of business research being dry from social science research and that is derived from physics and . physical