Person-Target Profiling for Selection & Recruitment

Part 3: Bigger Issues

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A Caveat!

None of the issues that we will discuss below are simple to resolve. Further, person-target profiling in I/O areas operates in an insecure and changing business environment, and not in a relatively secure and stable academic environment. So, although I am apparently critical to some extent with test publishers and HR professionals, I am also aware that there are differing perspectives to be considered here.

I am offering comments from a neutral perspective that considers "optimal profiling" without regard to business, human, or professional constraints. Thus the issue for me becomes one of determining *cost-benefit* rather than "*who is right and who is wrong*".

Simplistic Profiles

✪ The profiles we construct are sometimes too simplistic – constrained more by the attributes "permitted" by "interested parties" rather than by what's optimal. i.e. if a test publisher or consulting company offers a "profiling solution", this is likely to be focused around what their own tests and preferred procedures permit rather than focused upon the requirements of the actual problem to be solved. In short, a solution is more likely to be sales-driven rather than solution-driven.

Statistical Prediction Rules

✪ Users simply do not trust a Statistical Prediction Rule (SPR) to select candidates. That is, the rules by which a profile is constructed and used as a "target", with the outcome as a decision recommendation (hire, promote, enter fast-track, enter training scheme etc.). Exactly the same dilemma faced forensic psychologists and psychiatrists in their assessment of patient "risk of violence" until the advent of modern actuarial methods of risk prediction. The problem is though that all such systems are less-than-perfect. But how much less-than-perfect is the "I can pick'm" mentality amongst many managerial and HR professionals?

Statistical Prediction Rules

But, why should users trust profiling solutions that are acknowledged to be somewhat “simplistic”?

What exactly is the purpose of a profiling system that does not offer a decision to the user?

How many profiling systems offer a credible “evidence-base”, or even a means to assess business-outcomes for their adoption and use?

Persons are not Widgets

✪ This refrain goes something like … "it is impossible to measure all aspects of a person's characteristics and predict with any degree of certainty whether they will be "the right stuff". Well, it depends. Phil Ackerman's PPIK theory (Process, Personality, Interests, and Intelligence as Knowledge) – and resultant criterion-related multiple correlations with Air-Traffic Controller "success" of > 0.7 seems "pretty good". As does Wittman and colleagues' work in the Mannheim Research Project on predicting knowledge uptake and business performance (> 0.6).

Persons are not Widgets

The issue once again returns to what is to be considered "relevant" as an attribute in a target profile.

Then, even if you think of a series of attributes, can any be measured coherently, objectively, and cost-effectively in one or more "target-group" individuals?

Assuming this is a "yes", the next problem is whether any are indeed relevant to some desired outcome. The fact that a group of individuals possesses certain attribute characteristics is not necessarily indicative that they are uniquely different from any other group!
Which brings us to the next old chestnut ➔➔➔!

Star Performer Profiling

✪ Well, things don't get much worse than this! The usual example is that you select one of your best employees – someone who you would dearly like to be able to hire/select again, and again, and again …etc! You get them to complete whatever tests or attribute assessments you feel is relevant (or more likely what the assessment company is selling you!) – then use these attribute scores as a "star performer" target profile. This will be used to "select" similar others from within your own company or new employees etc. for similar positions. Sounds good in principle, but is inevitably quite ineffective in practice. Why?

Star Performer Profiling

❶ How do you know the attribute scores for your star-performer are in any way unique from any other individual/s who might have been assessed?

❷ Worse still – what if these mix of attribute magnitudes really are unique? That is, you are doomed to never find a similar candidate because the attribute values are "peculiar" to that one individual!

Star Performer Profiling

❸ Even if you find some unique attributes, are these **ALL** that define a star-performer? Are they the majority subset of all possible attributes? What happens if they only represent 20% of the star-performer's "*magic ingredients*"?

❹ How will you know if your star-performer really is a "*one-off*" – *the perfect person-environment interactive fit for the current job-conditions*? Never-to-be-repeated because of a *synergistic interaction* between the person attributes and the job at that particular point in time?

Star Performer Profiling

Note very carefully, I am not saying that a star-performer profile might never be possible to generate, but merely that great care has to be taken:

➲ in proposing the logic for attribute inclusion.
➲ for acquiring an empirically generated evidence-base to support the likely utility of the particular profile construction.
➲ in the evaluation strategy for the projected outcome of its use.

Homogenous Group Profiling

✪ For me, and I know many other companies to whom profiling has been recommended, this is where it all goes

Homogenous Group Profiling

Consider these data from 100 NZ General Managers, using the mean sten scores as the target "profile" for future selection purposes …

	[1] Target Mean Score
Extraversion	4
Leadership	8
Drive for Success	7
Optimistic	6
Tough Minded	8
Responsible	9
Anxious	4
Customer Focused	6
Unrealistic	2
Liking of Status Quo	2

Homogenous Group Profiling

Now let's add in the minimum and maximum score values per attribute:

	1 Target Mean Score	2 Minimum	3 Maximum
Extraversion	4	1	10
Leadership	8	1	10
Drive for Success	7	1	8
Optimistic	6	1	8
Tough Minded	8	2	10
Responsible	9	2	10
Anxious	4	1	4
Customer Focused	6	1	9
Unrealistic	2	2	5
Liking of Status Quo	2	1	4

Homogenous Group Profiling

Now let's add in the median score values per attribute – for all those who think a standard deviation will help assess "variability"!

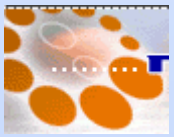
	1 Target Mean Score	2 Minimum	3 Maximum	4 Median
Extraversion	4	1	10	8
Leadership	8	1	10	3
Drive for Success	7	1	8	7
Optimistic	6	1	8	6
Tough Minded	8	2	10	5
Responsible	9	2	10	9
Anxious	4	1	4	3
Customer Focused	6	1	9	4
Unrealistic	2	2	5	3
Liking of Status Quo	2	1	4	2

Homogenous Group Profiling

Let's look at some real data – from an original Mariner7 validation dataset of 994 individuals classified by:

Industry
Area and,
Level of Responsibility

I'm using the Proto-Profiler Viewer program – available to you on the workshop CD



Homogenous Group Profiling

A group target profile attribute actually requires:

1. A point-estimate target (mean, median)
2. A minimum-maximum value
3. A mean-median disparity
4. A quantile bound (maybe 70%)
5. A 10% modal range around the median

From this information, it is possible to construct an autonomous profiling algorithm that selectively and incrementally uses the information to produce profile similarity estimates based upon the error associated with a point-estimate target.

Homogenous Group Profiling

This will be a multi-pass algorithm that will produce more and more "possible" selections as the constraints on the profile attributes (variability around the point estimate) are relaxed. It is left to the decision-maker to decide upon the trade-off between too-discriminating vs too-broad a selection criteria.

Alternatively, the algorithm could be calibrated in advance using existing assessment data allied to a desired performance criterion i.e. what are the optimum selection constraints that would have selected at least 90% of my target group (taking care to use a training and holdout sample etc.).

Which brings us to the door of data-mining and neural net technologies. This is where we depart the small-industry user for large-scale corporates with the necessary databases and budgets to implement employee database mining and large-scale psychological attribute assessments.

The cost-benefit issue

Is there any actual benefit to a user by opting for a profiling approach to selection? i.e. is a simple checklist of “essentials” + “desirables” sufficient for most purposes?

Today we have seen just how sophisticated we can get with the technology for constructing and manipulating profiles – but is this just “overkill” in relation to how users currently make use of profile data?