

## Personality: From Theory to Practice Part II.

### The Practice

The whole point of the proceeding section was to document the credentials of the personality test. Obviously it has high validity and reliability and can be used with confidence.

### The Personality Test

The two dimensions Internalizer-Externalizer (I-E) and Subjectivizer-Objectivizer (S-O) consist of the first and second sets of questions respectively. The scales for these dimensions are given by the simple summation of the four items. The test has now been administered many times, sometimes in an interview but more commonly in a questionnaire. Most people have no difficulty with it at all.

QX. Now just thinking generally about your preferences in different sorts of situations. SHOW CARD (if in interview). Which preference would you be most likely to make in each of these situations? This is a forced choice question where you have to choose between the right and the left-hand sides of the scale. People sometimes feel that they would have different preferences in different situations. Choose the one you would prefer in *most* situations. If you prefer that one, would you very much prefer it, or only slightly prefer it.

<b>Very Much Prefer It</b>	<b>Slightly Prefer it</b>	<b>Don't Know</b>	<b>Slightly Prefer It</b>	<b>Very Much Prefer It</b>
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Make sure that the head ruled the head	1	2	3	4	5	Make sure that the head ruled the heart
Be concerned with people's feelings	1	2	3	4	5	Be logical
Show pity, sympathy	1	2	3	4	5	Use foresight
Share your feelings	1	2	3	4	5	Be convincing
Take a bit of a chance	1	2	3	4	5	Keep both feet on the ground
Find new ways of doing things	1	2	3	4	5	Do things the way you know

Come up with new ideas	1	2	3	4	5	Just use your common sense
Make allowances for unconventional appearances and behaviour	1	2	3	4	5	Just follow the conventions of appearance and behaviour like everyone else

## The Results

1. You will not find any causal paths in here relating to the genotypical design principles and democratization. The test has been administered numerous times as part of Peter Aughton's and my organizational health and innovation survey. Never once have we obtained a significant result. We eventually left it out as a waste of time because it added nothing.

What this means is that the design principles affect everybody in exactly the same way. ***Democratization is good for everybody.***

### 2. Inadvertently Recruiting Subjective Internalisers.

This data comes from an evaluation of a multimode campaign, the One World Campaign, organised by an Australian peak overseas aid body. The campaign slogan was 'You can change the world'. The sample consisted of 351 randomly selected from those who registered with the campaign, all aspects of which were researched.

This sample was overrepresentative of subjectiverts and subjective internalisers more specifically (see Table 7). As the previous study had contained relatively few people in this quadrant of the personality space, the study afforded an opportunity to explore a relatively populous sample of SIs.

**Table 7. Personality Distribution for Campaign and Australian Samples**  
(percentages of the total sample)

	Subjectiviser (S)		Objectiviser (O)	
	Campaign	Aust.	Campaign	Aust.
Internaliser (I)	37.2%	15.9%	12.4%	33.3%
Externaliser (E)	44.4%	33.3%	6.0%	17.5%

The Australian sample demonstrated the minor role played by the pure types SI and OE and equal distributions of I-E and S-O. While the controlled Australian sample showed roughly half and half on the S-O dimension, the campaign sample is roughly 80% S and 20% O. The campaign, therefore, appealed to 'subjectivisers' or 'subjectiverts' (S) rather than 'objectivisers' or 'objectiverts' (O).

The difference is even more marked for males (89% S to 11% O) with females recording 76% S to 24% O. The Australian sample recorded gender differences with more males than females being subjectivisers but more females than males were objectivisers. This was in line with work done in UK and USA.

Further analysis showed that the bias in the campaign sample was due only to the overrepresentation of SIs. In this study personality was the most significant variable. An

analysis of the campaign, its slogans and materials, showed that it was targeting (quite unconsciously) this very narrow segment of the population in personality terms.

The 1980 Australian study did not find such an extremely isolated picture of SIs as had previous overseas work. There was some joining behaviour although the world was generally perceived as dangerous and threatening. There was also a clear picture of people who were ideas oriented and socially concerned but lacking in action about these ideas. This study tends to confirm the more moderate profile of SIs in Australia.

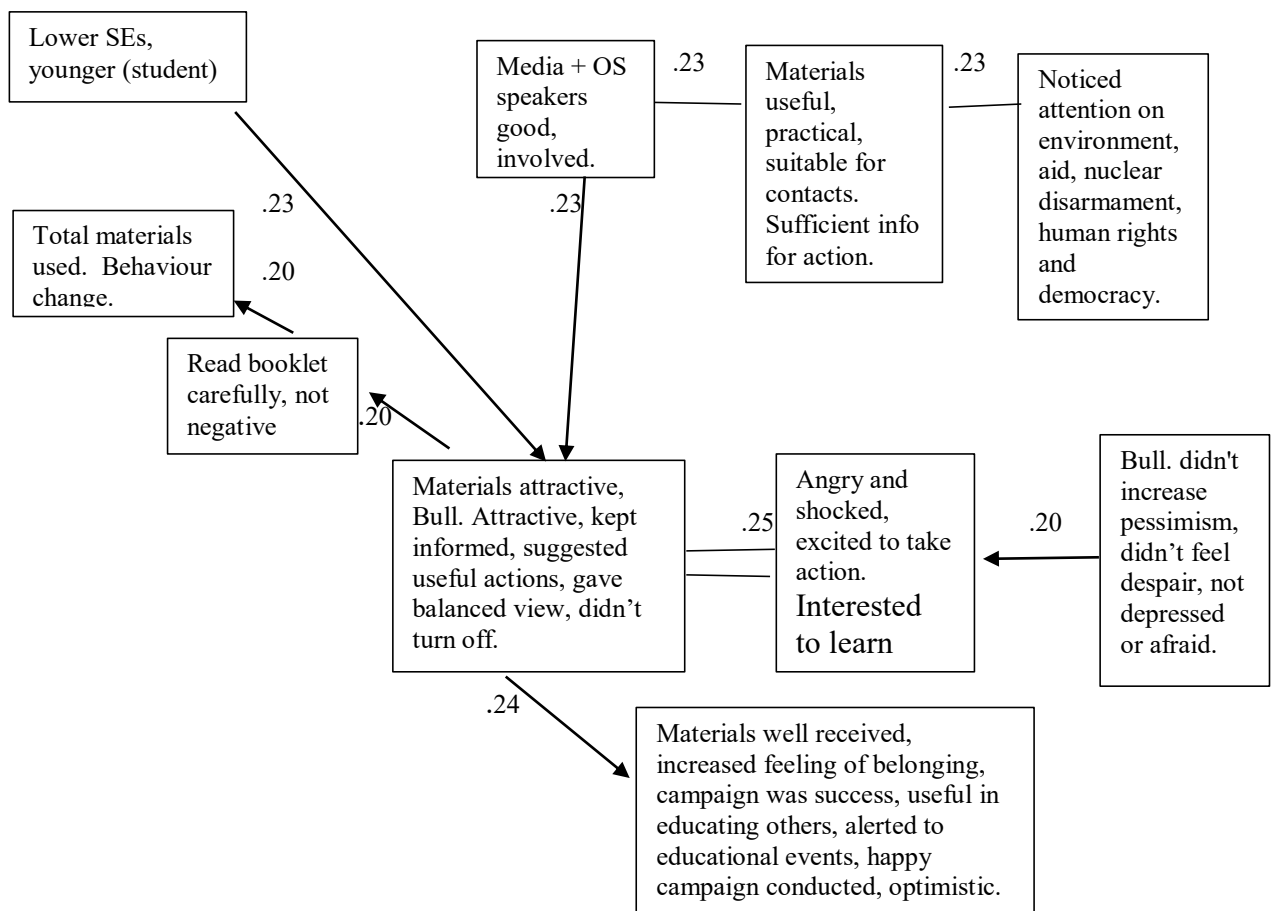
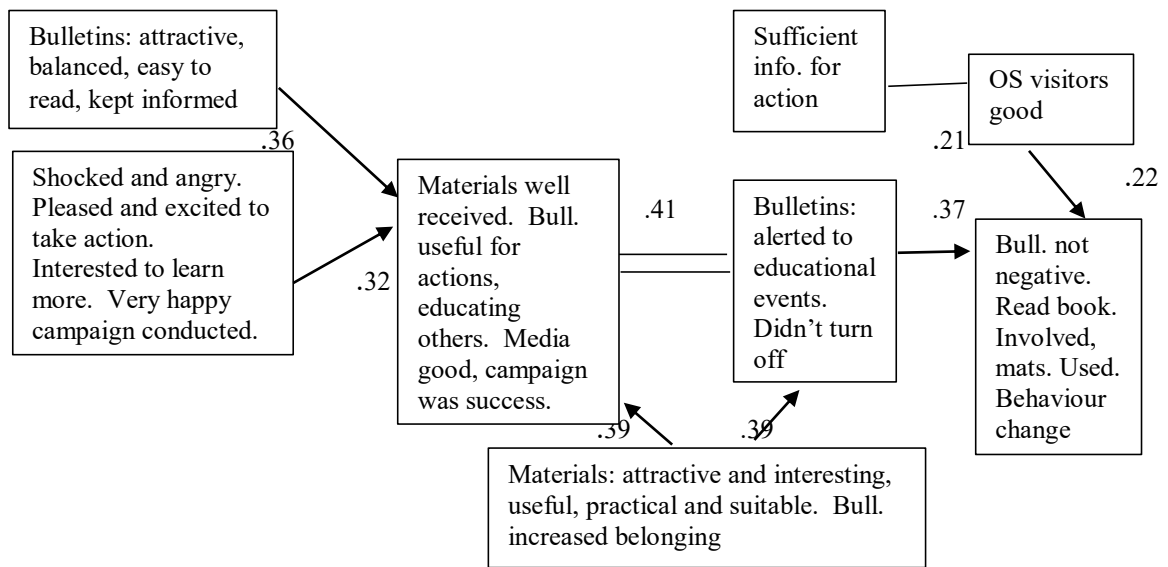


Figure 21 One world campaign Subjective Internalizers (N=123)



$r=.19 @ p<.05$ ;  $r=.24 @ p<.01$ ;  $r=.31 @ p<.001$

**Figure 22. One World Campaign Subjective Externalizers (N=110)**

The overall impression gained of SIs from the 1990 picture in Figure 21, certainly in contrast to those of the other personality types is one of optimism, enthusiasm and energy. Everything about the campaign was good, they used the materials, became involved and showed very little by way of negative emotional reactions to the campaign. The fact that being shocked and angry came together with being excited about being able to take action means that the new information generally stirred them up. This appeared to be a positive force.

As can be seen in Figure 21, there were two major blocks of outcome centering around using material for behaviour change and believing the campaign was a success. As with the previous Australian study, our SIs are more socially integrated than expected and are prepared to take some action although it appears fragmented.

As the great divide in the sample was between subjectivisers and objectivisers, the subjective externalisers (SEs) may cast more light on the question. The SEs were the other numerically large group. Despite the very skewed appeal of the campaign the personality dimensions lined up with gender as predicted from overseas work and the 1980 study. (Tables 8-11)

**Table 8. SO by gender**

	M		F		
S	126	89.4%	144	75.8%	270
O	15	10.6%	46	24.2%	61
	141	100.0%	190	100.0%	331

Means  
 S-O M 8.26 F 9.41\*\*\*  $X^2 = 9.94, df = 1, p<.01$

**Table 9. EI by gender**

	M		F		
E	82	58.2%	85	44.7%	167
I	59	41.8%	105	55.3%	164
	141	100.0%	190	100.0%	331

Means

E-I            M                            F     $X^2 = 5.87, df = 1, p < .02$   
                  11.81                            12.85\*\*

**Table 10. Mixed Types by gender**

	M		F		
SE	75	51.0%	72	49.0%	147 (100%)
OI	8	19.5%	33	80.5%	41 (100%)
	83		105		188

$X^2 = 12.2, df = 1, p < .001$

**Table 11. Pure Types by gender**

	M		F		
SI	51	41.5%	72	58.5%	123 (100%)
OE	7	35.0%	16	65.0%	20 (100%)
	58		85		143

$X^2 = 0.47, ns$

Tables 8-11 show that:

- ❖ subjectiverts are more likely to be male while objectiverts are more likely to be female;
- ❖ externalisers are more likely to be male while internalisers are more likely to be female;
- ❖ SEs are more likely to be male while OIs are more likely to be female;
- ❖ no gender differences were found between the pure types.

#### Subjective Externalizers (SEs)

The previous Australian study confirmed that SEs are basically insensitive and non responsive to affect and environment but they are socially concerned. They are also the busy people with mentally demanding jobs and are the joiners and networkers who enjoy a rich active life in the process of changing and controlling their environment. This data (Figure 22) is a further strong confirmation of the SE profile.

SEs present a more simple picture than the SIs. They come across as much harder headed people with a key interest in education and action. For SEs, all the items relating to education are closely clustered while for SIs, they are scattered. For SEs, an increased sense of belonging (community) was tied to materials being attractive, interesting and suitable for contacts. Their increased sense of belonging was therefore, more closely related to actually making contact with others. For SIs, their increased feeling of belonging to a wider community made them happy that the campaign had been conducted but is just that further step removed from direct contact with others. This is a demonstration of the difference between internalisers and externalisers in that externalisers tend to act on the environment, others, while internalisers act to change themselves, staying more apart from others.

For SEs several variables dropped out of this analysis including all the variables relating to noticing public attention to campaign issues. This is what we would expect of subjectivisers who are not particularly vigilant of minor environmental changes. The fact that the SI total sample did notice all of them is probably due to youthful enthusiasm and emotional involvement with the ideas themselves. Age and SES dropped out of the SE picture.

Closely related to the above is the fact that all emotional reactions including optimism dropped out, apart from being stirred up to learn and take action. as for the SIs, also. The only difference between the SIs and SEs on judgements of the actual campaign was the item 'Bulletin increased your pessimism about the state of the world'. SIs denied any increase in pessimism while the item also dropped out for SEs. As expected, these SEs were not particularly impressed by emotions or emotional displays and prefer to make judgements on the basis of good ideas and the probability of successful action. They were happy that the campaign was conducted because it was educational and did stir to action.

In contrast to the SIs, the behaviour change of SEs was directly tied to involvement and using materials. For the SI's it was most closely related to the campaign bulletins not being biased or simplistic, not negative. This For SIs the separation of involvement and use of materials on the one hand from taking action on the other, illustrates a basic difference between SIs and SEs. It seems that for SEs, action was the result of a coherent thought thorough plan of action based on experience with the campaign and its materials. As above, SIs tended to have fragmented emotions and perceptions and bits of action which flow directly from having the suggestion made to them. As we see below, the different personality types took different types of action.

The SEs behaved exactly as predicted, not noticing public attention directed to fashionable issues but taking their direction from practical ideas. These they responded to in collective practical ways rather than with an emotional response.

#### Objectivisers

There were no deviations in those small samples from the profiles established in the 1980 validation study. Some findings were strongly supported.

The 1990 sample of OIs was predominantly characterized by negative emotions and pessimism, the only group to respond in this manner. The central core of their cluster contained the variables of angry and shocked and noticing attention to nuclear disarmament and defence expenditure. Both attributes of materials, use of materials and involvement contributed to this perception. These were then closely related to their feelings of depression and fear for the future which also appear to be fed by their noticing less attention recently to environmental issues. As OIs are not oriented to planning and executing large scale action, they have good reason for feeling powerless in the face of the global arms and defence industry. In some ways, this is a vicious circle as these feelings actively inhibit action.

The conjunction of their negative perception of the campaign bulletins and increased their pessimism with the perception that the materials were well received, is not a paradox. Earlier work and the 1980 study showed that OIs have a small group of friends and indulge in relatively little social behaviour although they do like to use the phone for social purposes. This data indicates that these OIs tended to engage with a small group of people very much like themselves, to whom pessimism was an accepted reaction.

The OIs did feel some excitement and pleasure at being able to help and quite separately, did consider themselves to have taken some action and to be interested in learning more. They considered the campaign to have been a success because it increased feelings of belonging and provided more than enough information for action. Note, however, that as for SIs, this variable is divorced from the action taking itself. This indicates the gap between the perception and the actual behaviour which is characteristic.

This sample differed from the previous Australian work in that the media variable dropped out for OIs (and OEs) rather than featuring strongly. This is explained below after we have compared the four analyses

#### Summary and Discussion

The variables which behaved differently between the four personality types are summarised in table 12 below. A + sign means the variable was in the direction as stated. A – sign means the variable was reversed to provide the opposite meaning and a 0 means that the variable dropped out due to a low correlation, which means it was of little or no importance for that sample.

**Table 12. Summary of Comparisons between Quadrants for Campaign**

	SI (N=123)	SE (N=110)	OI (N=25)	OE (N=20)
Age	younger	0	0	0
SEs	low, student	0	0	0
OS visitors good	+	+	0	+
Media good	+	+	0	0
Bulletins:				
attractive	+	+	0	+
suggested most useful actions	+	+	0	0
negative aspects	-	-	+	-
increased pessimism	-	0	+	0
turned some people off OWC	-	-	0	-
Shocked and angry	+	+	+	0
Despair	-	0	+	0
Depressed and afraid	-	0	+	+
Very happy that campaign conducted	+	+	+	0
Optimism	+	0	-	0

Noticed attention to:

environment	+	0	-	+
aid to 3 <sup>rd</sup> world	+	0	+	+
nuclear disarmament and defence	+	0	+	+
human / democratic rights	+	0	0	+

There are very few surprises here in terms of theory and the data collected from the 1980 Latin Square sample above. The differences were also tested in terms of the dimensions of the personality space as in Table 13.

**Table 13. Summary of Differences for Personality Dimensions**

	<b>Means</b>			
	S	O	E	I
Total involvement	10.51	9.15*		
Materials were attractive, high quality and interesting 8.41**			7.98	
Bulletins were easy to read and kept informed of Campaign progress 8.28**			7.89	
Bulletins were OK (not biased, not simplistic, not concentrated on stirring, not too oriented towards the environment)	9.56	11.30***	10.38	9.62*
Degree of public attention to aid for 3 <sup>rd</sup> world	2.64	3.00*		
Optimism			25.56	27.46*
Personal actions taken due to Campaign				
- belong to environmental org	1.51	1.15***		
- donate to environmental org	1.79	1.45**		
-ask for organically grown fruit vegies			1.29	1.52**
-donate to aid-helping agencies			1.94	1.82*
Total of personal action taken due to Campaign	16.89	15.94*		

where \* is significant at  $p < .05$ , \*\* is significant at  $p < .01$ , \*\*\* is significant at  $p < .001$

In Table 13 we see that the campaign, through its choice of slogans and materials, unknowingly appealed to subjectivisers and internalisers. The only exceptions to this case were firstly, the overall judgement of the campaign Bulletins. Objectivisers and Externalisers rated them more highly because they were balanced. Objectivisers particularly noticed attention being paid to aid for 3<sup>rd</sup> world. This is consistent with their emphasis on sympathy for and empathy with others.

In terms of specific campaign induced behaviour change (measured by the combination of 'no action before' but 'took action after'), the subjectivisers changed more than objectivisers in terms of belonging and donating to environmental organisations. So while the objectivisers noticed aid for the 3<sup>rd</sup> world, they did not follow it up with increased action.

The internalisers changed their behaviour by more frequently asking for organic fruit and vegetables which is essentially changing themselves, while the externalisers donated to aid and helping agencies.

A comparison was made by personality quadrant of the specific actions suggested by the campaign and the rate of behaviour change. Each action was analyzed as in Table 14:

**Table 14. Behaviour Change by Personality Quadrant**

Ask for Recycled Paper

	S		O		
	N	%	N	%	
I	1	0.8	0	0.0	OWC turned off No action before or after Already took action Took action after OWC
	24	19.8	9	36.0	
	53	43.8	4	16.0	
	<u>43</u>	35.5	<u>12</u>	48.0	
	121		25		
E	0	0.0	0	0.0	OWC turned off No action before or after Already took action Took action after OWC
	25	22.9	7	35.0	
	41	37.6	10	50.0	
	<u>43</u>	39.5	<u>3</u>	15.0	
	109		20		

% converted of didn't before		
	S	O
I	64.2	57.1
E	63.2	30.0

OE is different from the rest.  $X^2 = 4.29$ ,  $df = 1$ ,  $p < .05$

Ask for Organically Grown Produce

	S		O		
	N	%	N	%	
I	1	0.8	0	0.0	S   O I 21.1   5.3
	71	58.2	18	72.0	
	31	25.4	6	24.0	
	<u>19</u>	15.6	<u>1</u>	4.0	
	122		25		
E	2	1.8	0	0.0	E 10.2   0.0
	79	71.8	14	70.0	
	20	18.2	6	30.0	
	<u>9</u>	8.2	<u>0</u>	0.0	
	110		20		

OE is not significantly different from the rest.  
SI is significantly different from the rest.  $X^2 = 7.18$ ,  $df = 1$ ,  $p < .01$

Donate to Aid/Helping Agencies

	S		O		
	N	%	N	%	
	1	0.8	1	4.0	S   O 8
	17	13.9	8	32.0	
	98	80.3	13	52.0	
	<u>6</u>	4.9	<u>3</u>	12.0	
	122		25		

I		I	26.1	27.3																				
E	<table border="1"> <tr><td>2</td><td>1.8</td><td>0</td><td>0.0</td></tr> <tr><td>9</td><td>8.2</td><td>2</td><td>10.0</td></tr> <tr><td>92</td><td>83.6</td><td>15</td><td>75.0</td></tr> <tr><td><u>7</u></td><td>6.4</td><td><u>3</u></td><td>15.0</td></tr> <tr><td>110</td><td></td><td>20</td><td></td></tr> </table>	2	1.8	0	0.0	9	8.2	2	10.0	92	83.6	15	75.0	<u>7</u>	6.4	<u>3</u>	15.0	110		20		E	43.8	60.0
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9	8.2	2	10.0																					
92	83.6	15	75.0																					
<u>7</u>	6.4	<u>3</u>	15.0																					
110		20																						

E is significantly different from I.  $X^2 = 60.23$ ,  $df = 1$ ,  $p < .001$

Belong to an Environmental Organisation

	S	O																							
I	<table border="1"> <tr><td>0</td><td>0.0</td><td>1</td><td>4.0</td></tr> <tr><td>71</td><td>58.2</td><td>21</td><td>84.0</td></tr> <tr><td>42</td><td>34.4</td><td>3</td><td>12.0</td></tr> <tr><td><u>9</u></td><td>7.4</td><td><u>0</u></td><td>0.0</td></tr> <tr><td>122</td><td></td><td>25</td><td></td></tr> </table>	0	0.0	1	4.0	71	58.2	21	84.0	42	34.4	3	12.0	<u>9</u>	7.4	<u>0</u>	0.0	122		25			I	S	O
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<u>12</u>	10.9	<u>1</u>	5.0																						
110		20																							

S is significantly different from O.  $X^2 = 3.90$ ,  $df = 1$ ,  $p < .05$

These more detailed findings support the conclusions above. OEs generally were less influenced by the campaign, SIs changed only their eating habits, Es donated to helping organisations and Ss joined environmental organisations. We would have predicted that SEs would have had the highest percentage here and they have in absolute terms, but the figure failed to reach significance. All the actions suggested by the campaign were in fact oriented to individual change behaviour rather than organising collective action so there was little opportunity for the Es to make a characteristic response. Giving money to helping organizations was the closest they could come.

We can see then why the campaign appealed so strongly to SIs rather than other segments. The 1980 national data indicated a heavy use of TV by objectivisers. When we examine the dimensions of the campaign materials and its message, it becomes clear that it was a **literate** campaign and its slogan 'One World or None' was designed to sort out the subjectivisers from the objectivisers. Because it was literate, fewer objectivisers would have caught up with it. Most OEs would have been too busy to read it properly. For the OIs who did, the idea of NO WORLD is simply too terrible to contemplate.

It is the subjectivisers who are heavy readers while objectivisers tend to rely on the media so that a primarily literate hard copy based campaign will almost automatically pick up the subjectivisers. Although the OEs read the booklet carefully because they had been alerted to the environment as a major issue, more TV coverage may have helped to have pulled in more of them. They are media and public attention sensitive and charge ahead on that basis without major emotional disruption.

Within the subjectiviser group, the theme 'You can act to save the world' was a clear direction to the SIs as most of the suggestions for action were **individually** and **personally** based. There were some which suggested joining a group etc which would have appealed to SEs rather than SIs but the vast majority would have appealed to the loner who believes you must change yourself in order to achieve change.

*If the slogan had been 'WE can change the world', this could have encompassed both the internalisers who could continue to change their own attitudes and behaviour and the externalisers who would have been*

*better mobilised for organising networks*. This is the sort of practical advice that this approach to personality can provide.

Within the confines of this campaign the responses of the personality quadrants have been consistent with the 1980 validation study.

### 3. Attitudes Toward Change at a University

Again in 1990 we were asked to clarify and explain the nature and mix of attitudes towards a new model of Professional Development at a regional university (Emery M and F, 1991).

Given the nature of the population under study, it was unrealistic to aim for a full Latin Square Design sample. So strong were the known correlations in university samples between age, sex and hierarchy that we would not have been able to fill quotas for example, high occupational status females, of any age. The final sample of 80 was, therefore, a Latin Square controlling only for age and gender.

We would expect a university to be heavily populated by subjectivisers, people of ideas, and the sample clearly confirms that. Tables 15-17 give the detailed comparisons with the 1980 sample.

**Table 15. Comparison of Personality for Australian and University Samples**

	University (N+% of total)				Australia (N+% of total)					
	S		O		S		O			
I	14	17.5	3	3.8	17	30	15.9	63	33.3	93
E	61	76.3	2	2.5	63	63	33.3	33	17.5	96
	75		5		80	93		93		189

The Australian sample with the great majority of the sample in the 'mixed' boxes (SE and OI) confirmed studies from other cultures. The university sample is obviously very different in every box except that of SI. We would expect that a university would consist of a very specialized sub sample of population preferences and this university does.

**Table 16. Comparison of personality for Australian and University Samples**

	University		Australia			University		Australia	
	N	%	N	%		N	%	N	%
S	75	94	93	49	I	17	21	93	49
O	5	6	96	51	E	63	79	96	100
	80	100	189	100		80	100	189	100

$$X^2 = 47.57, p < .001$$

$$X^2 = 18.17, p < .001$$

Although the Uni sample differs from the population on both dimensions, the  $X^2$  confirms that it is the lack of objectivisers that makes the major contribution. Uni staff primarily look to ideas for their meaningful knowledge.

When the two samples are disaggregated by gender, the differences are clearer. In table 17 the % is percentage of total group (sample x gender).

**Table 17. Comparison of Australian and University Samples by personality and gender**

	Male								Female							
	Uni				Aust				Uni				Aust			
	S		O		S		O		S		O		S		O	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	9	23	0	0	11	12	19	20	5	13	3	8	19	20	44	46
E	29	73	2	5	43	46	20	22	32	80	0	0	20	21	13	14
	38		2		54		39		37		3		39		57	

Table 17 shows that:

- ❖ For males, the uni over contributes subjectivisers ( $X^2 = 17.89, p < .001$ ).
- ❖ For males, there is no difference between the uni and national populations on I-E ( $X^2 = 1.28, ns$ ).
- ❖ For females, the uni over contributes subjectivisers ( $X^2 = 30.83, p < .001$ ).

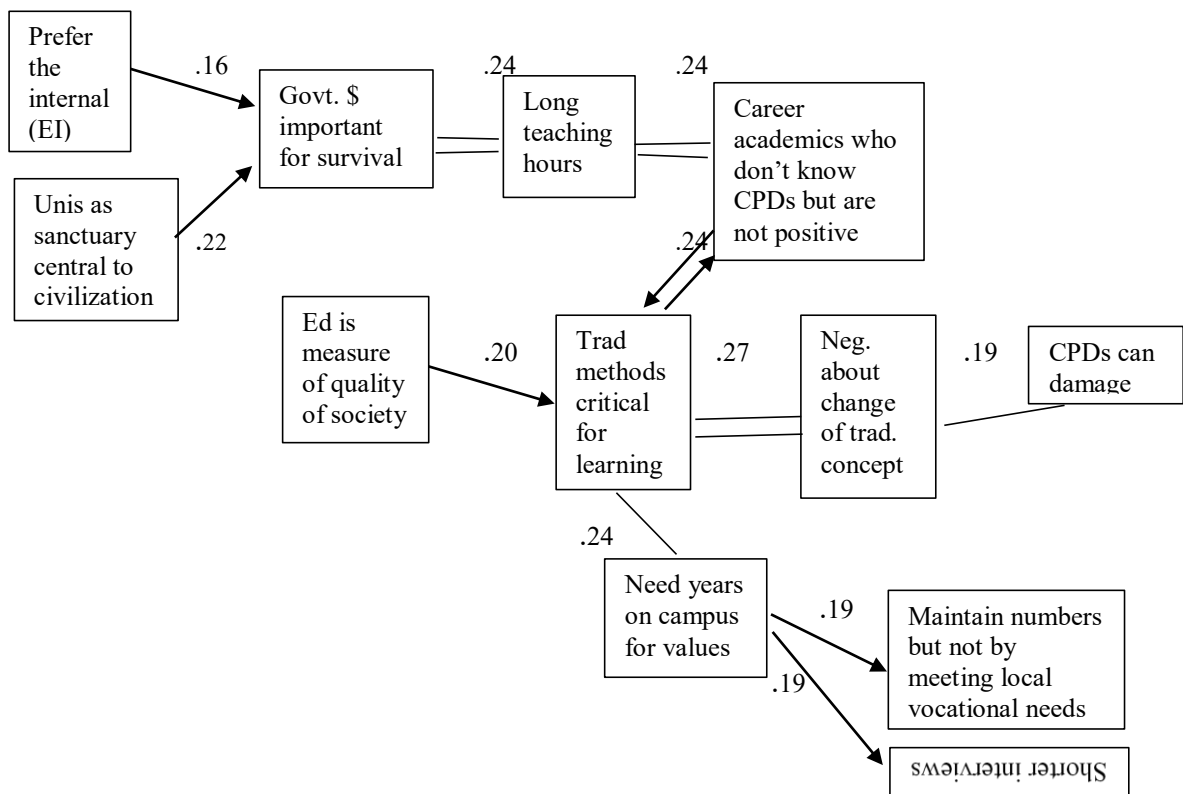
❖ For females, the uni over contributes externalisers ( $X^2 = 23.56, p < .001$ ).

Therefore, women are making a further contribution to the difference.

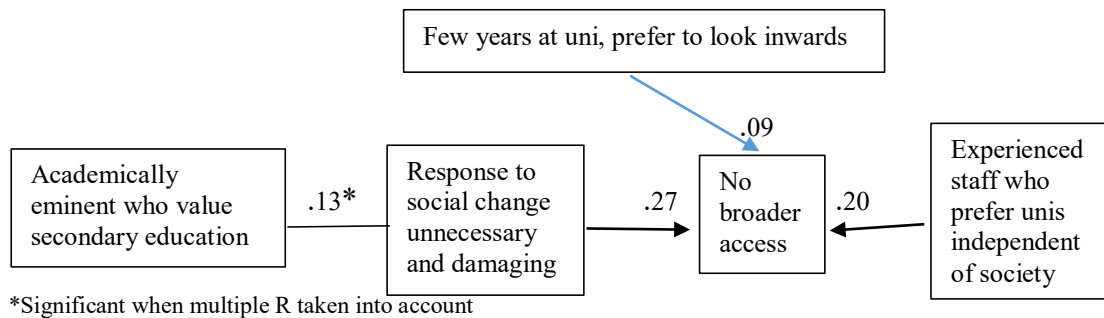
In particular, women at the uni are more than the national sample concentrated in the traditional 'male' box of S-E ( $X^2 = 15.76, p < .001$ ). Only a longitudinal study would be able to determine whether this is a factor of self-selection or a case of the predominant personality profile being assumed by women over time.

### Influence of Personality on Attitudes

Two major clusters emerged from the causal path analysis of attitudes towards the new Centres for Professional Development (CPDs). The first is shown in Figure 23. Changing the traditional model towards CPDs is seen as a threat because it forces actions to be directed towards the world outside.



**Figure 23. Cluster I. Internalisers defend the University**



**Figure 24. Cluster II, Subjectivisers Resist Change**

Our focus in Figure 23 is on the top right where the box named ‘Prefer the Internal’ consists of:

- EI Their own behavioural preference for internally directed reactions.
- Rejection of the notion that pressures for greater university relevance will not go away until satisfied.
  - The belief that industry (external) goals are inimicable to university goals.

The second starting point on the right consists of:

- The belief that universities provide a necessary sanctuary for creativity and academic freedom; and
- The belief in the centrality of universities to civilization in a modern society, the centrality of academic freedom to the concept of a university and the centrality of tenure to academic freedom.

Given that the notion of a sanctuary is one of a sacred place or a refuge within which there is immunity from the outside world, this confirms the internal orientation of the approach. Also, if these starting points apply, then their careers as teachers are central to civilization and only a sanctuary could provide the conditions required for such a central function. Certainly, CPDs coming from a different paradigm of education which has little use for the concept of teaching hours and addresses the needs of the outside world will amount to a threat.

Figure 24 shows the second cluster which emerged and this too has an internal focus. In this case, the dimension of subjectivising did not maintain significance through the analysis but reflects, as we would expect, that ideas come from self rather than outside. The subjectivising orientation is supported by the cluster ‘Response to social change is unnecessary and damaging’ which expressed their rejection of ideas coming in from the outside world. Similarly they resisted the use of non-traditional university staff as they too could import competing ideas.

For the older long-standing staff in Figure 24, the resistance revolves around rejecting the notion that university functions and culture should be in anyway geared to the individual or society. In other words, the university has a unique and traditional role in providing a life for the mind. A university is independent, above and beyond cultural boundaries and the current needs of Australian culture are not its concern.

Both major clusters from the total sample expressed an internal orientation but the subjectivising and internalizing dimensions were split between the clusters. It should be noted here that:

1. Subjectivising was a significant influence on the first order correlation matrix ( $r = 0.33, p < 0.01$ ) but its power was reduced through multiple iterations of the matrix.
2. The causal path analyses do not necessarily match the predominant quadrant in terms of numerical population. The behavioural (or attitudinal) complexes they describe are the result of the personality orientations being moulded by the culture of the environment and the forces operating on and within it.
3. In a complex study with many variables many different aspects of a phenomenon may be investigated. Different aspects can throw out different combinations of the personality dimensions. This happened in this study when it became apparent that a major determinant of the results was whether or not staff had first hand knowledge of the changes taking place.

When the sample was split into those with and without first hand knowledge of the changes taking place through the CPDs, it became clear that when such knowledge was present, the behaviour changed from mere

resistance of the traditional university to active defence. The personality profile of these active defenders was Subjective Externalizing ( $r = 0.17$  at  $p < 0.05$  after several iterations of the matrix), that of the numerically strongest quadrant in the sample. In other words, when first hand knowledge of the changes was present, the majority of the sample became energized to organize against them. This is of course what we would expect of SEs but in this case, the majority orientation of the sample was masked, presumably by the prevailing culture of the institution which is arguably SI.

#### 4.Exploring the Six Psychological Requirements for Productive Activity in an Innovative University Internship

The six psychological requirements for productive activity, known as the 6 criteria for work, (Emery and Thorsrud, 1969; Emery and Emery, 1974) were known by practitioners to work as well in educational institutions as they did in workplaces, but this fact had never been quantitatively demonstrated.

While this was the focus of the study (Emery M, 2000), its scope aimed to provide guidance of further improvement of the Internship including its recruitment and its relationship with more conventional university offerings. Personality was, therefore, a potentially powerful influence.

We would expect particularly given the academic nature of the criteria used in student assessment, that this sample of highly selected and experienced students would have a personality profile similar to that of the university staff in the example above. This is exactly what the data shows (Table 19).

**Table 19. Comparison of SE and SI at 2 universities**

	Interns		Staff	
	N	% of total	N	% of total
SI	10	21.7	14	17.5
SE	30	65.2	61	76.3

$$X^2 = 0.64, \text{ n.s.}$$

Table 19 show that the student and staff samples are identical. For the academic population, both actual and potential, the test provides a consistent profile.

The proportions of males and females were also identical (Table 20)

**Table 20. Staff & Interns by Gender and Personality Quadrant**

		S		O	
		Male	Female	Male	Female
S	Staff	9	5	0	3
	Interns	6	4	2	3
E	Staff	29	32	2	0
	Interns	16	14	1	1

For SEs,  $X^2 = 0.26, \text{ n.s.}$

#### Role of Personality in the Internship Experience

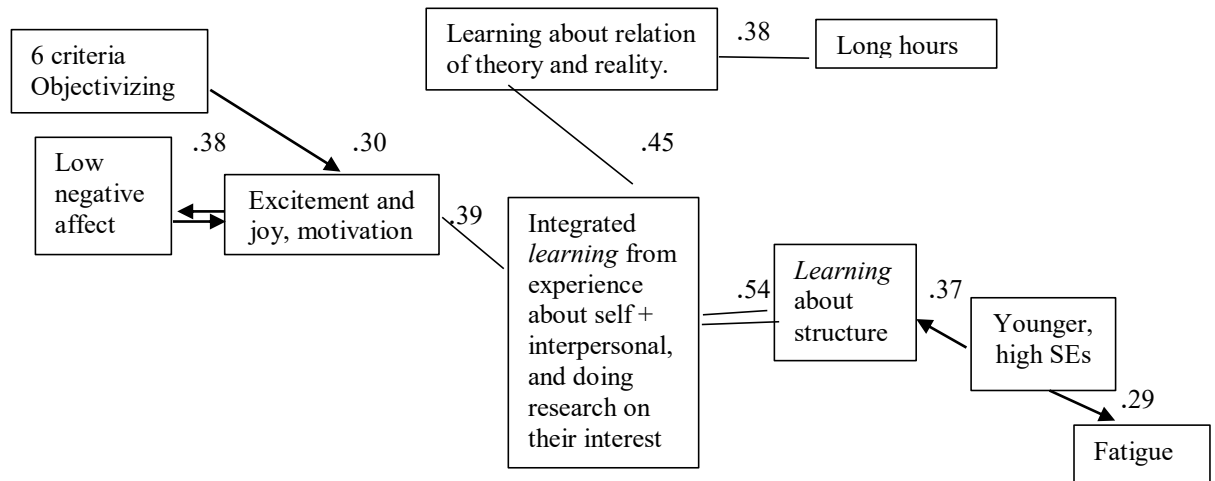
For the total sample the dimension EI dropped out but the SO dimension was influential. The overall pattern for the total sample is given in Figure 25 which shows that the hypothesis for the 6 criteria as the measure of intrinsic motivation was supported. SO combined with these criteria but despite the heavy majority of subjectivisers in the sample, the orientation was that of objectivising.

Further light was shed on the unexpected finding when the 6 criteria were entered individually (Figure 26)

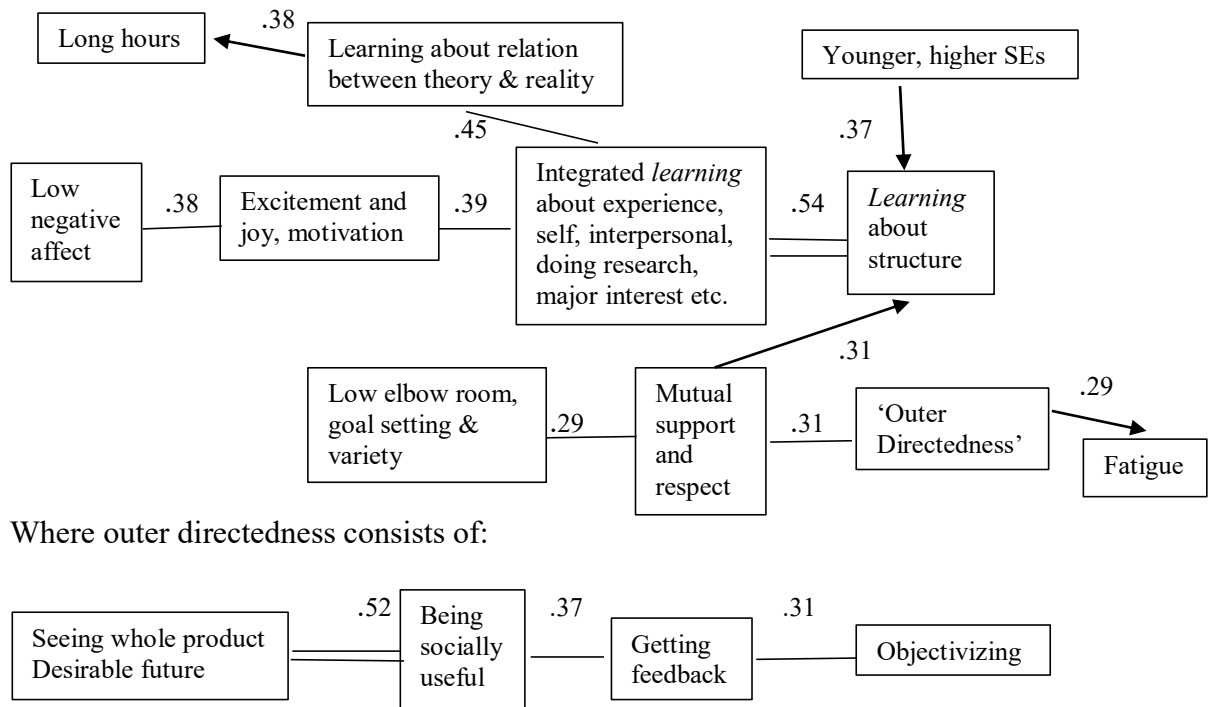
When we see the 6 criteria taken individually within our system of data here (Figure 26), it becomes much clearer that it was elbow room, variety and the first component of learning, namely room to set adequate goals or challenges for one's learning that failed in the internship. They are on the periphery and contrast sharply with mutual support and respect which plays a key role.

Feedback is positive in the systemic picture. This suggests that even the inadequate feedback was reassuring, if not essential, to the interns and again correlates with objectivising, getting ideas externally rather than internally. The left bottom line suggests a pretty well delineated picture of what is called 'outer directed'. It is possible that this is an artifact of the data but unfortunately, data from the USA confirms this interpretation (Economist 1998, 34).

In a university climate where there is usually an orthodoxy of ideas, it suggests that these students were seeing, and acting on, links between meaningfulness as judged by others through the feedback they received, and their desirable future. Because this bottom left stream which suggests ‘outer directedness’ contributes to fatigue, it raises the spectre of a highly selected group of students, in this case our interns, internalising a very conformist and non innovative or creative approach. And it is one which because it is outer directed instead of intrinsically motivated, causes fatigue. It is this type of fatigue which leads to what is called ‘burnout’. Goals which are not personally determined and intrinsically motivating can never be met. Rather than exciting and energy generating, the efforts made towards meeting goals are enervating. In these analyses, fatigue has been lined to outer directedness and to youth and high SES. This is particularly ominous as it indicates that our most privileged youth have succumbed to the ‘rat race’ theory of success, i.e. accepted the inevitability of dominant hierarchies and therefore, the need to not rock boats.



**Figure 25. Pattern for the Total Sample**

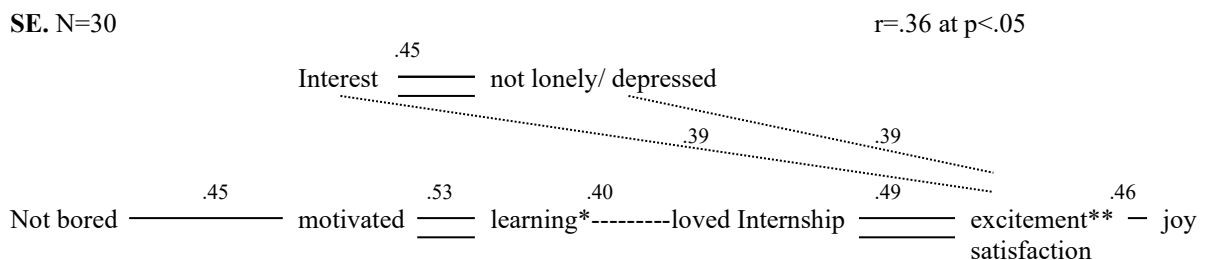


**Figure 26. Pattern for the Total Sample with 6 Criteria Entered Individually**

This result requires replication particularly in the light of the small numbers involved but it is cautionary in terms of possible uses of the personality test itself. While the test appears to consistently identify academic or university populations as subjectivising and more specifically as heavily SE, these characteristics may be subordinated by factors in the organisation which militate against their free expression. The clear difference in the systemic patterns for staff (in the previous study) and students in that under review here argues for an interpretation of powerful environmental influence on behaviour, as is expected from an open systems framework. In organisations such as universities where there is an asymmetrical power structure, people will adjust their behaviour to meet environmental demands. In other words, there is no point in using the test to recruit the characteristics you desire if your organisational structure cannot support the translation of those characteristics into behaviour (Emery M, 2000)

### Analysis by Quadrant

In the systemic pattern for the total sample above, it was notable that it was dominated by positive rather than negative affect, and the sample was itself dominated by SEs. A further analysis was performed to check whether the differential relationship with positive and negative affect was again found in this sample. The results are shown in Figures 27, 28 and 29



\* All forms of learning were combined into a single variable

\*\* Dotted lines show secondary links

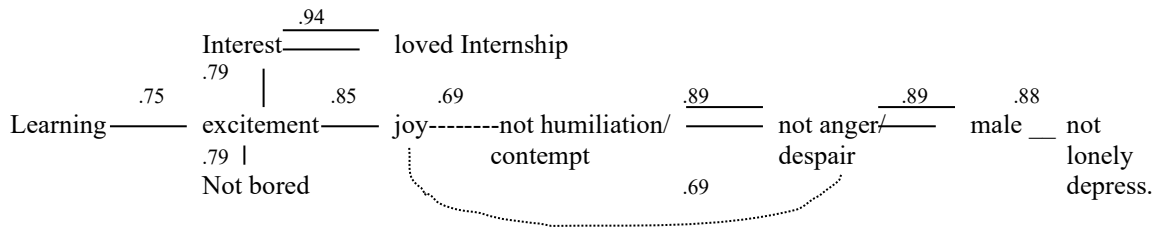
NB. The variables of gender, fatigue, anger/despair, humiliation/contempt dropped out.

**Figure 27. Systemic Pattern of Affects, Motivation and Learning Achievements for SEs**

As in the pattern for the total sample, so the pattern for SEs centres on the positive affects revolving around motivation and learning achieved

SI. N=10

r=.63 at p<.05



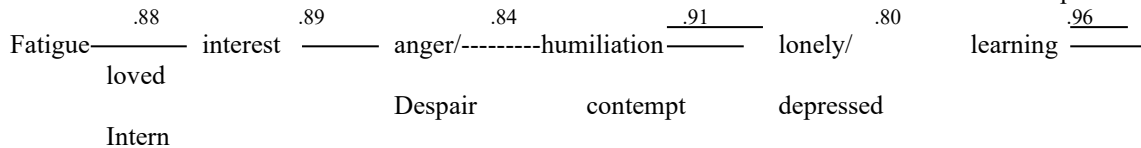
NB. Variables of fatigue and motivation dropped out.

**Figure 28. Systemic Pattern of Affects, Motivation and Learning Achievements for SIs**

The pattern for SIs is very similar to that for SEs showing entirely positive affects.

OI. N=5

r=.88 at p<.05



ship.

NB. Variables of gender, boredom, excitement, joy, and motivation dropped out.

**Figure 29. Systemic Pattern of Affects, Motivation and Learning Achievement for OIs**

While for the OIs, the closest relationship is that of an overall judgement of “I loved it” and “it met my expectations”, they are the only quadrant in which negative affects are influential. It is also noteworthy that the positive affects of excitement and joy which are theoretically (Emery M, 1986) and empirically so critical to motivation and learning, dropped out of the OI pattern.

While these figures are only indicative, they support an increasing body of data to the effect that the poles of the personality dimensions are differentially related to positive and negative affect and hence to behaviours such as motivation and learning

## 5. Exploring diffusion of the theory and practice of open systems

The sample consists of people who had attended Merrelyn Emery’s introductory course to Open Systems theory and practice at New Mexico State University (USA) over the preceding three years. All other studies are Australian so this sample affords some cross cultural comparison. No cultural differences are apparent. Consultants comprise by far the biggest group with 59.3% while another 13% are practitioner academics or students. The rest are essentially from organizations of various varieties, predominantly from the managerial ranks

As the other extant data base is that of the Interns reported immediately above, we can get exact comparisons between these two samples (Table 21)

**Table 21 Comparison of Interns and Practitioners in terms of Personality Distribution**

	Subjectivizing				Objectivizing			
	Interns		Practitioners		Interns		Practitioners	
	N	%*	N	%	N	%	N	%
<u>Internalizing</u>	10	21.3	12	11.1	5	10.6	10	9.3
<u>Externalizing</u>	30	63.8	84	77.8	2	4.3	2	1.9

\* percentage of total

The samples did not differ on either dimension (Tables 22 & 23).

**Table 22. Comparison of Interns and Practitioners Samples on SO**

	S	O
Interns	40	7
Pract's	96	12
	$X^2 = 0.45, n.s.$	

**Table 23. Comparison of Interns and Practitioners Samples on EI**

	I	E
Interns	15	22
Pract's	32	86
	$X^2 = 2.39, n.s.$	

Comparing the most populous quadrant in each sample, namely the SEs, we find that the samples are also identical in terms of the distribution of gender and socioeconomic status (Tables 24 & 25).

**Table 24 Comparison of Intern and Practit. SEs re SES**

	Below Mean		Above Mean	
	N	%	N	%
Interns	14	46.7	16	53.3
Pract's	27	30.2	57	53.8
	$X^2=2.02, n.s.$			

**Table 25. Comparison of Intern and Practitioner SEs re Gender**

	Female		Male	
	N	%	N	%
Interns	14	46.7	16	53.3
Pract's	32	38.1	52	61.9
	$X^2=0.67, n.s.$			

While the figures for the OI samples are too small to draw any hard and fast conclusions, they continue to demonstrate consistency in the predominance of females within the OI samples (tables 26 & 27)

**Table 26. Comparison of Intern and Practit. OIs re SES**

	Below Mean		Above Mean	
	N	%	N	%
Interns	0	0.0	5	100.0
Pract's	6	60.0	4	40.0

**Table 27. Comparison of Intern and Practiti. OIs re Gender**

	Female		Male	
	N	%	N	%
Interns	3	60.0	2	40.0
Pract's	6	60.0	4	40.0

It would appear that the findings for distribution of gender for SEs and OIs are totally consistent from the 1980 validation study onwards. Subjective externalizers are consistently predominantly male justifying for their quadrant the old sobriquet the 'Daddy box'. They are also consistently of higher SES. Objective internalizers are consistently predominantly female, similarly justifying the label of 'Mummy box'. The socioeconomic status of OIs appears less clear cut over our several samples but given that females in most of our countries continue to be of lower SES than males generally, the small numbers in for example, the Interns sample in Table 26 may be meaningless. It is also possible that given the bias in our occupational samples, academic and consultancy work is seen as an potential avenue for the improvement of female status.

It would also appear as we consider the last three samples together that, as we would expect, academic staff, students or potential staff, and consultants are all drawing on the same areas of the personality space. Given the ease today of moving between academia and consulting, these figures can be considered as a profile of a single occupational group.

### Analysis by Quadrant

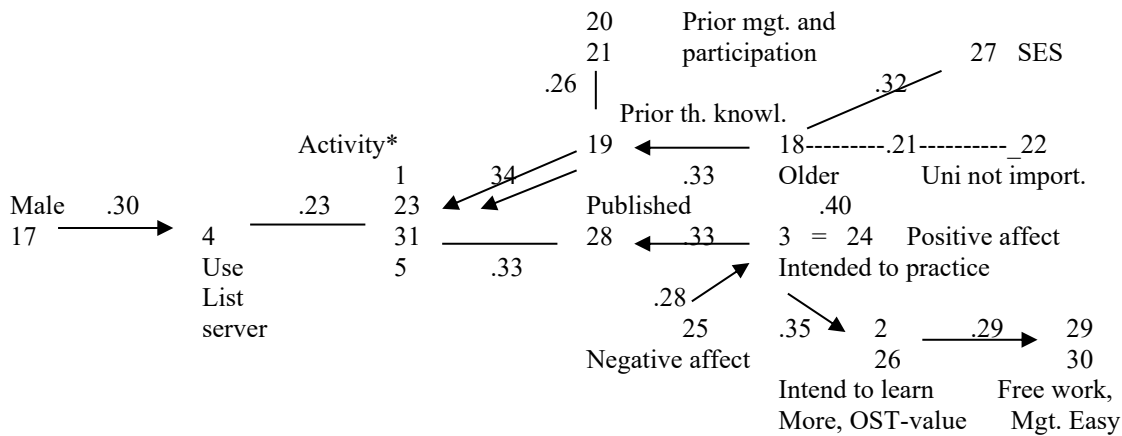
It should be remembered throughout this analysis that the sample is 59% consultants with an additional 13% of practitioner/academics/students. Both groups have the sort of action described here as the bedrock of their work. Similarly, the organizational people in the sample attended the course because they were intending to

make change or were already in the process of so doing. We can, therefore, only look at differences of scale in action, rather than more absolute expectations of action versus no action

**SE (N=84)**

(after 4 re-iterations of the matrix)

$r=.22$  at  $p<.05$



\* Activity comprises reading, no. of events run, the adequacy of these, no. of people trained and giving talks for free.

**Figure 30. Systemic Pattern of Affects, Motivation and Activity for SEs**

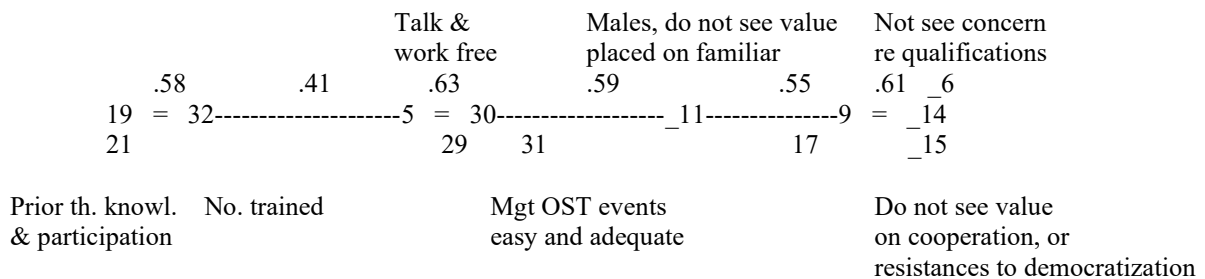
The cluster for the SEs shows a typical SE profile in all respects. The sample is male of higher socioeconomic status, and in this case older. The subcluster on the right tells us that their decision to attend the course was a well informed one, based on experiences of participation and management of events together with theoretical knowledge. The subcluster in the middle right tells us that they experienced both positive and negative affect during the course but only the latter contributed to their desire to practice and to learn more about OST which they consider valuable. This leads them to do subsidized or free work which they find easy. These two streams, prior knowledge, SES and affects lead to a whole central cluster of activities, in fact every activity variable is present. Both the subjectivizing (intellectual) and externalizing (activity) components of the cluster are as expected.

What is also noteworthy about the pattern is that all of the perceptual variables (see items 6-15 in Table 28 below) dropped out, confirming that SEs are perceptually and/or environmentally insensitive. The environment is not the source of their ideas and although the correlation just failed to make significance here, they do not place particular store by universities as the source of knowledge, presumably because they value good ideas whatever their source and they are not status conscious. Their chosen sources are shown to be reading, both before and after the course, learning through practice and further OST courses. This pattern has been consistently demonstrated

**SI (N=12)**

(after two re-iterations of the matrix)

$r=.58$  at  $p<.05$



\* Dotted lines indicate secondary linkages between the fragmented subclusters

**Figure 31. Systemic Pattern of Affects, Motivation and Activity for SIs**

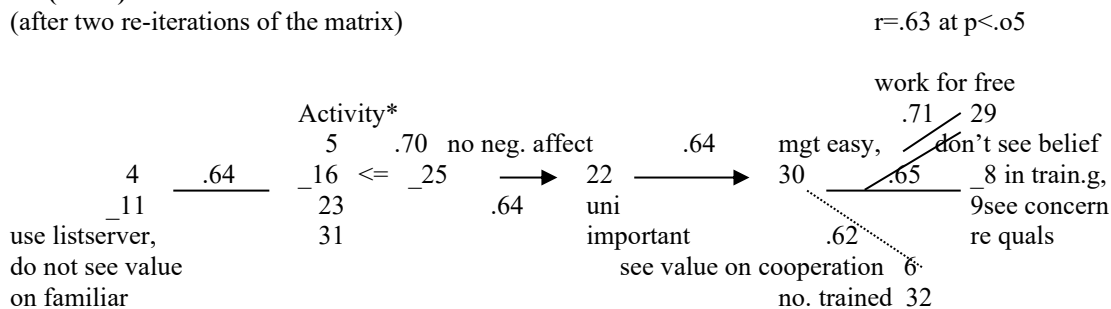
The fragmented pattern for the SIs shows very few of the major activity variables featured for the SEs, as we would expect, but does contain some of them, notably talking and working for free and doing some training of others. Again we see that empirical determinations of SI are less extreme than predictions flowing from the work prior to derivation of the test in 1980. The typical subjectivizer variable of having prior theoretical knowledge to attending the course is present but reading has dropped out, correlating only .49 with talking for free.

Both positive and negative affect experienced during the course were irrelevant to the SIs.

In contrast with the SEs for whom perceptions of others' values and attitudes in the environment were simply irrelevant, the SIs had specifically not noticed half of them. With such small numbers it is difficult to interpret such a finding but it is possible that the internalizer component may have forced these perceptions through the need to adapt oneself to what one finds in the field. To the extent possible with these fragments, the picture of the minority SI conforms to what we have learnt of that quadrant over the last twenty years.

### OI (N=10)

(after two re-iterations of the matrix)



\*Activity contains, in order, talking for free, not discouraged, no. of events run, and adequacy of those.

**Figure 32. Systemic Pattern of Affects, Motivation and Activity for OIs**

This profile of OI is not typical on the surface of it as it contains more activity variables than would be anticipated. However, as most of the sample are consultants, this should not come as a surprise. When we examine the means for these variables it is clear that Internalizers do less talks for free ( $t=-2.18$ ,  $df=91.197$ ,  $p=.016$  for one tailed test) and less work for free than Externalizers ( $t=-2.44$ ,  $df=76.52$ ,  $p=.009$  for one tailed test). When a scale of total activity of each of the variables marked # below is compiled, it is clear that internalizers are engaged in less activity than externalizers ( $t=-1.68$ ,  $df=90.922$ ,  $p=.049$ ). Incidentally, there were no differences on any of these scales between subjectivizers and objectivizers demonstrating that it is the EI dimension which is involved here.

What also becomes clear from the causal path analyses is that none of the variables which identify intent to learn or practice are included in the OI pattern. All variables concerning prior activity and knowledge are missing as are those of intending to learn and practice after the course. Indeed, variable 2, regarding OST as valuable is also missing. The cluster gives a picture of some perceptions and activity occurring in a motivational, value or ideas based vacuum. It is possible, and there are hints in other parts of the data analysis, that some are distorting OST methods from their very precise task orientation into something resembling much more a human relations approach, and that they are doing that in response to the prevailing climate and beliefs found in the field. While OIs claim the management of OST events is easy, their lack of reading and intent to learn casts doubt on their judgement as OST events revolve around very sound theoretical knowledge, and a lack of this is going to render such management quite difficult. This tends to reinforce other hints in the data that they are changing the practices to something more acceptable to the field. In addition we see that the variables 6 and 32 just failed to reach significance ( $r=.62$ ). This is a tentative indication that the OIs are training others to adapt to a perceived valuing of cooperation in the field, rather than any intrinsic belief in the value of OST or the ideas involved.

In addition, the OIs in contrast to both the subjectivizing groups placed importance on the university connection and certificate which can be interpreted as status consciousness. Similarly, they were alone in stating that they had not been discouraged by the responses to OST they had found out in the field, and had not experienced negative affect during the course. These two variables so closely linked suggests perhaps a denial of those negative features of reality, and again supports the consistent finding above that objectivizers and particularly OIs respond very differently to affects than do subjectivizers

Although, again restricted by small numbers, this OI profile conforms to those of previous studies.

## Summary

Table 28 summarizes these comparisons in terms of variables which dropped out of the analysis (o), and those which remained in with positive sign (+) or with negative sign (-).

<b>Table 28. Summary Comparison of SE's, SI's and OI's.</b>			
<b>Variables</b>	<b>SE</b>	<b>SI</b>	<b>OI</b>
s.1. Reading since the course	+	o	o
s.2. See OST as valuable	+	o	o
#.3. Intended to practice after doing the course	+	o	o
#4. Use dedicated list server	+	o	+
#5. Extent to which give talks for free	+	+	+
p.6. When talking with others find: a high value placed on cooperation	o	-	o
p.7. “ “ “ faith that new technology will solve problems	o	o	o
p.8. “ “ “ a belief that training is the key to good performance and productivity	o	o	-
p.9. “ “ “ a concern about the emphasis placed on formal educational qualifications	o	-	+
p.10. “ “ “ a belief that serious change is required for a sustainable future	o	o	o
p.11. “ “ “ that people simply prefer approaches that they know	o	-	-
p.12. “ “ “ negative attitudes towards unions	o	o	o
p.13. “ “ “ resistance to examining changes in the global environment	o	o	o
p.14. “ “ “ find confusion between participative democracy and laissez faire	o	-	o
p.15. “ “ “ find resistance to participative democracy through educational elitism	o	-	o
A.16. Extent to which have been discouraged by responses to OST	o	o	-
17. Gender	+	o	o
18. Age	+	o	o
s.19. Prior OST theoretical knowledge before the course	+	+	o
#.20. Prior OST event management before the course	+	o	o
21. Prior participation in OST events before the course	+	+	o
22. Importance of university as venue and for certification	o	o	+
#23. No. of OST events run since the course	+	o	+
A.24. Extent experienced positive affect in the course	+	o	o
A.25. Extent experienced negative affect in the course	+	o	-
s.26. Value placed on attending further courses for learning	+	o	o
27. SES	+	o	o
#28. Publications involving OST since the course	+	o	o
#29. Extent to which work for less than full fee	+	+	+
30. Extent to which find managing OST events easy	+	+	+
31. Adequacy of length of events run	+	+	+
#32. Number of people trained	+	+	o

If we look first at those variables marked with an 's' which indicates that we would expect that subjectiverts would show significantly more of these behaviours, we see that OIs showed none of them, SIs showed one out of four ¼, (ie. had prior theoretical knowledge), and SEs had 4/4. Obviously behaviours such as reading in this context have an action or externalizing component as well as a subjectivizing one.

For those variables marked A. indicating affect, we see that the SEs were the only group to admit to experiencing both positive and negative affect during the course and had also not been discouraged by negative responses in the field. Clearly negative affect is not about to deter them. All affectual variables were irrelevant to the SIs. The OIs failed to experience any negative affect.

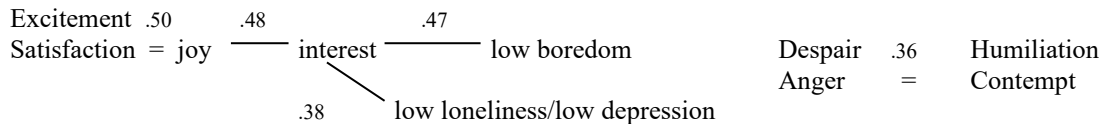
For those action variables marked #, we find that SIs showed 3/8, OIs 4/8, and SEs 8/8. Despite the occupational imperative, externalizing significantly increases the level of action. For a more precise test than simply I versus E, significance tests between SIs and SEs showed that SEs gave more talks for free, had greater

prior participation in events before the course, had published more and in addition, showed greater adequacy of the events they ran.

In terms of perceptions of values, attitudes, beliefs and resistances found in the field, the emerging picture is complex. In terms of sheer numbers, SEs noticed 0/10, OIs noticed 3/10 and SIs noticed 5/10. But the signs on each of the latter two quadrants were quite different. The small numbers involved in the SI and OI quadrants makes it unproductive to attempt a more detailed analysis.

### 6. Further Analysis of Affects, Motivation and Learning in Interns Study

After the diffusion study data was analysed, we returned to the Intern data to obtain a better test of the hypothesis that personality types are differentially related to positive and negative affect and motivation. The twelve affects measured for the internship were separated out and analyzed by causal path analysis resulting in two clusters (Figure 33)



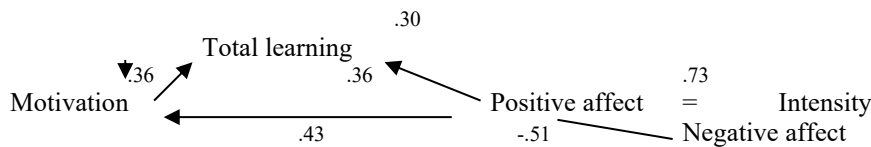
**Figure 33. Clusters of Positive and Negative Affect**

Scales of positive and negative affect were produced from these two clusters and then added to form a scale of intensity of affect. As the internship was concerned with the student's individual learning rather than diffusion, a scale of total learning was also formed by adding all the various learning achievements.

### Results

Total Sample (N=46)

r=.29 at p,.05

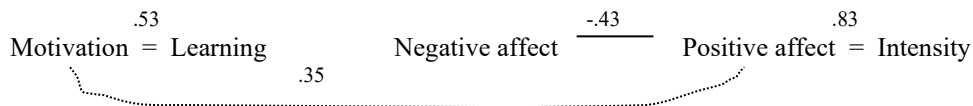


**Figure 34. Relation of Positive and Negative Affect to Motivation and Learning in Total Sample**

For the total sample (Figure 34), positive affect and intensity contribute directly to both motivation and learning. Negative affect has only a negative relation with positive affect.

SEs (N=30)

r=.36 at p<.05



**Figure 35. Relation of Positive and Negative Affect to Motivation and Learning for SEs**

For the SEs (Figure 35), the correlation between positive affect and motivation just failed to reach significance at .35. While this is disappointing, it is in exactly the same direction as the results from the practitioner's study.

### Conclusions

Even with this small selection of results, we have been able to show the capacity of the test. Also, in some of these studies, it is difficult to get big numbers but in these cases, the indicative results have been in the right directions.

In the original 1980 study, the test was shown to have acceptable validity and reliability. Subsequent studies have shown consistency in the overall directionality of its two dimensions. The people in each of the quadrants of the personality space have been found to have observably different behavioural preferences which are

consistent from study to study regardless of the purpose of the study or the numbers empirically involved. Subjectivizers consistently show tendencies towards the world of introspection and ideas while objectivizers do not, preferring to focus upon external realities. Similarly, externalizers consistently show preferences for acting upon the world while internalizers do not, preferring to adapt their behaviour to suit their perceptions of this reality.

The data are more powerful for the mixed types SE and OI than for the pure types SI and OE. Also, the focus of several studies has meant a preponderance of SEs and only two studies have had adequate numbers of SIs. Study of the OEs in particular have suffered from this problem. This in itself confirms that the majority of the population falls into the mixed types.

The causal path analyses demonstrate that the personality types are coherent configurations of behaviours rather than merely correlates of single isolated variables. It is further confirmation that what we are measuring are indeed people as open *systems* with generalized tendencies towards consistent forms of behaviours.

The sequence of studies has also supported the original predictions of SEs being predominantly male and OIs being predominantly female. Constraints on the subsequent studies has meant that only the original study had a full Latin Square design and this has interfered with attempts to learn more about the distribution of gender between the pure types. It has also frustrated attempts to clarify the influence of socioeconomic status on the quadrants. Only one study has involved populations other than Australian and this predominantly USA sample showed preferences consistent with those established in Australia.

Using both Australian and USA participants, the test has established a clear occupational profile for the interrelated vocations of academia and consultancy that are dominated by SEs.

One of critical findings consistently shown throughout the studies is the differential way in which the types respond to positive and negative affect. As hypothesized, subjectivizers are affectually insensitive but when they do notice these phenomena, they respond positively to positive affect and are not put off by negative. Objectivizers respond positively to positive affect but either deny the existence of negative affect or respond negatively to it. Such consistency in behaviours could be a central factor in determining occupational preferences or satisfaction with various types of work once engaged upon them.

Apart from establishing and confirming the essential directedness of the two major dimensions, the test has been shown to throw light upon some specific behaviours in terms of personality distribution:

<b>Some specific behaviours identified so far</b>	
Quantity of and orientation towards TV viewing	Reject university response to social change
Reading	Sensitive to affect transmitted over the phone
Letter writing	Responsive to affect transmitted over the phone
Degree of travel	Sensitive to positive affect
Busyness	Respond positively to positive affect
Social use of phone	Sensitive to negative affect
Work use of phone	Respond negatively to negative affect
Preference for face to face contact,	Perceptually sensitive
Concern with social issues	Sensitivity to change in social field
Joining	Quality of Life Space
Organizing/networking	Ecologically concerned
Degree of mental demand in job	Optimism
See university as sanctuary from outside world	Belonging/donating to environmental org.
	Preference for organic vegetables
	Diffusion of ideas and practices

Obviously from the above table, personality affects a huge range of behaviours.

The test is soundly based both theoretically and empirically. It now requires a more broadly based usage. Some of the outstanding research questions are detailed below

### **Further Research Required**

As reported above, Ackoff & Emery (1972) hypothesized that the mixed types SE and OI would move towards centraversion over their life span while the pure types SI and OE moved away from it. While there was some indirect data in the 1980 study to support that hypothesis, it can really only be tested by an adequately sized and designed longitudinal study.

While the range of variables reported upon here demonstrate that virtually any form of behaviour is influenced to some degree by the two dimensions of SO and EI, more studies are required to confirm some of

these results. As the three studies involving academic and consultant behaviours have shown, there are clearly major occupational groupings which can benefit from personality investigation.

On a similar and interrelated theme, is there is a particular personality profile associated with women who choose or would prefer to stay at home while their children are young, or those who voluntarily choose to be family day care workers or foster mothers? Is gender a significant determinant of personality or it partly culturally determined and/or is it changing over time?

Similarly, what role does socioeconomic status play in the determination of the personality profile and its movement through the personality space over time? Ackoff & Emery's hypothesis of a personality type of genetics with development over time at least partly dependent on the profile of the family has taken a battering from our empirical studies which consistently show that subjectivizing and the SE quadrant in particular are consistently characterized as of higher SES. Is this an Australian phenomenon, an index of the power of the formal Western education system, or something quite different?

Studies in cultures other than Australia are required to check out further the reliability, validity and consistency of the results. In addition, cross cultural studies can throw light on the more subtle environmental influences on human behaviour over the life span. While the one USA based study shows consistent results with similar vocational samples in Australia, the 1980 Australian study showed a higher proportion of pure types than anticipated from theory based predictions. This opens a very real question as to the degree of influence of culture on personality.

Given some of the subtleties we have seen in systemically studying the major variables, it is critical that as many as possible of these formative studies have Latin Square designed samples. Mechanisms such as partial correlations cannot hope to compensate for these systemic influences.

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