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Triading

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1. Introduction

Interviews are a great method for gathering first hand accounts of people's experiences, perceptions and attitudes. They can be more or less structured, providing the interviewer with a series of open-ended questions on a specific topic or a fixed list of scripted questions. But the flexibility that they offer can lure researchers into a false sense of security, as the interview can easily be biased.

Triading is a powerful interviewing that originated in clinical psychology and is useful in a variety of domains, including user experience design. It can be used to **elicit constructs** that people create in order to make sense of the world around them while, at the same time, **minimize researcher bias** and influence during interviews.

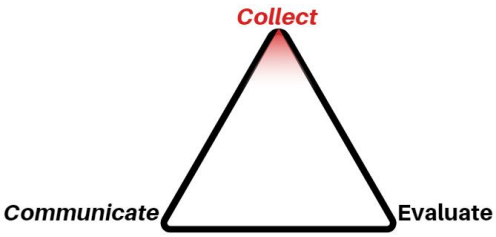

Figure 1: graphic representation of Triading method

It is a **collection method** (a graphical representation is provided by figure 1) as it aims to collect and group relevant information of the area under examination. Moreover, it is a very versatile method as it can be used to evaluating the competitive landscape and for collecting or discovering new potential needs. Typically, the contents are collected and communicated in a **quantitative way**, as can be better seen from the description of the method.

George Kelly pioneered the method as a step in the Repertory Grid elicitation process, and its foundations are grounded in *Personal Construct Theory* (Kelly G. A., 1955) [1].

2. Background literature

The psychological theory behind it

The technique was invented by US psychologist George Kelly in the 1950s. Kelly was of the opinion that, in trying to make sense of the world, everyone develops "rules" by which they view situations, people, relationships or objects, and almost any phenomenon. The rules by which we make sense of these situations are our **personal constructs**. The Theory of Personal Constructs makes a number of points that are **relevant to market research**. Constructs are constantly revised to match our experience and, in relationship to products and services, this means that individuals' constructs change over time and market research should to be kept up-to-date. This theory says that interviewees typically differ in how they construe events, although from one interview to another there will be many equivalent constructs (these are termed **common constructs**). The process of eliciting constructs often explores an interviewee's views at a level to which they were previously unaware. Consequently,

when a triading interview is completed, interviewees often comment that the process has helped clarify their own understanding. The triading method and more generally of the grid technique, find a very exhaustive explanation in the *Manual for Repertory Grid Technique*(Bell, Bannister, Fransella, 1977)[2].

Scientific evidence and application

Although the method has been validated and applied in the most varied disciplines[3][4][5], it has not found fertile ground in the fields of market research and human-centered design. It is possible to find an answer to this phenomenon in the *Identifying hidden needs*(K. Goffin, F. Lemke, U. Koners, 2010)[6]. The authors provide an explanation as to why marketers and designers are generally unaware of the Triading method and why the technique is not widely used; first, interviewers require specialist knowledge before they can conduct interviews effectively. Second, the flexibility of the technique requires a number of subtle decisions to be made in interview design. (However, once learned, the technique is relatively simple and easy to apply).

3. Description

Observing the broader context, one cannot fail to mention the Repertory Grid process, the method in which triading is inserted. Researchers conduct a Repertory Grid study by choosing several examples in a particular domain with which participants interact. Ideally, there will be 6–12 different examples that represent a wide variety of approaches and potential constructs. The following 4 steps are then performed in order: Selection, Triading, Rating and Analysis.

Selection

During each session, 3 examples are randomly chosen from the initial set. Ideally, there are multiple participants, and each participant works independently. The ideal is to be able to test all objects in the set approximately the same number of times.

Triading

This is the core aspect of eliciting constructs without introducing bias from the researcher. The researcher asks the participant to identify how two of the three examples are different from the third. In other word, interviewed people will have to compare object A with B and C and then state in what regards they are being different. The researcher does not provide a starting point, but just asks the participant about the constructs that are important from his or her perspective. The output will be contrasted attributes (e.g. motivating/boring or organized/a mess).

The participant continues the process of triading examples to identify additional constructs for the domain. The elements in each triad (that were randomly selected) are replaced for the next iteration. The key is to elicit as many constructs as possible, without any suggestions from the researcher. However, the researcher may be tempted to ask probing questions and ask the participant to think aloud, but

providing suggestions and guiding the participant is very risky as it **introduces the bias** this method seeks to avoid.

Rating

After identifying the contrasting poles for constructs during the triading step, the participant **rates all of the original examples** in the study (that is the 6–12 examples) basing their ratings on the constructs developed during triading. For each individual construct, the participant rates an example on a scale of 1 to 5, where 1 represents one end of the pole and 5 represents the other. For example, if a participant identified a construct with the two poles "organized" and "a mess", the researcher would ask the participant to rate each example on a scale from 1 to 5, where 1 is organized and 5 is a mess.
The result you would get during a triading exercise can be represented as table 1.

Negative Pole	A	B	C	D	Positive Pole
Positive Adjective 1	1	2	2	5	Negative Adjective 1
Positive Adjective 2	3	1	4	5	Negative Adjective 2
Positive Adjective 3	4	4	5	1	Negative Adjective 3
Positive Adjective 4	2	3	2	1	Negative Adjective 4
Positive Adjective 5	1	5	2	3	Negative Adjective 5

Table 1: generic example of triading results

At the ends of the table are the adjectives of the opposite pole, while in the center are the ratings (from 1 to 5) of the various objects.

Analysis

You can analyze the results of all performed triads **both qualitatively and quantitatively**. Often, a qualitative analysis (by reviewing notes from the triading sessions) is enough to develop a good understanding of the constructs that are important to the target audience. In addition, to statistically identify which constructs are most relevant, a researcher can apply factor analysis to the ratings table.
Figure 2 shows the flowchart of the method for summary purposes.

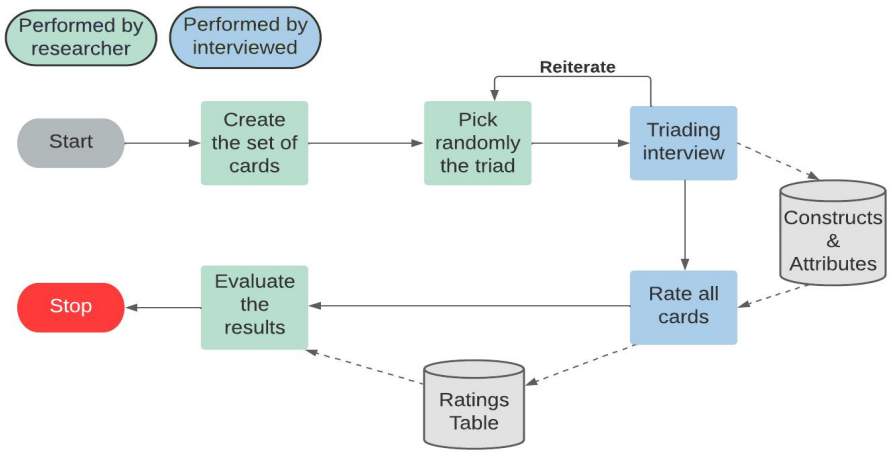

Figure 2: flowchart of triading technique

4. Application

Advantages and Disadvantages

The versatility of triading makes it particularly suitable for **data collection for products and services**, in particular for gathering useful information on the **hidden needs** of the interviewees. Participants often become very engaged in this technique as they are discussing topics they know, yet the process often reveals insights even they weren't aware of. Researchers can also gain deeper insights by prompting the participants throughout the process to give some more detail, explanation or clarification on the descriptions they give. However, the numerous and clear advantages of triading come with some drawbacks; the table 2 summarizes and compares the positive and negative aspects of this method.

ADVANTAGES	DISADVANTAGES
Gives a solid structure to interviews	Needs to be studied in more detail than a classic interview and for this it takes much more time
Good at uncovering biases and opinions that participants didn't necessarily know they have	Needs participants to be familiar with the 'entities' so that you can explore different 'triads'
Has a strong scientific basis	The results need to be processed before obtaining quantitative data

Table 2: advantages and disadvantages of Triading method

Real case scenario

To show how triading can be applied in the field of project design, in particular in the collection of needs and information from users, an example of the application is presented below (the search for needs of potential OpenStage[8] users is taken into consideration).

It is assumed that you have chosen people between the ages of 16 and 30 as your target users. Consequently, the following 6 cards are selected (figure 3), which represent different entities related to the world of "music distribution".

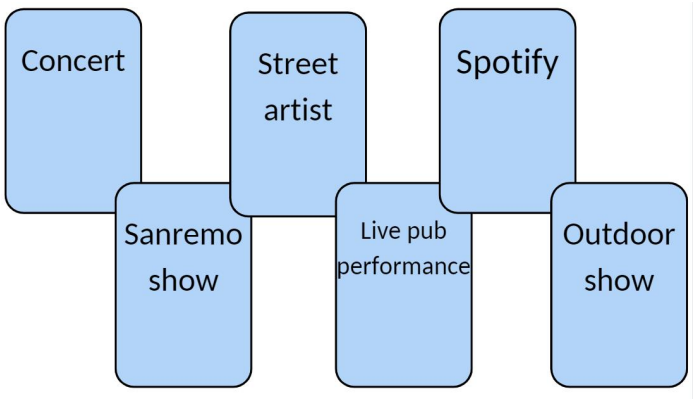

Figure 3: six cards selected for triading

After having chosen the 6 cards, the triads (chosen randomly) are presented to the interviewees and recreated for each new iteration. Having administered the interviews and collected sufficient ratings, we move on to the analysis phase. From a qualitative analysis it will already be possible to collect useful information related to the field under examination which can lead to discover more or less hidden needs of the users interviewed. Moreover, if a greater amount of data is available, it will be possible to proceed with a more quantitative analysis of the results of the triads. For example, counting the number of times particular items or particular constructs are mentioned can be used to find common trends from the sample of individuals.
Having the necessary knowledge available, it is possible to carry out much more in-depth analyses; through a hierarchical cluster analysis or a factor analysis[7] it is possible to uncover data that otherwise could never be snatched from a merely superficial qualitative analysis.

5. Quantitative improvements

As already mentioned, the method is used to collect information, opinions and hidden needs of users in a quantitative way. Mixing method with qualitative approaches can be very risky in this case, as the main purpose of triading is to minimize the influence of the interviewer in order to extract the (sometimes unconscious) mental constructs of the users. Keeping in mind that we want to exploit the method of collecting data for the development of a product or service, we have two possible ways to improve it: feed it with more data or apply it in a different way to obtain different types of information.

Feed the method with user data

When conducting the research of needs, at the same time the target users are analyzed. To further improve the method it is possible to feed it with user data. By associating the results of each interview with the user data collected, it is possible to identify a better segmentation of our targets and at the same time improve the quality of the analyzes in the post-processing phase. The data could refer to hobbies, work, predispositions, personality, and even more detailed based on the type of research being conducted.

Alternate usage: evaluate a solution

Given its versatility, triading could also be used as an evaluation method. The elements represented in the cards will therefore be the solution to the problem being studied, in which the developed solution will also be included. In other words, the set of cards used for triading will therefore be the solution devised and the existing alternatives. In the pre-processing phase, a "false" grid or matrix will be developed containing the constructs and adjectives (with the respective scores) that it is expected to obtain with the triading. This can then be compared with the actual grid resulting from the interviews. From the comparison of the two matrices it is possible to assign a score based on the number of matches and ratings(perhaps weighted differently for each adjective).

This evaluation method, it must be said, cannot be applied for every field of study and for every solution. Presenting a very innovative solution among the cards may not be well conceived by users simply by observing it in a card, and thus receive much lower scores due to the poor representation of the solution. For this reason it should be used with criteria and weighed if the solution devised is not affected by a stylized representation. Moreover, it can be difficult to evaluate a solution that does not present existing alternatives, while it can be particularly effective if applied to an idea conceptually similar to products or services already present on the market.

References

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