University of Basel

Partnering for Change: Link Research to Societal Challenges

Video Transcript

Three types of knowledge

[Tobias Buser] When addressing societal challenges, it is important to produce not only knowledge on problems, but also for transformations. For this reason, the concept of the 'three types of knowledge' is helpful to structure project goals and to formulate research questions.

We define systems knowledge as the knowledge about the current system or problem situation. It is mainly analytical and descriptive knowledge.

If you think of the nomad health case, systems knowledge refers to the knowledge about the links between animal and human health, as well as the knowledge on the understanding of the diseases for traditional and Western medicine.

Target knowledge is knowledge about the desired future development and the values that indicate which direction to take. It is deliberated by different societal actors, and is based on values and norms.

If you think about the water scarcity case, an example of target knowledge production would be the participatory scenario development by the different stakeholders.

Transformation knowledge is about how to move from the current to the target status. It includes the definition of concrete strategies and steps to take. If you think of the labour migration case, an example is the launch of round table meetings between Indian and Nepalese policy representatives, trade unions, and NGOs to address migration issues at the policy level.

While all three types are important, a specific project might focus more on one or two types, as other knowledge may already be generated by other projects or actors. We will now take a closer look at the three types of knowledge.

While it is possible to think of them as separate items, they are interdependent. For example, transformation knowledge would be of limited use, or even dangerous, if not oriented towards desirable targets and based on systems knowledge.

We can link these three types of knowledge to the three key terms, facts, values, and agency. While facts are mainly associated with systems knowledge, values are mainly defined as part of the target knowledge. And agency, that is the capacity to act in a purposeful way, describes the transformation knowledge.

To operationalise the concept, we define core questions for each knowledge type. While the systems knowledge answers the question, 'what is?', target knowledge addresses the question, 'what ought to be?'. And finally, transformation knowledge defines the 'how to?'.

We can further link the corners of the triangle to the different societal actors, which have a higher legitimation in this field. The facts are in the sphere of science, with the scientists as most credible actors.

The values and norms are generally in the sphere of political actors, with public debate and the government as legitimised actors. Finally, agency is attributed to this sphere of practice, with practitioners knowing how things are done.

These spheres, with their respective legitimised actors, are one rationale why to work with stakeholders from all phase spheres when aiming at societal change. Without actors from the spheres of policy and practice, change is not likely to happen, as scientists alone are not legitimised to change neither laws nor able to change practices on their own. But it is also important to note that the separation of spheres is very reductionist.

Actors from the political and practical sphere are also important holders of systems knowledge. Some scientists, for example ethicists, work explicitly on values, while others, for example engineers, on transformation knowledge. Or every research question is already a normative decision on what topic to focus on, to name just a few examples.

As the knowledge types are overlapping and interdependent, also the spheres of influence of the different societal actors are not independent. In this regard, transdisciplinarity can be seen as working within and creating spaces at the intersection of all three spheres.