

“Dialogues on risk”

Characters: the expert and the lay person

Dialogue 1

Scenery : Standard view

Expert: The risk analysis shows that the risk is actually almost zero. Therefore it is recommended to follow on with the economically most optimal measures already in place.

Lay person: I see. But, are these measures really sufficient, don't we need more important measures? You said the risk is almost zero - is the risk high or low? What is the level of risk? I did not get it clearly.

E: Low and high are neither accurate nor objective values. Based on the calculated risk it is clear that we have to take the measures.

L: Is your risk assessment objective?

Dialogue 2

Scenery : Reflexivity

Expert: When we assign the highest priority to the life safety, my analysis says that your risk in this building should be quite low.

Lay person: How can you be sure your analysis is objective?

E: A good question. I do not really claim for objectivity. I try to model the risk mathematically based on the knowledge available. Clearly, I want to produce results which may be useful for taking decisions affecting our future.

L: So, there is a model, which is oriented for something, if I understand correctly.

E: Of course, all the relevant facts have been taken into account, and the method is objective.

L: How can you be sure to have taken everything into consideration?

E: Because we use scientific methods everything is taken into account.

L: But, tell me what is your personal opinion about the acceptability of the risk?

E: In fact the results of the analysis coincide with my personal opinion, because I believe in the rationality of the method.

L: Ah. Tell me something else. The measures you told us to continue to implement are actually favouring a particular country and a particular industry, aren't they? It looks like as if your analysis is biased?

E: My assessment is based on logical-rational analysis, and goes not beyond. However, you should turn to the experts in economics.

E: Yes, this is a model which serves for a specific purpose. It is intended to do so.

L: Can you explain me how it works?

E: Oh well, I will try to do so. As you know, I just stick to one hazard, the earthquake hazard. What would you do, if you had to assess this hazard for your own?

L: I would think of all those things that could happen in connection with earthquakes.

E: So do I, and I'd like to call this procedure scenario thinking. The point is, that there are consequences which cannot be accounted for in a calculation. You cannot for example model mathematically psychological harm? That is why we start here with a qualitative description of a scenario of an earthquake.

L: But earthquakes do not occur here.

E: Oh yes, they do, and this brings me to the next point. As you realized yourself there are different possible scenarios. To each scenario a certain probability of occurrence is associated. So in the end, what I understand as risk is the scenario,

- L: Again, you said the risk is low ...
But, I heard your colleague on TV last night saying something different regarding the risk. Therefore experts are not speaking the same voice.
- E: Yes, they do, although there is room left because of the uncertainty factor. That is why you had the impression of a difference, but the results remain the same.
- L: I still do not understand. Your analysis of the risk is objective, while there is an important factor of uncertainty? How can you reconcile these two elements?
- E: Uncertainty is included in the model we use as a mathematical variable.
- L: But if the risk is high, and I tend now to believe the risk could be higher than what you stated. And if it is the case, we will have to consider to take better measures. I begin to distrust you.
- E: I think you misunderstand science. You need a better understanding of science.
- L: Well, my understanding of science
- the consequences, and the probability all together. Whereas the calculated risk is the result of multiplying the quantifiable consequences and the probability.
- L: How, for example do you come to a probability of the occurrence of an earthquake?
- E: This is really a weak point. I must rely on the results of seismologists. What I try to do is to deliver with the risk results, a measure of confidence.
- L: But how can you find out, if the risk is acceptable.
- E: This is what we have to discuss together. The decision is yours too.
- L: Ah, ah, what is your personal opinion?
- E: Personally, I feel that the risk is acceptable. But, I cannot decide in your place.
- L: Ah, well, I think that to make my

is certainly not as yours. Although I may know already enough to make my mind. I think one of the real problem is that there is no place for people in your knowledge.

In conclusion, consider the fact that as a woman, I know things you have no idea. I could be an expert too. An expert of the needs and of the use of a certain technique.

mind, I need to figure out again what the consequences could be. What about the consequences you cannot account for?

E: Yes, my colleagues and me came to the conclusion, that we have to work on this is issue on a transdisciplinary basis.