Competence: the quality of being competent; adequacy; possession of required skill, knowledge, qualification, or capacity.

Dictionary.com
Now, of course, this kind of thought-experiment has to be treated with much care. Numerous idealization and simplifying assumptions are made and so our conclusion should be carefully chosen. This much, however, seems reasonable: the result should caution against taking the fact that a decision-maker has successfully avoided avalanches over a long period of time as significant evidence that he/she is competent.

This points to something very important. If competent decision-making in avalanche terrain is somewhere between the ludicrous Joker case who merely guesses and the case of Erika the archer who is extremely reliable and highly skilled, we have to acknowledge that simply looking at the outcome of exercising that competence is not the right approach to finding out whether someone is competent. To put this into a slogan, we can say: competence (most often) leads to success, but success itself does not indicate competence. So, we have to acknowledge that snow is a “wicked” learning environment with inconsistent feedback mechanisms that do not always properly reflect the appropriateness of an individual’s decision-making.

Given this, the next step should be to inquire into what we can take as good evidence for regarding someone as a competent or incompetent avalanche decision-maker. Unfortunately, things are not straightforward and so let me finish by making some short remarks.

1. First, if you repeatedly misjudge the stability of a slope and end up in avalanches, it’s time to reconsider your decision-making skills (and/or your risk attitude). Success is not a guarantee of competence, yet repeated failure is a decent indicator of a lack of competence.

2. Second, an indicator of a lack of “full” competence is when a decision-maker puts forth overly confident “certainty” judgments. A truly competent decision-maker will always take into account the inherently uncertain nature of the snowpack and the resulting limits of their decision-making skills. Stability judgments can never be absolutely certain—after all even avalanche experts do get caught in avalanches. Also, let me remind you not to confute confidence with competence. Whether or not confidence is rooted in a genuine competence is always a further question—people can be confident yet wholly incompetent! In that context, also be aware of the gender confidence gap: males tend to be more confident and self-assured than females, when they are, in fact, equally competent.

3. Third, a lesson to draw from the thought-experiment is that when assessing competence, focus more on how people manage to avoid avalanches, not simply that they do. For example, competent decision-makers, in contrast to non-competent ones, will typically be able to give good reasons for why a slope is safe/non-safe.

4. Fourth, learn the good reasons. Knowing what the indicators of (in) stability of a slope are will put you in a good position to assess whether your partner is a competent decision-maker. Also be aware of the not-good reasons. Avoid becoming subject to “heuristic traps”, don’t simply rely on someone’s track record in avoiding avalanches, and challenge a judgment that a slope is safe if it is based only on a sixth sense or an intuition—these are usually not based on good reasons.

5. Fifth, engage in dialogue and consciously make decisions. Only if you and your partner engage in an explicit decision-making procedure can you test each other’s reasons for a given decision. Through this exercise, you can receive valuable feedback from your peers about how you arrived at your decision and whether it is based on good reasons. In this way, you can (justifiably) become more confident in your own competence.

6. Sixth, consider to agree to shift the burden of proof in order to make sure to engage in a dialogue. So, instead of assuming that a slope

**Competence most often leads to success, but success itself does not indicate competence.**

After all, it’s your life your are talking about.

References


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1. Compare here (Ebert and Robertson, 2013).
2. In the case of rock climbing this is shown in (Léwallin, et al., 2008). It is tentatively suggested for ski touring in (Zweifel, 2012).
4. We shall be very careful when employing such members since it is difficult to find relevant empirical data and so there is a lot of uncertainty here. In (Ebert and Photopoulou, 2013) we refer some reasons why a lower risk (1 in 23) does not seem unreasonable. The phenomenon outlined below will be even more pronounced if we underestimate the relevant risks. This fact and considerations of simplicity motivate the use of 1 in 10.
5. McCammon and Hägeli, 2007 have assessed a wide variety of decision tools and they suggest that between 60-92% of accidents could be avoided. So for simplicity, we here assume 80% and assume a competent decision-maker is understood as someone who adheres perfectly to such decision-making tools.
6. Allowing decimals, your confidence should rise from 2.0 to 2.14, i.e. not very much at all.
7. For an explanation of the calculation and the scale, see (Ebert and Photopoulou, 2013), section 5.
8. This is a theme that is also discussed in the article “Situational Awareness Part 3: Projection” in this issue of TAR. In fact, many of the suggestions offered here are also discussed in that article.