

Seminar preparation assignment 2

Theory and Methodology of Science

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Exercise 1 Are Jacobson and Tellefsen testing any hypothesis? Is so, which one?

Solution. The original hypothesis that they intend to test is: When a person concentrates vividly on an physical object in his surrounding he creates a so called 'psi track' which can be detected by dowsing. But since they haven't compared it statistically to the H_0 I wouldn't consider it as testing. They also add a few ad-hoc hypothesis but those aren't tested just added to basically save the theory.

Exercise 2 How were the experiments designed? Describe the experimental setup briefly. In your description, include answers to the following sub-questions:

- How were the test persons selected?
- What objects were hidden?
- How were the hiding places selected?
- Were Jacobson's and Tellefsen's experiments performed under double blind conditions, and if so, what does that mean?

Solution. Mostly experienced dowsers where chosen as dowsers.

Mostly small personal belongings where hidden since it turned out that objects with a strong positive connection to the person had strong psi-track where chosen, but this was not included in the original hypothesis.

The hiding places where selected such that the objects couldn't be seen from the sender as well as not be seen until within one meter.

The objects where not put out by going in a straight path to avoid the possibility to track a trail of the placer.

Additionally they mention the possibility for fraud amongst the test persons, for example the sender and dowser coming up with a hiding place in advance. Personally I think missing belongs and finding a thief isn't too hard, for example point at the closest large city will suffice being a good guess.

I think the condition that no one in the experiment setup knows the right answer is fulfilled and can thus be considered to be double blind. Some of the experiments were just testing and those where a bit vague on this aspect.

Exercise 3 Were the results statistically evaluated?

Solution. No, they only collected data, since doing a statistical evaluation would require to statistically reject the null hypothesis by checking if the p -value exceed some threshold say 5% then would could have rejected the null hypothesis that the "psi track" doesn't exist.