

THE REPERTORY GRID IN CAREER COUNSELLING: METHOD AND INFORMATION YIELD

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Abstract

George Kelly's (1955) repertory grid technique provides a method for exploring how people make sense of career alternatives and establish individual bases for making decisions. The basic method is explained and seven different types of information that a grid supplies are discussed.

Résumé

La technique du schéma du répertoire de George Kelly (1955) est une méthode permettant d'étudier comment une personne fait le triage parmi les nombreuses carrières et identifie une base individuelle pour faire des décisions. L'article explique la méthode de base ainsi que les sept formes d'information ressortant du schéma.

One of the most difficult tasks in career counselling is to heighten a client's awareness of the factors that might potentially influence his or her decision. Until implicit influences are made explicit, they are not likely to be discussed, negotiated, or modified. Outside of awareness, they are apt to be beyond a person's power to control or use in deliberation. This paper is concerned with one promising method, George Kelly's (1955) repertory grid, for systematically eliciting and organizing a client's considerations and career alternatives.

What Is a Repertory Grid?

A grid is a set of elements (objects, courses, people, careers, etc.) which have been rated on a set of constructs (bipolar concepts such as interesting/uninteresting). In the context of career counselling, a grid is a set of career alternatives which have been rated on a set of bipolar considerations. To complete a grid, then, requires a method of eliciting career alternatives, a method of eliciting career constructs, and a method of judging alternatives.

Eliciting careers. Traditionally, elements have been elicited by a list of abstract titles in an area of investigation. For example, one might specify a career that seems great but is unrealistic, a career that your father would like to see you in, and so on. However, in using career grids for several years, I have not found a list to be necessary to elicit careers (except when designing grids to answer specific research questions). All that seems necessary is to ask a person to make a list of at least 10 careers that he or she has considered. Others, if necessary or desirable, can be generated by splitting an alternative (e.g., teaching) into

more specific options (e.g., high school teacher, elementary school teacher, English teacher, etc.), by considering related alternatives, by interest inventories, by reading career information, and by discussions with significant others.

Eliciting constructs. With 10 or more careers numbered and written on small cards, there are several ways to elicit constructs, either in groups or on an individual basis (e.g., Fransella & Bannister, 1977). The classic method of elicitation is termed the minimum context form. Triads are pre-selected either randomly or by design and presented to clients with the question: In what important way are two of these alternatives similar, yet different from the third? Having specified the first pole of a construct, clients are then asked how the third alternative differs, to elicit the contrasting pole. In this way, 10 presentations of triads yield 10 different career constructs or bases for judging alternatives.

The generation of constructs need not be completely onesided. A counsellor might be very active in helping clients to sharpen their considerations and might even suggest constructs that seem appropriate. And sometimes, a counsellor might wish to supply all constructs.

Rating alternatives. Careers can be rated by 3-, 5-, or 7-point scales or by rank ordering. However, these forms of rating require correlational analysis and the use of a computer, which is impractical for most counsellors at present. For applied practice, a binary choice rating is much more feasible. That is, for each construct, a client would place alternatives at one pole or its contrast. For example, given the construct of pressured versus easy going, a client would show which alternatives were pressured and which were easy going.

Individually, clients can simply sort the alternative cards into piles while the counsellor records the placements. In groups, clients can make a list of constructs and place the numbers of alternatives to the right and left of each construct to show to which pole each alternative applies. For example, a completed rating might appear in the following format: "1,9,4,3,7. Pressured/Easy Going 6,2,5,10,8." While the binary choice is not as informative as rating scales and rank orderings, it is fundamental; it shows the most basic way in which alternatives are discriminated.

After constructs have been applied to careers, it is useful to ask clients to place a star beside the most valued pole of each construct. Usually, one pole is clearly positive and the other negative, but this cannot be assumed in all cases. For example, one might assume that it is better to have a high salary than an average salary. Yet this is not always the case. One client valued the average salary more because it was in agreement with her self concept, would not place her above her peers (e.g., make her better than they), and would not place her above her family.

For some purposes, it might also be useful for clients to weight the importance of each consideration. However, I have not found this practice to be very reliable. That is, I asked several clients to rank order constructs from most important to least important. One week later, they were asked to do the same thing. I found very little stability. The correlations between the rank orderings were apt to be negligible with some strong positive and some strong negative correlations. Clearly, the importance clients attribute to different considerations is valuable information, but stability should not be assumed.

Group Administration

While groups present special problems in administration, one procedure that I have found to be efficient is the following. Starting with the first alternative, ask clients to think of the most important or outstanding characteristic of this alternative. Once the characteristic is recorded (e.g., high salary), ask them to find the alternative that contrasts the most in that respect and to state how it contrasts (e.g., average salary). Once the construct is recorded in the prescribed format (e.g., _____ high salary/average salary _____), then clients can divide their alternatives into two groups to show which alternatives are, for instance, high salary and which are low salary. The numbers of the alternatives are then recorded in the appropriate spaces. Next, clients consider the second alternative and go through the same procedure. With a few clarifying examples, clients understand the procedure after the first few construct elicitation and can proceed on their own

through the remaining alternatives. The counsellor is left free to help individually if necessary.

What Information Does a Career Grid Supply?

To provide a concrete basis for discussion, Table 1 records the career grid of a young man in his second year of university. The "X" means that the left or positive pole of a construct applies to a particular alternative, while an "O" means the negative pole applies.

First, the grid provides a list of career alternatives. Some questions which might be posed include the following. Is the range of alternatives broad or narrow? In what way? Do the alternatives suggest one field or several? Are the fields harmonious or conflicting using, for instance, Holland's (1973) classification scheme? Do the alternatives indicate similar levels of skill and preparation or divergent levels? Is there an educational program that will keep most options alive or must a decision be made along with an educational direction?

Second, the grid provides a list of career considerations or personal issues that a career direction may resolve or exacerbate. What kind of issues are they? Once a number of grids have been assessed, it will be easier to answer this question.

Individual grids tend to be highly distinctive, providing a clear and stimulating entrance into the personal world of the client. Are the considerations thorough or restricted? In view of the work of Janis & Mann (1977), this is a key question. For example, Mann (1972) has shown that post-decisional regret is more likely and more intense if a person has failed to consider a wide range of consequences. From the broader and more informed perspective of the counsellor, a number of considerations will probably have to be supplied. How extreme are the considerations? Extreme constructs tend to inhibit negotiation and restrict movement and change. Are there constructs that might be modified through counselling (e.g., putting self through hell?). How abstract or concrete are the considerations? How far-sighted or near-sighted are they? How well-framed are they? Are the considerations grandiose, realistic, immature, or what?

Third, the grid illustrates how considerations are applied to careers. For example, consider "creative/non-creative" in the sample grid above. Eight careers were construed as creative while only two were construed as non-creative. Its use is lop-sided; it does not discriminate well among alternatives. Careers are construed as similar rather than different, but it is difference that allows a decider to favor one alternative rather than another. Consequently, a construct such as creative/non-creative might either be deleted, or if

Table 1
Example of a Career Grid

<u>Positive Poles</u>	Musician	Music Teacher	Elementary Education	Teacher of Social Sciences	Teacher of Physical Education	Sports Manager	TV Journalism	Librarian	Newspaper Reporter	Journalist for Weekly Magazines	
1) Applying one's own talents	X	O	O	O	X	O	X	O	X	X	Teaching others
2) Working with own thoughts (objective orientation)	X	O	O	O	O	X	X	X	X	X	Working with people
3) Easier to relate with and identify with people	O	O	X	O	X	O	O	O	O	O	More difficult
4) Less pressured	X	X	X	O	O	X	O	X	O	X	Pressured (time limits, etc)
5) Creative	X	X	X	X	X	O	X	O	X	X	Non-creative
6) Easier to work with numbers, ideas, etc.	X	O	O	O	O	X	X	X	X	X	Trouble working with people
7) Feel productive	O	X	X	X	X	O	X	O	X	X	Feel mechanized
8) Less trauma, easier	X	O	O	O	O	X	X	X	X	X	Trauma, putting oneself through hell
9) Feel better	X	O	O	O	O	X	X	X	X	X	Being more unhappy
10) Functioning well	O	X	X	X	X	X	O	X	O	O	Functioning less well

the client believes it is a deciding factor, tightened so that fewer careers meet his criteria for creativity. Another question concerns the accuracy of judgments. That is, how informed are the judgments of careers? In the sample grid, for instance, does newspaper reporting really make identification with and relating to people more difficult?

Fourth, the grid can be analyzed to reveal the relationships among considerations. In a binary choice grid, as illustrated above, relationship is determined by matching scores. For example, in Table 2, two constructs have been extracted from the sample grid. To determine the degree of relationship between these two constructs, matching scores are counted. A matching score is a match between the applications of poles to a given career. In Table 2, the career of musician has two X's, indicating that the poles on the left both apply. Music teacher has two O's, indicating that the poles on the right apply. In both cases, there is a match. However, for librarian, there is an X and an O, indicating that one left pole applies and one right pole applies. It is non-matching. Counting the matching scores between these two constructs

indicates that there are seven matching scores, seven points of similarity out of 10 possible. The significance of the relationship can be determined by the binomial expansion. The probability of seven matching scores out of 10 possible matching scores is 120/1024 or about 12%. Using the 5% level of statistical significance, we would assume that there is no significant relationship between these two constructs. That is, the seven matching scores could have occurred by chance. To accept a relationship as significant, there would have to be eight or more matching scores.

However, suppose one of the constructs is reversed. The left pole is switched to the right, and vice versa. Then all of the signs (i.e., X's and O's) will also be reversed. What does this do? The relationship or its lack remains exactly the same. There are now three matching scores. The probability of three matching scores out of 10 is still 120/1024 or about 12%, which is not significant. To be significant, there would have to be two or less matching scores. Whether the relationship is significantly positive or negative, it provides the same information, that the poles of constructs are significantly aligned in the way they are used.

Table 2
Counting Matching Scores

	Musician	Music Teacher	Elementary Education	Teacher of Social Sciences	Teacher of Physical Education	Sports Manager	TV Journalism	Librarian	Newspaper Reporter	Journalist for Weekly Magazine	
Applying one's own talents	X	0	0	0	X	0	X	0	X	X	Teaching others
Working with own thoughts	X	0	0	0	0	X	X	X	X	X	Working with people
	M	M	M	M			M		M	M	Matching scores

Table 3
Matching Score Matrix

Constructs	1	2	3	4	5	6	7	8	9	10
1	X	7	5	3	7	7	6	7	7	1
2		X	2	6	4	10	3	10	10	2
3			X	4	4	2	5	2	2	6
4				X	4	6	3	6	6	6
5					X	4	9	4	4	4
6						X	3	10	10	2
7							X	3	3	5
8								X	10	2
9									X	2
10										X

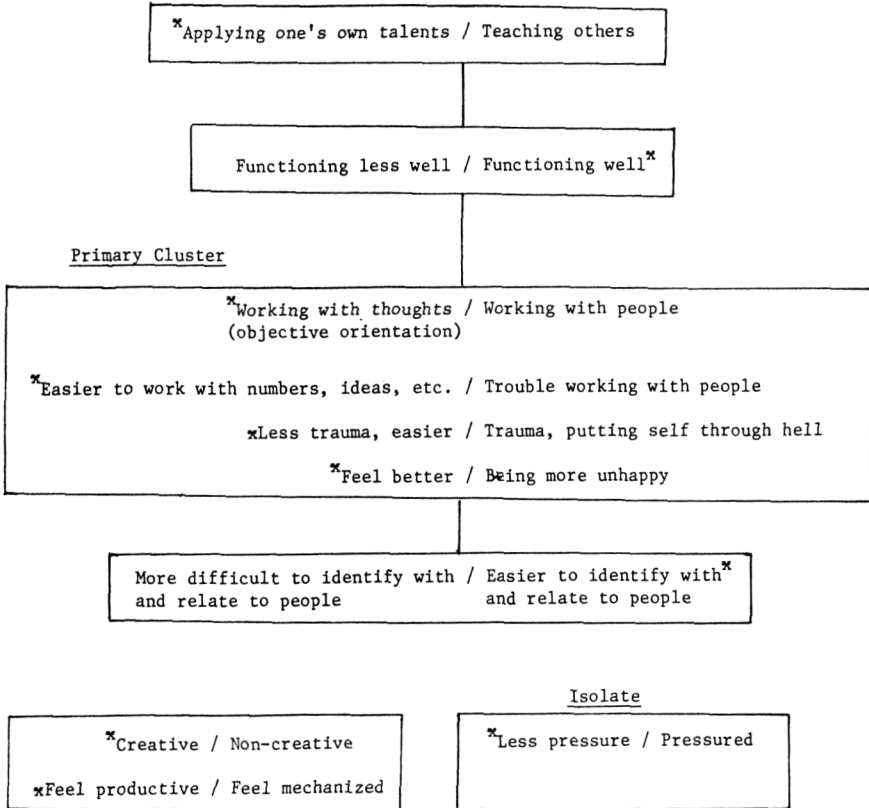
Note: The comparison between construct 1 and 2 yields seven matching scores, between 1 and 3 five matching scores, between 1 and 4 three matching scores, and so on.

When one pole of a construct is applied, there is a significant probability that a pole of another construct will also be applied.

To assess the pattern of relationships among a set of constructs, it is convenient to use a matching score matrix. Each construct is compared with every other construct, and the number of matching scores for each comparison is recorded as in Table 3. Significant relations (eight or more, two or less) can be circled for emphasis.

The pattern of significant relationships can be made visible in a number of ways. Perhaps the most useful and feasible method is through clustering related constructs (see Norris, Jones, & Norris, 1970). To begin, constructs can be arranged in a circle. For any significant relationship, draw a line between the constructs involved. From this display, a primary cluster of constructs can be identified (e.g., look for constructs with the most lines). The primary cluster is a set of constructs in

Table 4
Clustering Constructs into Themes



which each construct relates significantly to every other construct. Note that there may be more than one cluster. Once identified, remaining constructs can be added. Using the terminology of Norris, Jones, & Norris (1970), a secondary construct (or cluster) is one which relates significantly to one or more, but not all constructs in a primary cluster. A linkage construct is one that relates significantly to one or more constructs in two or more clusters. A construct which is not significantly related to any other construct is termed an isolate. The clusters from the sample grid are displayed in Table 4.

Points to note about this display are, first, that construct poles are aligned according to which goes with which. Poles on the left go with poles on the left. Poles on the right go with poles on the right. For example, construct 3 (which concerns identification with and relating to others) is negatively related to the constructs in the primary cluster. Thus, its poles were reversed in the graph to maintain alignment. This procedure makes the graph easier to scan for meaning. Second, the primary cluster is also a cluster of linkage constructs. Both constructs 3 and 10 relate significantly to all

constructs in the primary cluster, but were not included in it because they do not relate significantly to each other. Graphing is simply a way to make a person's construing clearer as a whole and clear enough for presentation to the person. Sometimes, arbitrary decisions have to be made.

The questions asked of this representation of construct organization depend to some extent upon familiarity with research findings in personal construct theory. However, many are straightforward and become natural with experience in using grids. For example, what is the dominant meaning of the primary cluster? In the example, the central distinction concerns working with people, which is hell, versus working with thoughts, which is not heaven, but better. But he functions less well when working with thoughts. Why? If working with people is such hell, why would such alternatives even be considered? Perhaps there is some negative consequence of working alone that is missing (psychological deterioration?). The meaning can be clarified further by considering the alternatives. Working with people applies only to teaching positions. Perhaps, working with people

then is defined by situations calling for more than functional relationships, calling for mutual involvement, expectations, obligations, liking, and so on. Perhaps the teaching careers are intended to resolve a sense of isolation and alienation. Do the words frame distinctions sharply or do they clutter or obscure meanings? Is the organization integrated or separated into separate themes or clusters? Are key constructs (pertaining, say, to motivations) isolated? What implications follow? In summary, showing what goes with what reveals the pattern of implications any given construct has for a person.

Fifth, the overall degree of tightness or looseness of relations among constructs can be measured (Bannister & Mair, 1968). To illustrate, the number of matching scores expected by chance for any comparison is one half of the total number possible. If there are 10 careers, then five matching scores would be expected by chance in any comparison of constructs. The absolute difference between obtained scores and five indicates deviations from chance. The more deviation from chance that exists, the more systematic variation or pattern. To obtain an overall measure, add the deviations from chance across all comparisons. To make this score commensurate with scores from grids with varying numbers of constructs, divide the sum by the number of comparisons. This score indicates the average deviation from chance for each comparison.

In pilot studies with "real" clients, I have found that the degree of interrelationships among constructs correlates significantly and positively with the degree of stability in rank order preferences over a one week period. People with lower degrees of structure exhibit more unstable preferences. From this perspective, the intensity score, as it is formally termed, can be viewed as a measure of conceptual ambiguity. Whether those with more structure are more integrated or more conceptually simple is debatable, but there can perhaps be agreement in the assertion that people who are either more disorganized or more complex will be more ambiguous.

It should be noted that lopsided categorization artifactually inflates relationships, and consequently, inflates the overall intensity score. One can either delete extremely lopsided constructs or specify beforehand that clients should not place over six careers at any one pole of a construct (assuming 10 careers). For two reasons, I prefer to let placements vary without restriction, even though it might weaken my confidence in some of the relationships revealed. First, if a client is using a construct in a lopsided manner, I want to know it. It can always be deleted. Second, the information provided by a grid is most appropriately viewed in the context of discovery, not confirma-

tion. The grid generates hypotheses to be tested in cooperation with clients. Information is to be negotiated, weighed, and possibly used in conjointly developing a clearer picture of a client's situation and planning further actions.

Sixth, the grid isolates conflicts. If positive and negative poles are aligned, then any negative relation defines a conflict. Whenever the positive pole of one construct applies, the negative pole of another applies, and vice versa. In the sample grid, the primary cluster of constructs conflicts with the constructs concerned with personal functioning and identification with people. An overall measure can be obtained by dividing the sum of negative deviations from chance by the total number of deviations from chance (i.e., the intensity score). This ratio might be seen as a measure of ambivalence. In the sample case, the total intensity score is 99. Counting only the negative deviations from chance (scores of four or less), the total is 48. Dividing 48 by 99 yields .48. About 48% of the deviations from chance define conflict in this case! At this point in the analysis, it might prove insightful to assume that all constructs were significantly related. That is, assume the client will move toward a tighter, less ambiguous, organization of considerations. Hypothetically, scores of three or four would be shifted to zero. Scores of six or seven would be shifted to 10. What would happen? Conflict would only intensify! Any move to reduce ambiguity would heighten ambivalence. In this situation, a counsellor could stress a confrontation with the negative consequences of a decision, and so forge a realistic commitment. Or he or she could capitalize on the assumed ambiguity in certain relations to modify constructs (otherwise known as cognitive modification), explore alternative criteria, test constructions in life experiments, bolster, seek alternative perspectives, or in other ways seek to reduce conflict. One could seek more information about careers, clarify, try to remove the basis for conflict by, in this case, social skills training. In short, once the dimensions of conflict are identified clearly, explorations and actions can be more concentrated.

Seventh, the grid supplies a measure of preferability, defined here as a career's potential for being preferred. Since the grid in Table 1 is aligned so that positive poles are on the left designated by X's, and negative poles on the right, designated by O's, then the preferability of a career can be measured by adding the X's. The career with the most X's would be most preferable, the career with the next most number of X's would be second in preferability, and so on. In this way, a rank ordering (usually with some ties) can be established. It is convenient to assume that this rank ordering is what a person would express if he or she were a perfect information processor, or more

reasonably, in command of his or her considerations. But the strain of managing an overload of considerations and distinctions, complemented by ambiguity and ambivalence, makes this possibility unlikely (at least at the beginning of counselling).

If a client is asked to rank order his or her alternatives, a measure of actual preferences can be obtained. As might be imagined, a rank order correlation between measures of preferability and preference is generally high (averaging about .8 in my experience with clients having difficulties making a decision). The congruence between these two measures can be taken, for exploratory purposes, as an indication of the extent to which a client is expressing preferences in accordance with the weight of his or her considerations. Lack of congruence suggests either difficulties in construing (e.g., ambiguity, ambivalence) or a failure to deliberate properly and thoroughly.

With these two measures, it is informative to measure their stability over time. That is, a client might complete the grid (once elements and constructs are elicited, it only takes a few moments to make the necessary ratings) and the preference ordering a week later or at some other appropriate time in the course of counselling. The rank order correlations assess the extent of stability or change in preferability and preferences. Also, gains can be assessed by how strongly the measures of preferability and preference correlate at some future time.

For a technique that is relatively economical to administer, a career grid provides an impressive amount of information for counsellor and client deliberations. While this article concerns grid administration and information yield, the following article focuses upon the role of career grids in career counselling programs, in promoting a joint venture in planning a future.

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