Constructed Development and Psychometrics:

the Missing Link to Better Personality Data!

Dr Darren Stevens

Outline of Today's Talk

What is Personality?

What is OCEAN?

What are Psychometrics?

What is Psychometric Isomorphism?

What is missing from the above?

What is Constructed Development Theory?

How CDT can fill the gap!

Why are we here?
Let's set the scene immediately: I have a LOT of information in this presentation and you will not be able to take it all in.
I am simply setting the scene and if you're interested, you can have the slides afterwards to read at your leisure.
Do not think you must take it all in as you simply cannot. Our working memory will allow us to recall about 10% of this at best!
The number of slides is never the problem. The amount of information on each slide IS the problem. So I've gone with that premise and we have 4000 slides :)

What is Personality?

The word personality itself stems from the Latin word persona, which refers to a theatrical mask worn by performers in order to either project different roles or disguise their identities.

Whatever the behaviour, personologists—as those who systematically study personality are called—examine how people differ in the ways they express themselves and attempt to determine the causes of these differences.
Personality is defined as the characteristic sets of behaviours, cognitions, and emotional patterns that evolve from biological and environmental factors. While there is no generally agreed upon definition of personality, most theories focus on motivation and psychological interactions with one's environment.

Super-Ego is the internalised representation of society at large mediated to some degree through your parents..

Characteristics of Personality

⚠ **Consistency**

⚠ **Psychological and physiological**

⚠ **Behaviours and actions**

⚠ **Multiple expressions**

What is Personality?

Psychodynamic Theories
Sigmund Freud
Erik Erikson

Behavioural Theories
BF Skinner
John B Watson

Humanist
Carl Rogers
Abraham Maslow

So what exactly makes up a personality? Traits and patterns of thought and emotion play important roles as well as the following fundamental characteristics of personality:
Consistency: There is generally a recognizable order and regularity to behaviors. Essentially, people act in the same ways or similar ways in a variety of situations.
Psychological and physiological: Personality is a psychological construct, but research suggests that it is also influenced by biological processes and needs.
Behaviours and actions: Personality not only influences how we move and respond in our environment, but it also causes us to act in certain ways.
Multiple expressions: Personality is displayed in more than just behavior. It can also be seen in our thoughts, feelings, close relationships, and other social interactions.

Psychodynamic theories of personality are heavily influenced by the work of Sigmund Freud and emphasize the influence of the unconscious mind on personality. Psychodynamic theories include Sigmund Freud's psychosexual stage theory and Erik Erikson's stages of psychosocial development.
Behavioral theories suggest that personality is a result of interaction between the individual and the environment. Behavioral theorists study observable and measurable behaviors, often ignoring the role of internal thoughts and feelings. Behavioral theorists include B.F. Skinner and John B. Watson.
Humanist theories emphasize the importance of free will and individual experience in developing a personality. Humanist theorists include Carl Rogers and Abraham Maslow.
Personality: Individual differences in characteristic patterns of thinking, feeling, and behaving.

Can personality change?

What is Personality?

Yes. A study published in the January 2017 journal Psychological Bulletin synthesized 207 published research papers and found that personality may be altered through therapy. "For the people who want to change their spouse tomorrow, which a lot of people want to do, I don't hold out much hope for them," said study researcher Brent Roberts, a social and personality psychologist at the University of Illinois. However, he continued, "if you're willing to focus on one aspect of yourself, and you're willing to go at it systematically, there's now increased optimism that you can affect change in that domain."

Walter Mischel and Albert Bandura - behaviour is controlled not by hypothetical traits but according to the degree of regularity of external stimuli. My theory says the opposite to this…
That is, they believe that personality traits are only consistent if the situation is consistent and that they vary once the situation changes.
In their view, behavioural consistency does not reflect stable personality traits. Rather, it is the environment that evokes and shapes the illusion of such traits.
In my theory, I come at this from a different angle. We construct our environment, and depending on our Dynamic Intelligence level, we are or are not aware of this construction.
Averaging over such situations to find an overarching "trait" in fact masks critical differences among individuals

Social learning theory would contend that personality is more susceptible to change than would trait theory.

WHY this happens will be addressed later.

So how do we currently Measure Personality?

What is Personality?
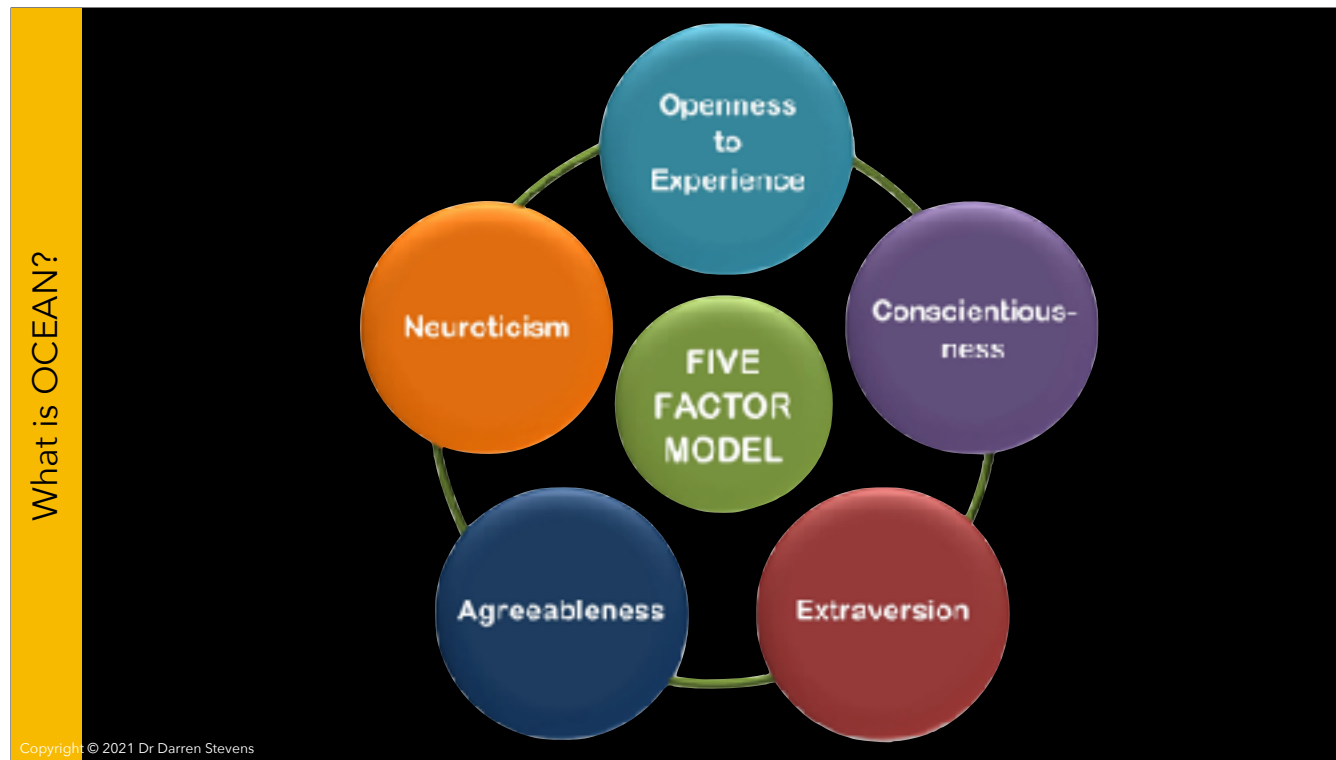
OCEAN

Personality is described on the basis of an individual's score on five major traits. The acronym OCEAN is often used to convey these five traits, which are Openness to Experience (O), Conscientiousness (C), Extraversion (E), Agreeableness (A) and Neuroticism or Emotional Stability (N).

What is OCEAN?

High Scores

Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness to Experience
Joiner	Trusting	Conscientious	Worried	Imaginative
Talkative	Lenient	Hard Working	Temperamental	Creative
Active	Soft-Hearted	Well Organised	Self-Conscious	Original
Affectionate	Cool-Natured	Punctual	Emotional	Curious

Extraversion

Activity — Energetic
Assertiveness — Forceful
Excitement — Adventurous
Gregariousness — Sociable
Positive Emotion — Enthusiastic
Warmth — Outgoing

Intraversion
Loner
Quiet
Passive
Reserved

Agreeableness

Altruism — Warm
Compliance — Not Stubborn
Modesty — Not Show-Off
Straight-forwardr — Not Demanding
Tender-Mindedr — Sympathetic
Trust — Forgiving

Antagonism
Suspicious
Critical
Ruthless
Irritable

Conscientiousness

Achievement — Thorough
Compliance — Efficient
Modesty — Not Impulsive
Straight-Forward — Not Careless
Tender — Organised
Trust — Not Lazy

Lack of Direction
Negligent
Lazy
Disorganised
Late

Neuroticism

Angry Hostility — Irritable
Anxiety — Tense
Depression — Not Contented
Impulsiveness — Moody
Self-Conscio — Shy
Vulnerab — Not Self-Confident

Emotional Stability
Calm
Even Tempered
Comfortable
Unemotional

Openness to Experience

Actions — Wide Interests
Aesthetics — Artistic
Fantasy — Imaginative
Feelings — Excitable
Ideas — Curious
Values — Unconventional

Closed to Experiences
Down-to-Earth
Uncreative
Conventional
Uncurious

Low Scores

Extraversion

High

- Open and talkative
- Competitive, enthusiastic and persuasive
- Enjoys a fast pace and variety at work
- Gregarious
- Socially active and energetic
- Can be impulsive or indiscreet
- Needs praise - enjoys attention
- Can lack concentration in routine or long tasks

Low

- Reserved and shy in company
- Able to concentrate on long tasks
- Prefers a calm environment
- Dislikes the limelight and attention
- Inhibited and somewhat reluctant in teams
- Not a natural communicator
- Deliberate, and reflects on things
- Lacks spontaneity

Intraversion

These are the ATTRIBUTES ASSIGNED to Extraversion, but are they true? Real?

Extraversion is characterised by excitability, sociability, talkativeness, assertiveness, and high amounts of emotional expressiveness.
People who are high in extraversion are outgoing and tend to gain energy in social situations.
Being around other people helps them feel energised and excited.

Social events can feel draining and introverts often require a period of solitude and quiet in order to "recharge."
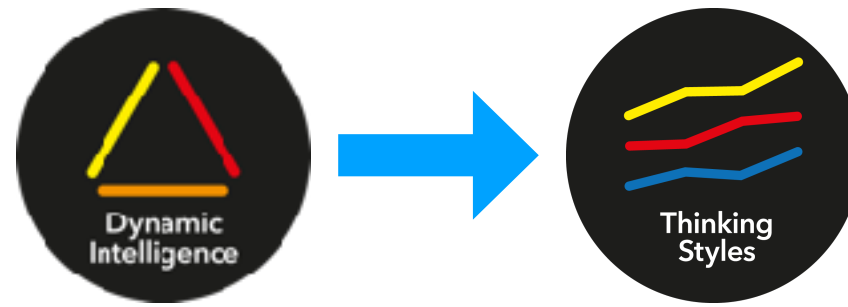
I was told that they do not. But I know Prof. Stephen Wood at Liverpool Uni has been working on this and has a number of papers on it.
What else measures these traits?
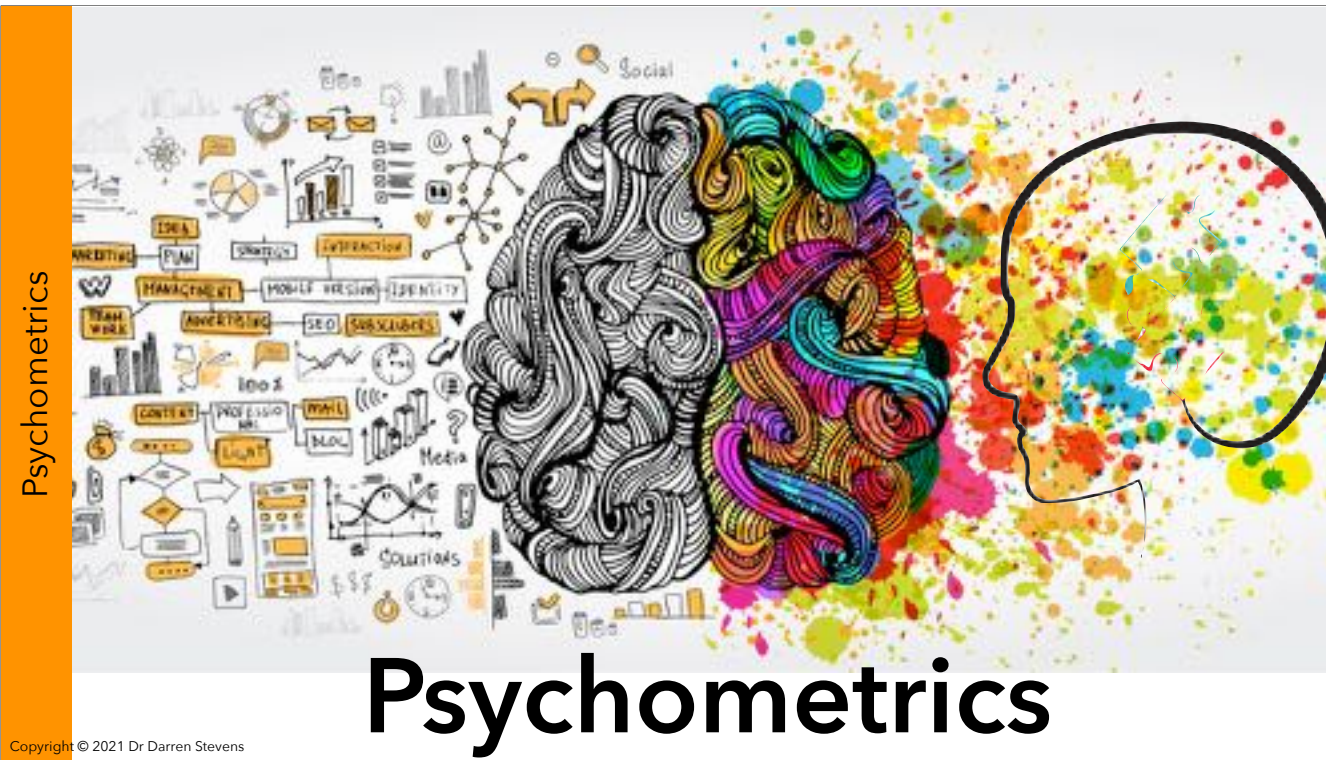
Psychometrics

Psychometrics is a field of study concerned with the theory and technique of psychological measurement. ...
The field is concerned with the objective measurement of skills and knowledge, abilities, attitudes, personality traits, and educational achievement.

What Can Be Measured in a Psychometric Test?

Types of Psychometric Tests

- Numerical Reasoning
- Verbal Reasoning
- Inductive Reasoning
- Diagrammatic Reasoning
- Logical Reasoning
- Error Checking
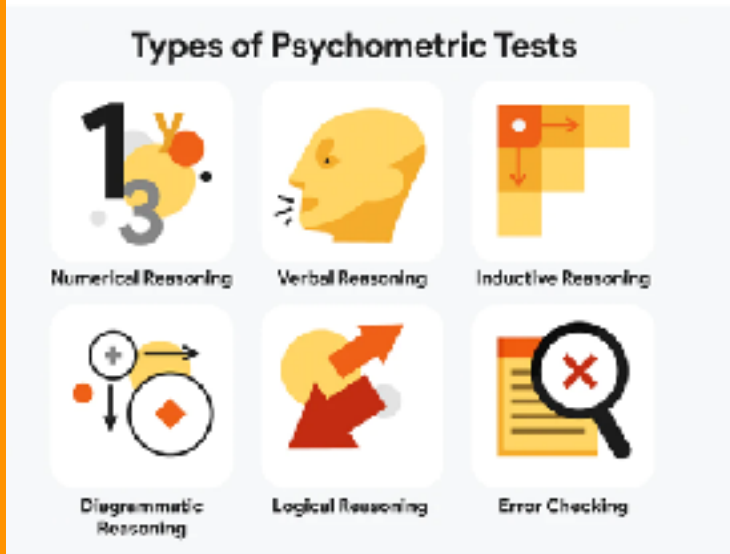
- Cognitive tests

- Personality tests

- Aptitude tests

There are several different types of psychometric tests that can be used to assess your academic achievement, job-related skills, attitudes toward people, and the degree to which you can tackle the demands of a job
Cog - IQ, verbal, Maths, reasoning, knowledge, skills, education.
Person - measure aspects of personality for employers to make hiring or promotion decisions such as attitude, emotions and motivation.
Aptitude - your capacity to cope in a Jon role. But skill based, not cognitive based. Personality tests come under this. Stress coping and managing.

A Few Stats…

- 87 percent of companies to adopt such measures in the near future.

- 8/10 U.S.A companies use psychometrics to remove 30% of unqualified applicants.

- 70% complete personality tests for companies

- 52% of companies use psychometric instruments

- 49% use MBTI

- Hogan - 25%

- Firo-B - 24%

Psychometrics

Walmart, Target, UPS
https://www.apadivisions.org/division-5/publications/score/2017/04/psychometric-testing - from here!

Empirically based measures

- The Sixteen Personality Factor Questionnaire (16PF)

- The California Psychological Inventory (CPI)

- The Comrey Personality Scales (CPS)

- The Jackson Personality Inventory (JPI)

- The Minnesota Multiphasic Personality Inventory (MMPI)

- The Multidimensional Personality Questionnaire (MPQ)

Psychometrics

There are two types of measures: Type and Trait
The empirically based measures have been developed without specific personality models guiding instrument development.

Many psychologists have recently shifted away from type theory in favor of trait theory.
Much research has revealed that variation in human personality indeed occurs along continuous dimensions and not as discrete categories, and
viewing personality in this way allows for more flexible categorisation of individuals by eliminating the 'boxes' into which type theory tries to fit people.
No matter how many dichotomies of traits you choose to look at, a type theory approach will always have some limit to the number of ways a person's personality could potentially be oriented.
With a trait theory approach, there is an infinite number of places on the sliding scales of traits individuals could fall.

Theory-based instruments

- The Big Five Inventory (BFI)
- The Big Five Questionnaire (BFQ)
- The Five-Factor Personality Inventory (FFPI)
- The NEO Five-Factor Inventory
- The NEO Personality Inventory
- The Eysenck Personality Questionnaire (EPQ)
- The HEXACO Personality Inventory (HEXACO-PI)
- The MyersBriggs Type Indicator (MBTI)
- The Nonverbal Personality Questionnaire (NPQ)

Psychometrics

The theory-based instruments have been purposefully developed to measure specific theoretical models of personality.

Psychometrics

**16PF
Questions**

Cold? Sad? Smurf? ➝

I take time out for others.
I know that I am not a special person.
I take control of things.
I try to forgive and forget.
I keep in the background.
I can't do without the company of others.
I trust others.
I am not easily frustrated.
I cheer people up.
I often feel uncomfortable around others.
I seldom feel blue.
I dislike myself.
I take charge.
I let others make the decisions.
I believe in the importance of art.
I like to get lost in thought.
I wait for others to lead the way.
I am willing to talk about myself.
I find it difficult to approach others.
I enjoy my privacy.

These are the types of questions we get. We'll come on to why I'm not keen on them later.

How are Psychometrics Evolving?

Gamifying them!

- It reduces socially desirable responding, where candidates respond based on what they think the employer wants to hear.

- It minimises the effect of lack of self-awareness in the prospective employee as he or she may be unaware of his or her own internal processes.

- It reduces test anxiety that some prospective employees may experience in a traditional testing environment.

Psychometrics

But a larger benefit of gamifying testing is to make the process as meritocratic as possible. Some firms have also hidden details of candidates' university to eliminate "unconscious bias." Such companies include Deloitte, the NHS, HSBC and the BBC. Universities will also use a similar system by 2017.
"Our psychometric games have been designed to measure dimensions of the Big Five personality framework, specific cognitive functions and General Mental Ability"

Firefly Freedom – measures innovation by asking players to catch fireflies to provide light for their family during the winter

Cosmic Cadet – measures resilience and problem solving, as the player navigates a spaceship through space

Yellow Hook Reef – measures general ability, such as verbal, numerical and abstract reasoning

Gamifying might be the future of psychometrics.
In conclusion, personality testing has come a long way from traditional questions about mood, and companies and job candidates seem to be embracing this change.

Psychometrics

Why would we need to "gamify" them?

"This approach to psychometric testing in the workplace could well have been triggered by the gap between personality test scores and actual job performance."

\- REFERENCE

Deloitte customized a "game" which places potential employees in real life work situations at the firm.
The 20-minute online game incorporates videos and tasks from real Deloitte employees based on scenarios that occur regularly in the workplace.
The game serves as the first round of the selection process and follows the same principals as traditional psychometric testing commonly used by large consulting and professional firms and allows employers to assess candidates' performances.
It's flashy to attract graduates who are applying for positions with multiple employers.
According to Deloitte: "It's highly competitive, and we feel this is not innovating for the sake of innovating, but we do feel that it's reflective of our environment.
Having a boring, lengthy process that has no real connectivity to what they'll be doing at the firm is not ideal. We absolutely wanted to address that."
Is it because they don't work. They don't tease out anything useful. Are companies finally realising this and adapting them?
What are Psychometrics missing that might be found in a game? We'll come on to this.

Psychometrics

Myers
Briggs
Type
Indicator

I'm sure everyone here knows what the MBTI is and does…
Do you consider the MBTI a psychometric?
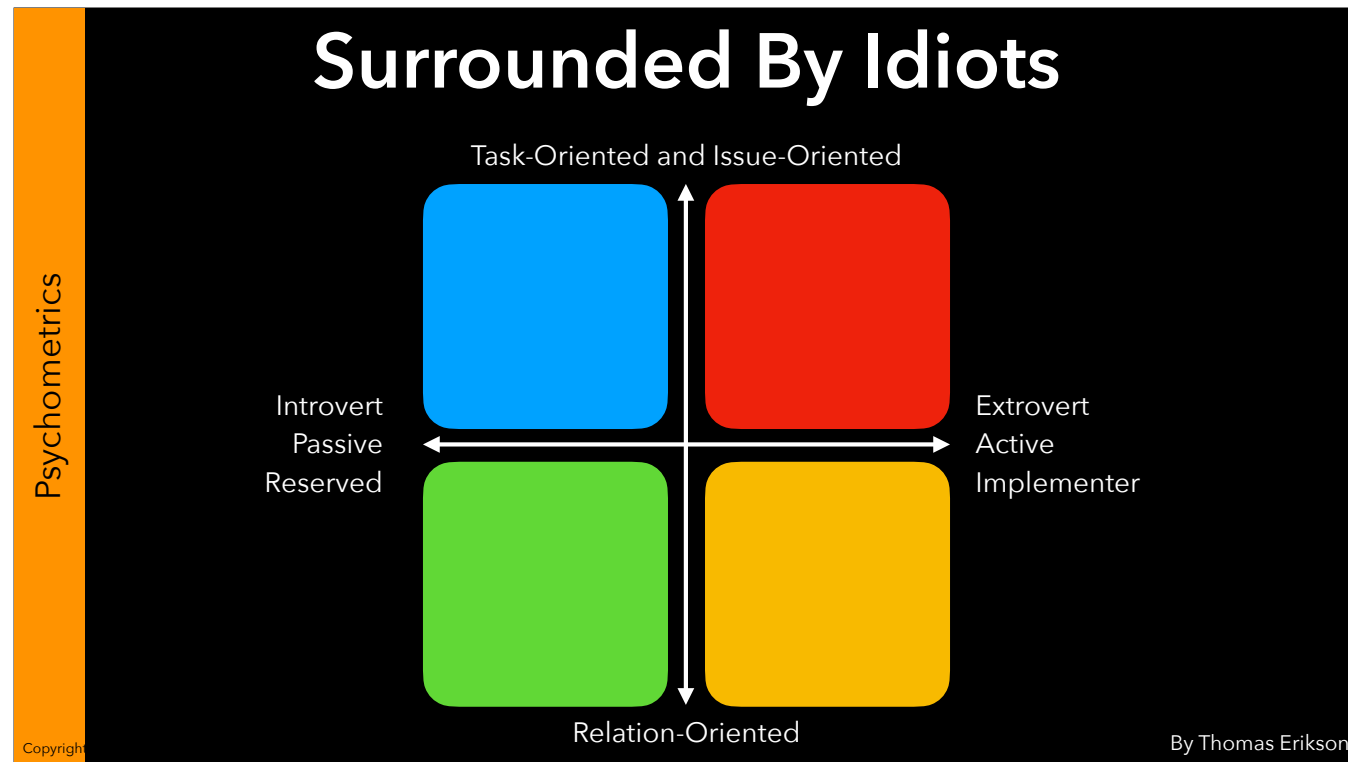
There are other systems, but as they all suffer from psychometric isomorphism, I can address them all at once in the next section.
I will also be addressing them in my up-coming book.

What is Psychometric Isomorphism?

Psychometric Isomorphism

From the available literature, it could be argued that psychology is supposed to be a dictionary of behavioural and thinking terms, but in reality, it is simply a thesaurus.
Each new word professing to redefine the previous, when in reality it is acting as a synonym or even neologism rather than a replacement.
This is no more evident than in trait theory where I argued in my literature review that the missing link for each trait is what we're going to discuss…

Psychometric Isomorphism

Question / Text	Instrument	Label
I accept people as they are	HPI-HIC	Forgiveness/Mercy
I accept people as they are	6FPQ	Agreeableness
I accept people as they are	AB5C	Calmness
I accept people as they are	HEXACO_PI	Gentleness
I accept people as they are	HPI	Calmness
I accept people as they are	NEO5-20	Agreeableness
I accept people as they are	TCI	Tolerance

The FFM is the best-known model of personality (Funder, 2001) and despite this popularity, the nature of the appropriateness has been continually debated (De Young, 2010; Srivastava, 2010).
The actual number of factors is one of the most contested aspects of the research (see Simms, 2007; Bowler, et al., 2009).
I argue that it is not an explanation but a description.
That is, the explanatory part of traits does consist of countless narrow traits relating specific features of situations to specific behaviour reactions.
However, these narrow traits accrete over time into broader traits. Accretion means that the narrow traits become linked together and influence each other psychologically.

What is MISSING in all these psychometrics is very important. And it's important not just from a self-awareness perspective but also from a productivity perspective.

Method Bias

- incomparability of samples (e.g., differences in education or motivation)
- differences in environmental administration conditions (e.g., ambient noise)
- ambiguous instructions for respondents and/or guidelines for administrators
- differential expertise of administrators, tester/interviewer/observer effects (e.g., halo effects)
- **communication** problems between respondent and interviewer, differential familiarity with stimulus materials (notably relevant in cognitive testing)
- differential familiarity with response procedures, and differential response styles (e.g., social desirability, extremity scoring, acquiescence).

The communication bias isn't so much a communication issue as a meaning-making issue and we'll come on to this too
The question that arises out of the final point is: what kind of person would acquiesce?
And can we measure THAT specifically from a position of habit or choice?

Item Bias - Differential Item Functioning

an item is biased if persons with the same standing on the underlying construct (e.g., equally intelligent) but coming from different cultural groups do not have the same expected score on the item. The expected item score is usually derived from the total test score.

The item is biased as it favours one cultural group across all test score levels. Of all bias types, item bias has been the most extensively studied; various psychometric techniques are available to identify item bias

Can we measure levels of awareness of cultural impact on our thinking?
I once asked three Nigerian woman…

Let's put the ideas to the test in one question.
Notice the direction of INTENTION with 8 & 9.
Perhaps you agreed with the statement, "If I ruled the world, it would be a better place" not because you think you would be a particularly good world leader, but because you are very disappointed with the current world leaders
Completely the opposite direction yet but end up being an agreement response.
How do we cater for this problem? How do we measure their Intention as it's not the same…?

E.I. and Workplace Frustration

Psychometric Isomorphism

Yoo and Salovey (2009) found individuals higher in Emotional Intelligence ability reported greater levels of frustration after reading about, and experiencing a frustrating event…

What were they expecting to find?
This is an EXTERNAL unconscious bias.
Frustration isn't real. It's a construct. A nominalization. Do YOU think this person is productive?
If you are feeling frustrated after READING about something, you're not in control at all.
Why do psychologists think this is a useful thing to know?
In my theory, EI is a facet of DI because it also reflects attitudes and describes positions, rather than determines if it's a choice or a construction…

Is Personality Stable across Situations?

Psychometric Isomorphism

Stability in personality (a trait) is typically defined as:

"rank-order consistency".

Example: Is the person who is most extroverted around her classmates also more extroverted than her peers at soccer practice, with her family, and at a pep rally?

But WHAT is stable?
And can we show WHAT has changed?
Results from many personality studies show there is indeed rank-order consistency in people's personalities.

Is Personality Stable over Time?

People do change, but they don't change drastically

people tend to become more responsible and more emotionally stable as they age.

everyone is a little less emotionally volatile

but the most volatile people at age 15 are still more volatile than most of their peers at ages 30, 50, and 70.

Personality seems to be pretty stable, even over decades and after big life changes.

People do change, but they don't change drastically
Very extroverted people rarely become introverted and vice versa.
The rank-order of a person relative to his or her peers stays pretty stable over the course of life.
Interestingly, however, there are some changes that almost everyone experiences—for example, people tend to become more responsible and more emotionally stable as they age.

Because this happens to (almost) everybody, it doesn't change the people's rank order—everyone is a little less emotionally volatile;
but the most volatile people at age 15 are still more volatile than most of their peers at ages 30, 50, and 70.

What other reasons could there be for becoming more responsible? Greater awareness? More choices in our thinking and behaving?
And the ones most emotionally volatile are consistently volatile over time. What could be another reason for that?

Is Personality Stable over Time?

- There is mean-level change in personality during the transition from adolescence to adulthood
- Negative life events do have long-term (negative) effects on well-being
- Positive events (e.g., marriage) only have short-term (positive) effects.

I can prove this with CDT. It's coming up soon. But the difference is, I can tell you what has changed specifically.

Does Personality Predict Behaviour?

Extroversion predicts talking, happiness, social status, volunteerism.

Agreeableness predicts swearing less, being less likely to divorce, volunteerism, less criminal behaviour.

Conscientiousness predicts occupational success, college GPA, less drug use, being less likely to divorce.

Emotional stability predicts less depression, being less likely to divorce and less likely to fight in romantic relationships.

Openness to experience predicts more traveling/studying abroad and being more likely to vote for liberal candidates/causes and choose artistic careers.

What does it NOT predict? Or offer?
CHOICE!!!!
Examples (from Ozer & Benet-Martinez, 2006; Roberts et al., 2007; Mehl, Gosling, & Pennebaker, 2006)

If Personality is stable, what can we change to affect it?

How it is Constructed…

Psychometric Isomorphism

Some experts, including psychologist Carol Dweck, believe that changing the behavior patterns, habits, and beliefs the lie under the surface of the broad traits (e.g., introversion, agreeableness) is the real key to personality change.
THIS ONE - On the Importance of Conducting Construct-Level Analysis for Multidimensional Constructs in Theory Development and Testing.pdf

Constructed Development Theory

"*The mind constructs the psychological niche within which the personality fits.*"

\- (Mischel, 2004)

In effect, the mind constructs the psychological niche within which the personality fits (Mischel, 2004).
This lends itself to a constructed environment.
However, where Constructed Development Theory contributes to the field is in its perspective on a person's **level of awareness** of this contextually-derived behavioural response, and a person's **level of choice** in the moment to either adopt an habituated pattern, or to employ a different pattern after considering the ramifications of said behavioural choices.
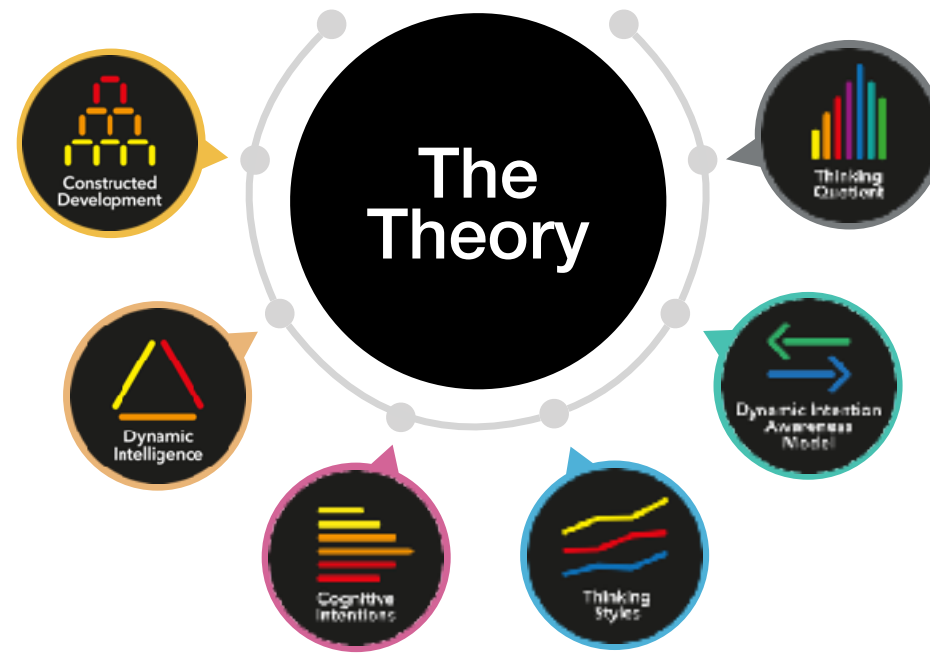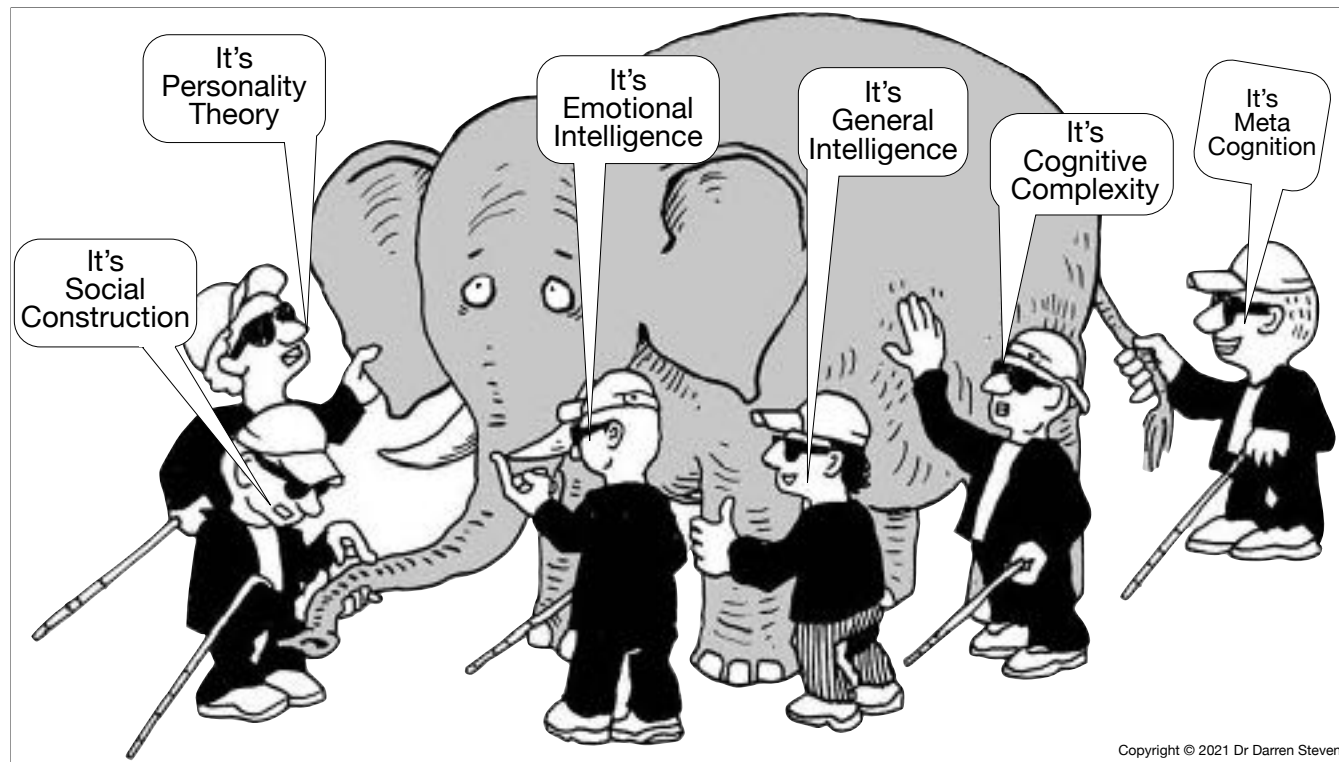
While Bohm said that everything is connected, he was actually saying more. Thinking ANY theory is the absolute reality is the very thing that causes a fragmentation in itself. All of the 'theories' we have are one way of viewing one angle of the implicate wholeness. Even the holistic theories themselves are limited in this way. Its about realising the fragmentary nature of thought itself...
And because we see everything as fragmented, (BECAUSE we ARE connected as the observer,) the universe reflects back to us these fragments, hence leading to confirmation bias - and then we get stuck.
"consciousness being an internal awareness of the whole"
The orthodoxy on psychology has closed the door on what they all agree. I want to open the door to a new debate.

I wanted to know what is the one thing that unites and separates psychology as a field of human endeavour?
What is the lowest common denominator? And I found that it's self-awareness.

Where Does it Fit In?

Altitude (Ken Wilber)	Ego Development (Loevinger & Cook-Greuter)	Action Logics (William Torbert)	Skills Theory (Kurt Fischer)	Requisite Organisation (Elliott Jaques)	Hierarchical Complexity (Michael Commons)	Orders of Consciousness (Robert Kegan)	Dialectical Thinking (Michael Basseches)	Cognitive Development Framework (Otto Laske)	Constructed Development Theory (Darren Stevens)	Cognitive Line (Piaget/Ourobindo)
CLEAR LIGHT										Supermind
ULTRAVIOLET										Overmind
VIOLET	Ego Aware									Meta Mind
INDIGO	Construct Aware	Ironist			Cross-Paradigmatic				Construct Aware	Global Mind
TURQUOISE	Integrated	Alchemist		Corporate Prescience	Paradigmatic			Self-Aware	Self-Constructing	Late Vision-Logic
TEAL	Autonomous	Strategist	Systems of Systems	Corporate Citizenship	Meta-systemic	5th Order Inter-individual	Advanced Dialectical Thinking	Self-Authoring	Self-Aware	Middle Vision-Logic
GREEN	Individualistic	Individualist	Systems	Strategic Intent	Systemic	4.5 Order	General Advanced Intermediate Postformal	Other-Dependent	Culture-Aware	Early Vision-Logic
ORANGE	Conscientious	Achiever Expert	Abstract Mapping	Development	Formal Abstract	4th Order Self-Authoring	Formal	Socialised Mind	Culture-Unaware	Formal Operational
AMBER	Conformist	Diplomat	Abstract Set	Practice	Concrete	3rd Order Interpersonal	Pre-formal	Instrumental	Self-Unaware	Concrete Operational
RED	Self-Protective	Opportunistic	Rep. System Rep. Mapping	Service	Primary	2nd Order Imperial			Authority Aware	Preoperational
MAGENTA	Impulsive	Impulsive	Pre-Operational Nominal SM Circular SM SM Calculatory	Quality	Single Rep. Set SM System SMr Mapping Single SM Set	1st Order Impulsive			Pre-Aware	Preoperational
INFRARED	Symbiotic									Sensorimotor

Key Post-Formal Maturity Models
A pattern arises in each theoretical position in that one theory apes another, without deviating from an accepted norm. There is an element of isomorphism in Table!

Factor Analysis

Constructed Development Theory

Dimension 1	Dimension 2	Dimension 3	Dimension 4	Dimension 5
Future	Sceptic	Procedures	Own	Relationship
Abstract	Trustful	Concrete	Individualist	Affiliation
Vision	Things	Realisation	Internal	People
Long Term	Away From	Quality Control	Influence	External
Difference		Task	Caring 4 Self	Listening
Options		Short Term		Team Player
Polar		Details		Places
Observer		Consensus		Partner
Global		Information		
Towards		Present		
Seeing		Re-Active		
Pre-Active		Sameness		
Reading		Past		
		Feeling		

Gordon Allport proposed that there were more than 4,000. Psychologist Raymond Cattell used a statistical technique known as factor analysis to whittle this list down to 16 different personality factors, while Hans Eysenck narrowed the list down to just three.
So I had over 8000 profiles and decided to do all kinds of data analysis, beginning with a factor analysis. It was excellent.

Study 4 actually supported the findings from Studies 2 and 3 where there was a demonstrable difference in thinking styes based on the combination of Cognitive Intentions, but also the CI's that came out worst in the self-report study (3) happened to be the same CI's that appeared in the fifth dimension on the right. And the ones that appeared on the left column (first dimension) were at the top of the self-report list.
Finally, according to the Factor Analysis, the CI's in the first dimension had a positive effect on the TQ score, whereas the CI's in the third dimension had a negative effect. Notice how many of the third dimension oppose the first in the traditional sense, and then notice how this aligns with Piaget's Disequilibrium principle. In my thesis, I say the only way to grow someone's thinking is to disrupt their habituated patterns. This Factor Analysis now gives us the way to do this using Cognitive Intentions!!!!
But we only need to focus on the top 13 or so…

MEANING-MAKING!

Constructed Development Theory
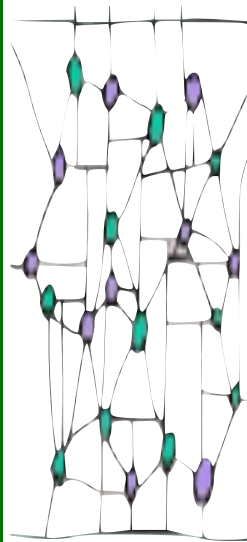
At 25yrs

- **Openness**
- **Conscientiousness**
- **Extraversion**
- **Agreeableness**
- **Neuroticism**

At 45yrs

- **Openness**
- **Conscientiousness**
- **Extraversion**
- **Agreeableness**
- **Neuroticism**
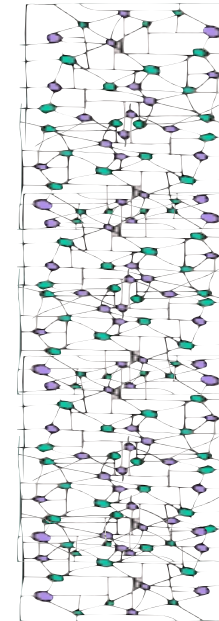
We have talked about OCEAN. Did I mention that developmental psychologists take it for granted that traits change, simply because they know that meaning changes?
From a Dynamic Intelligence perspective, one hopes the 45 year old is a higher level than his 25 year old self. We'll come onto levels later. But it's about our capacity to pull in as much info as possible in the moment.
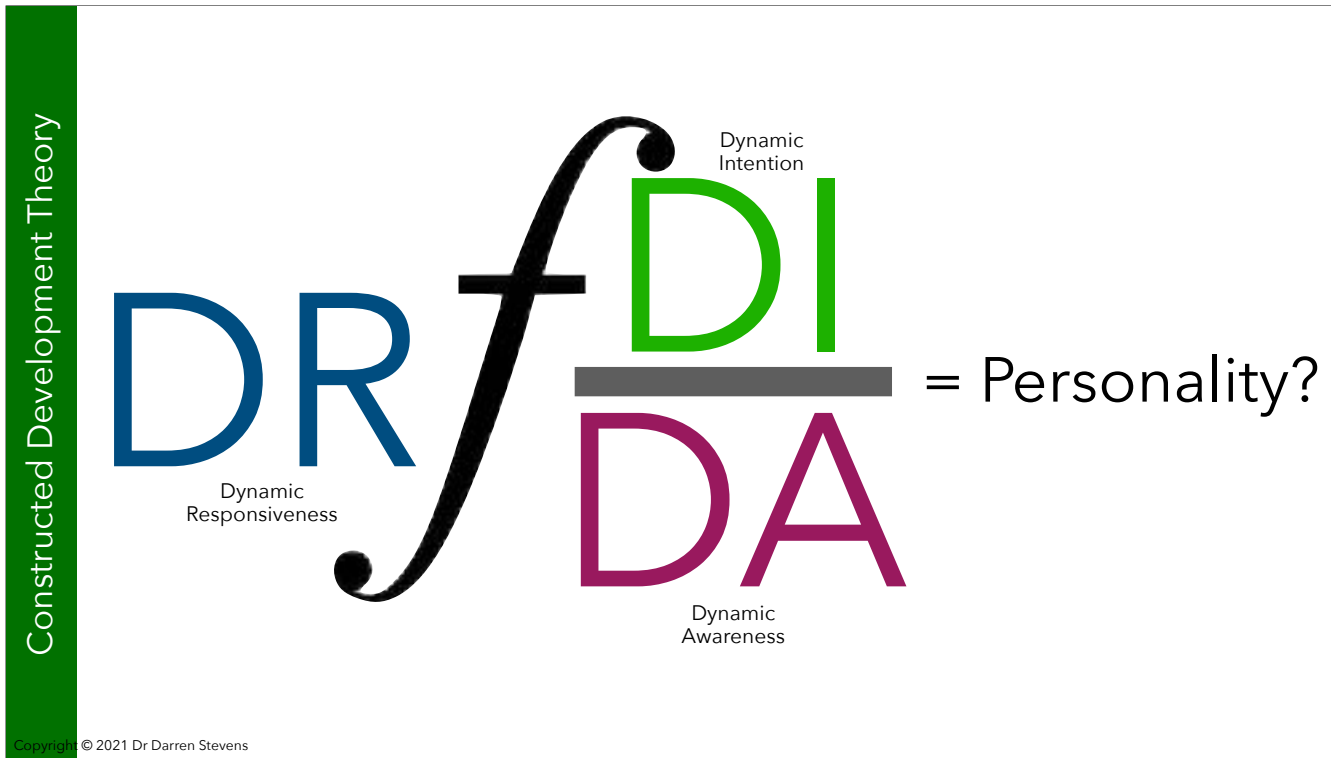
Using Constructed Development Theory, we can understand HOW we construct 'personality' and thus how we can impact it.
We can demonstrate HOW we construct our behaviours, because they are the outcome of our thinking, and we know we construct our thinking. The important thing, once again, is Choice.
Our personality is a function of our construction of self in the world, based on our constructed intention.
Our personality is a function of our Dynamic Intelligence and this can be measured better with Cognitive Intentions as we can determine how much of our personality & behaviour is choice, and how much is automated.

What is Missing?

- **Intention**
- **Awareness**
- **Choice**
- **Response**

The main thing missing is DYNAMIC INTELLIGENCE
It's our LEVEL of awareness of our capacity to construct ourselves in the moment.
The main thing that is missing from psychometrics and personality is CHOICE! But from a position of Awareness.

The Thinking Quotient

TQ level:	2.5	2.7	3	3.2	3.3	3.5	4
Factor 1	64.60	67.35	70.28	72.19	73.09	74.32	75.50
Factor 2	56.90	56.77	58.63	60.79	61.71	63.26	66.14
Factor 3	75.40	73.99	73.18	73.09	72.77	72.97	73.96
Factor 4	65.67	64.37	63.52	62.98	63.59	63.87	65.38
Factor 5	60.46	61.44	63.69	64.65	65.85	66.75	68.33
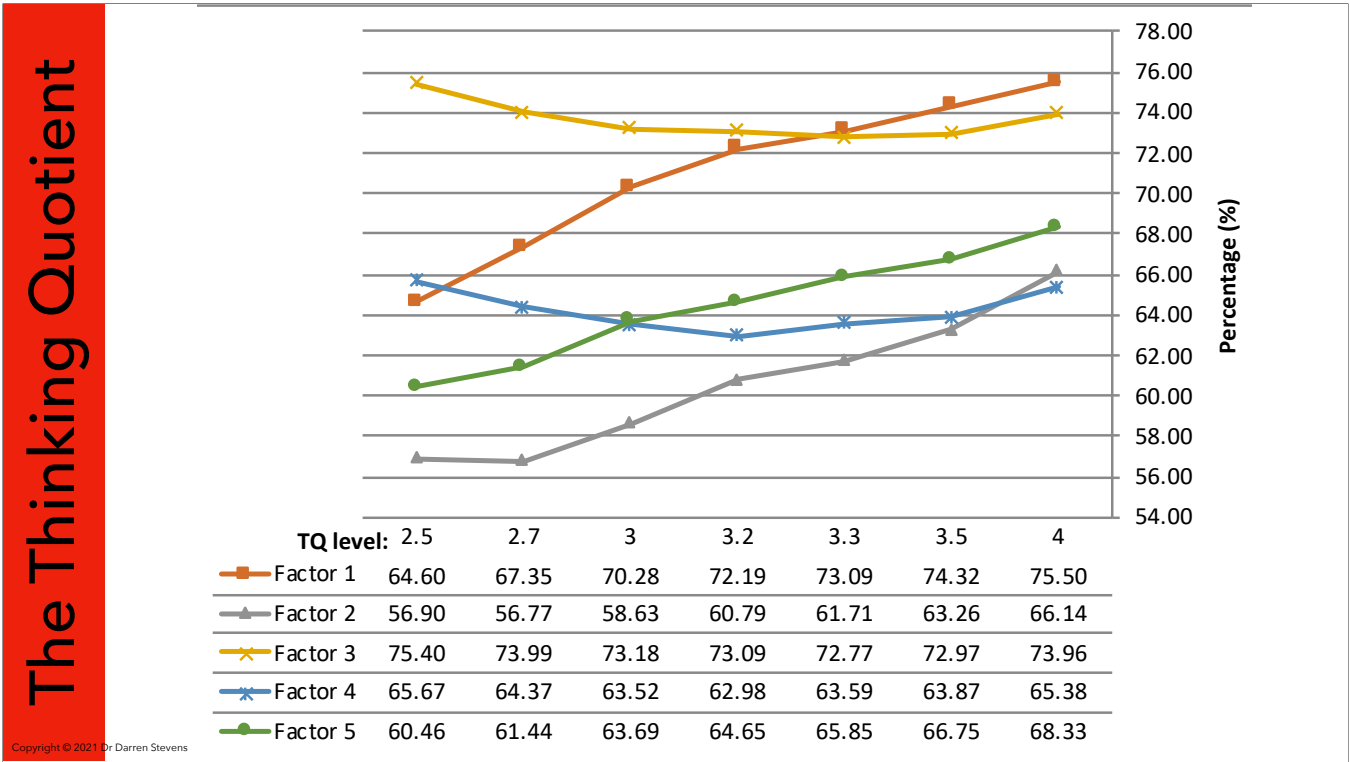
How do I know there are levels of self-awareness? The Thinking Quotient.
Please bear in mind that the MBTI has a database of 16,000 profiles to support it's WORLDWIDE programme.
I am one man and I have 8,200 profiles to support my findings. That's the quantitative side taken care of.
I also have a number of qualitative studies supporting the quant findings.
Levels of Self-Awareness

I know what you're thinking: can DI be considered a REAL intelligence?
Next slide…

Can Dynamic Intelligence be considered an Intelligence?
What do I need to do logically to address this question?

QUESTION

What is Missing

DEFINE

What is an intelligence?

Intelligence is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings – "catching on," "making sense" of things, or "figuring out" what to do.

RESEARCH

Who are the main players in the field?

Spearman, Nisbett, Eysenck, Jensen, Plomin, Thorndike, Sternberg, Thurstone, Herrnstein, Guilford, Hoepfner, Ceci, Gardner, Willingham, Cohen, Cobb, Cronbach, Squire.

ACCEPT DEFINITION

FINDINGS

Discover Spearman's 'g' isn't universally agreed and that Gardner's work isn't as robust as is reported

TANGENT

Why are Multiple Intelligences still being taught?

Warne, Astle & Hill (2018) found that three-quarters of psychology text books give disproportionate coverage to theories such as Gardner's Multiple intelligences, with 80% containing logical fallacies in their discussion of the topic (Warne, et al., 2018).

CREATE ARGUMENT FROM STANDARD DEFINITION

REFRAME

What does this mean for Dynamic Intelligence?

It suggests that with quantitative and qualitative support for **DI** as a construction of cognitive capacity, …

Dynamic Intelligence can be considered a legitimate intelligence

CONCLUSION   **YES!**

What is never mentioned is the process of vertical development. This is not just left out of trait-based systems but also stage based systems.
The "what" that changes in order to elevate a thinker to the next level is discussed in stage transition by such psychologists as Michael Commons, Michael Basseches and Elliott Jaques.
However, it is referred to as a bridge and a shell, with myriad ideas about what entices the thinker upwards.
With CDT, however, we can pinpoint the "thing" to tweak in order to propel the thinker vertically.
The idea of construction isn't new.
The idea of construction and vertical development using our awareness of the fifty Cognitive Intentions is new.

Low Dynamic Intelligence

0% ——→ 100%

Own
Partner
Observer
Sameness
Difference
Influence
Affiliation
Achievement
Away From
Towards
Internal
External
Options
Procedures
Global
Details
Abstract
Concrete
Long Term
Short Term

High Dynamic Intelligence

0% ——→ 100%

Own
Partner
Observer
Sameness
Difference
Influence
Affiliation
Achievement
Away From
Towards
Internal
External
Options
Procedures
Global
Details
Abstract
Concrete
Long Term
Short Term
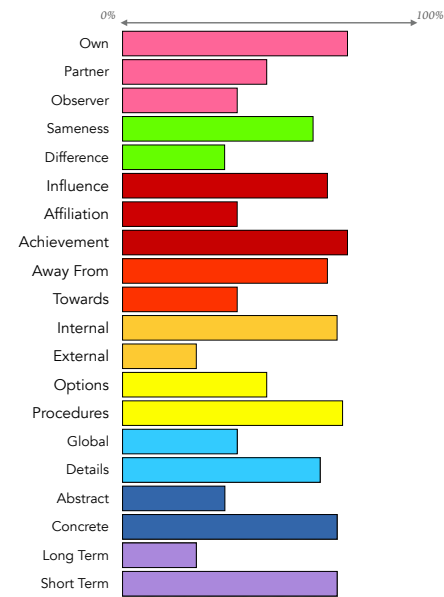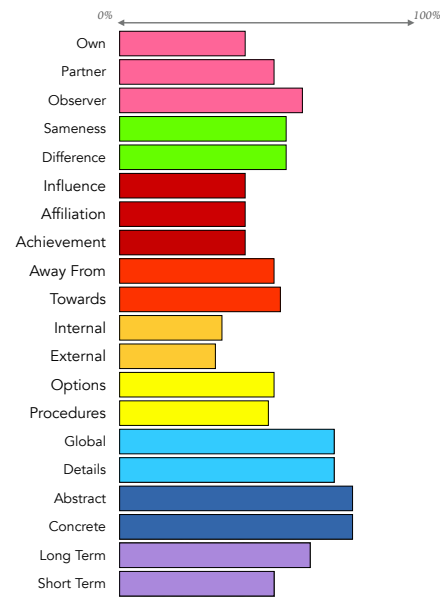
What is Missing

So in profile terms, the graph looks like this.
It's the capacity to measure THIS that is missing in psychometrics and I'll explain why as we go deeper down the rabbit hole.

MEANING-MAKING!

Trait = Unconscious Habit

Personality = Series of unconscious Habits

Dynamic Intelligence = Choice of Personality Construction

What is Missing

There is no conscious Intention behind the Trait behaviour.
There is research that pertains to Traits being a habit. An unconscious habit.

What is Missing

The lowest common denominator in personality theory, Trait theory, OCEAN, constructivism, constructionism, social theory, social construction and more is…

Self-Awareness

There is research that pertains to Traits being a habit. An unconscious habit.
How do I know this?
Let's look at the supporting evidence.

Application Across Contexts

Filling the Gaps

So we've looked at what's missing from personality, trait theory and psychometrics, so now let's look at how CDT fills those gaps.
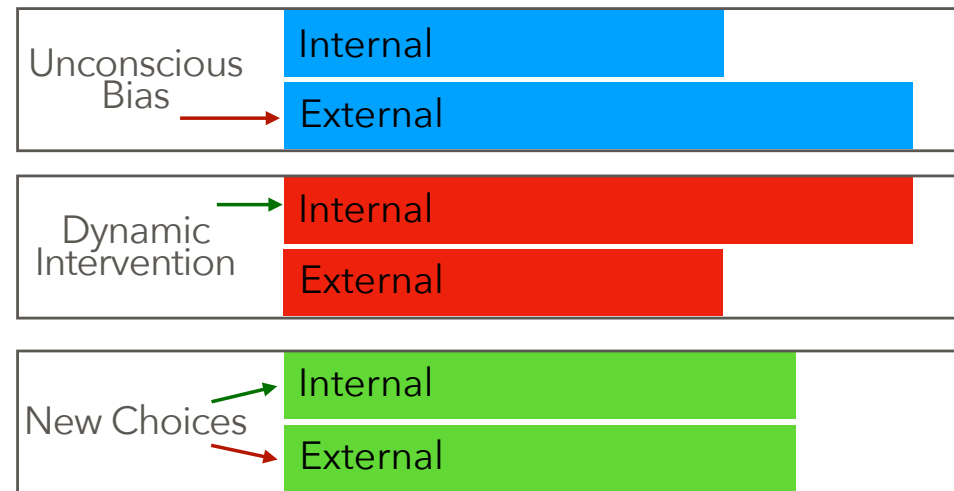
Academic Style vs **General Style**

Academic Style	General Style
Achievement	Future
Information	Abstract
Activity	Vision
Long Term	Long Term
Future	Difference
Caring for Self	Options
Pre-Active	Polar
Realisation	Observer
Task	Global
Difference	Towards
Concrete	Seeing
Observer	Pre-Active
	Reading

The data from study 2 showed the construction of the academic Thinking Style and how it differed from the larger data set.

Cognitive Intentions

The **difference** is greater which, according to research denotes less "choice" and thus lower Dynamic Intelligence.

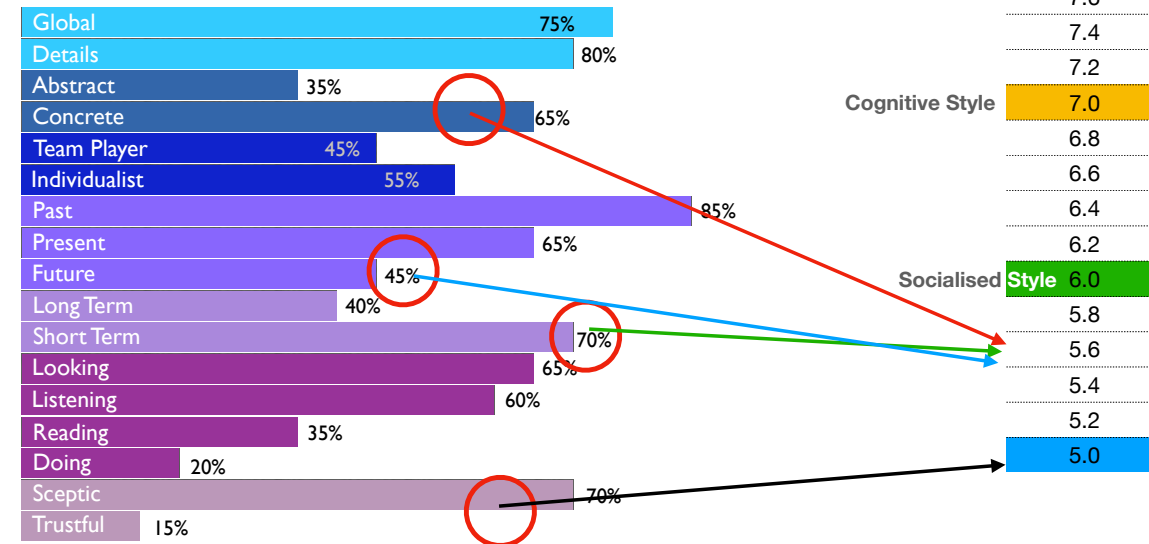| Intention	Value
Global	75%
Details	80%
Abstract	35%
Concrete	65%
Team Player	45%
Individualist	55%
Past	85%
Present	65%
Future	45%
Long Term	40%
Short Term	70%
Looking	65%
Listening	60%
Reading	35%
Doing	20%
Sceptic	70%
Trustful	15%

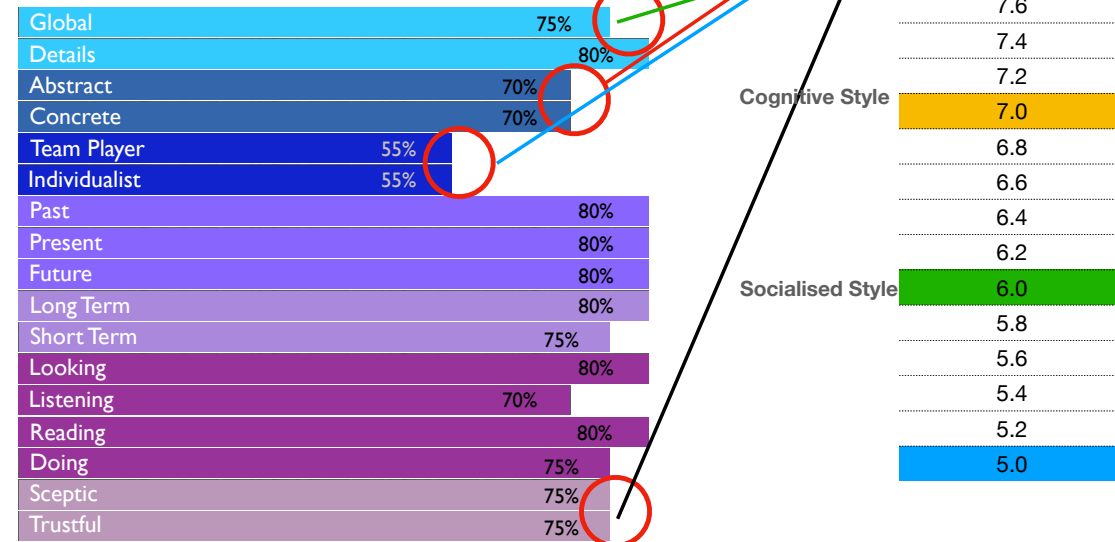| TQ Level	
	8.0
	7.8
	7.6
	7.4
	7.2
Cognitive Style	7.0
	6.8
	6.6
	6.4
	6.2
Socialised Style	6.0
	5.8
	5.6
	5.4
	5.2
	5.0

Place more emphasis on what it will allow them to do. In order to be more successful in business, they need to be more long term. Level 3 is needed in most organisations but as you get promoted, you will need to be thinking Long Term, and so on.

The Eventual Outcome

The **difference** is 5% which, according to research denotes "choice" and thus higher Dynamic Intelligence.

Global	75%
Details	80%
Abstract	70%
Concrete	70%
Team Player	55%
Individualist	55%
Past	80%
Present	80%
Future	80%
Long Term	80%
Short Term	75%
Looking	80%
Listening	70%
Reading	80%
Doing	75%
Sceptic	75%
Trustful	75%

TQ Level
8.0
7.8
7.6
7.4
7.2
7.0
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0

Cognitive Style

Socialised Style

So level 4/5 thinking looks like this, which is better for choice.

FILL THIS IN

Applying IACR to OCEAN

Agreeableness

Consensus	75%
Polar	80%
Internal	70%
External	70%
Task	55%
Relationship	55%
Trustful	80%
Sceptic	80%

With OCEAN, as with CDT, it is the awareness of the difference that makes the difference.

Extraversion

Long Term	40%
Short Term	70%
Looking	65%
Listening	50%
Caring for Others	35%
Caring for Self	
Sceptic	70%
Trustful	15%

| TQ Level |
|---|
| 8.0 |
| 7.8 |
| 7.6 |
| 7.4 |
| 7.2 |
| 7.0 |
| 6.8 |
| 6.6 |
| 6.4 |
| 6.2 |
| 6.0 |
| 5.8 |
| 5.6 |
| 5.4 |
| 5.2 |
| 5.0 |

The Dynamic Intelligence Principle
The structure of personality… Using Cognitive Intentions.
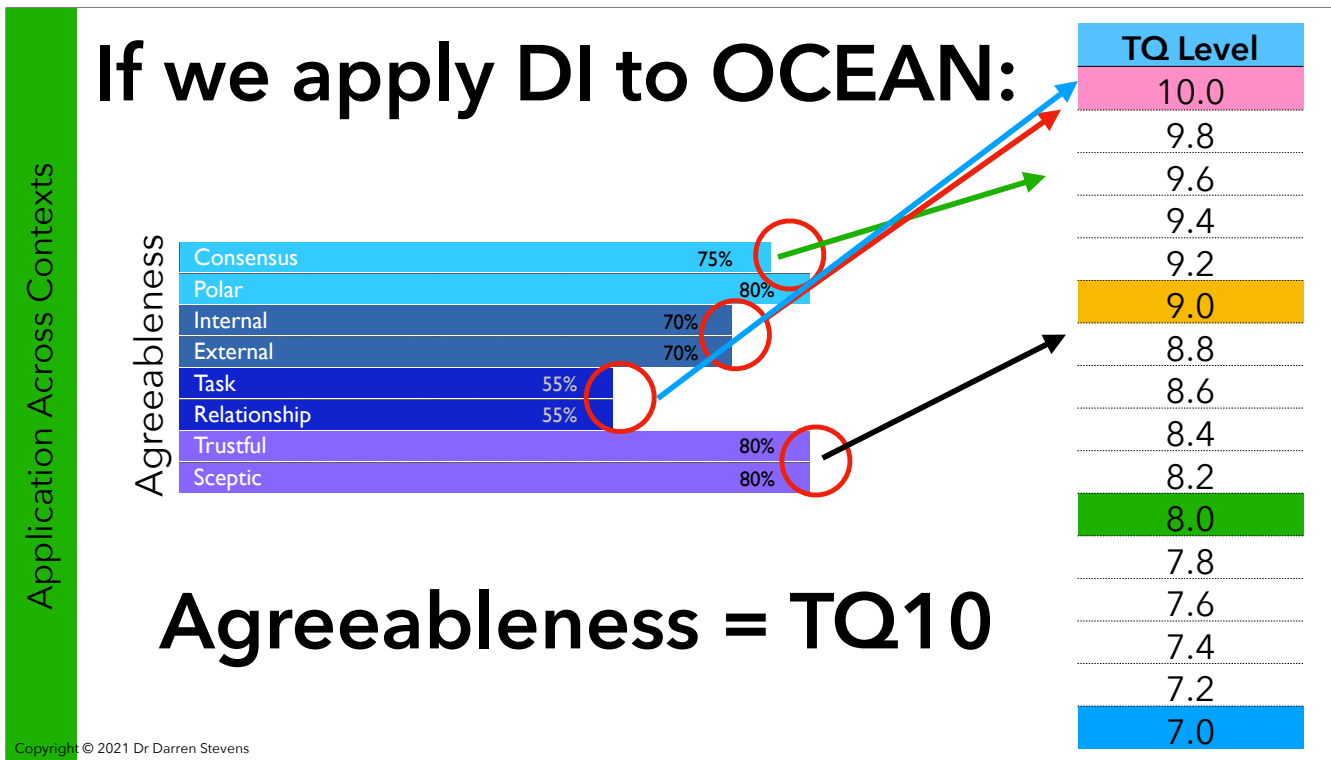
So TQ10 thinking looks like this, which is better for choice.

Openness

Application Across Contexts

- Dislikes change
- Does not enjoy new things
- Resists new ideas
- Not very imaginative
- Dislikes abstract or theoretical concepts

Sameness
Difference

Options
Procedures

Global
Details

Abstract
Concrete
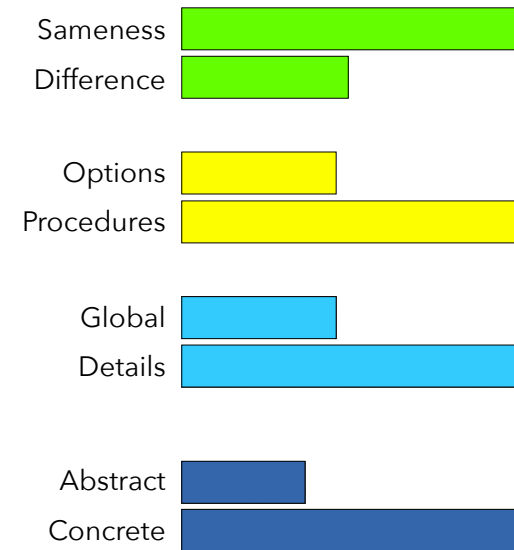
OPENNESS is just an unconscious habit… Openness thus becomes an intention! You could be intentionally Open to new experiences rather than simply being "Open", and that's a choice the current systems do not measure.
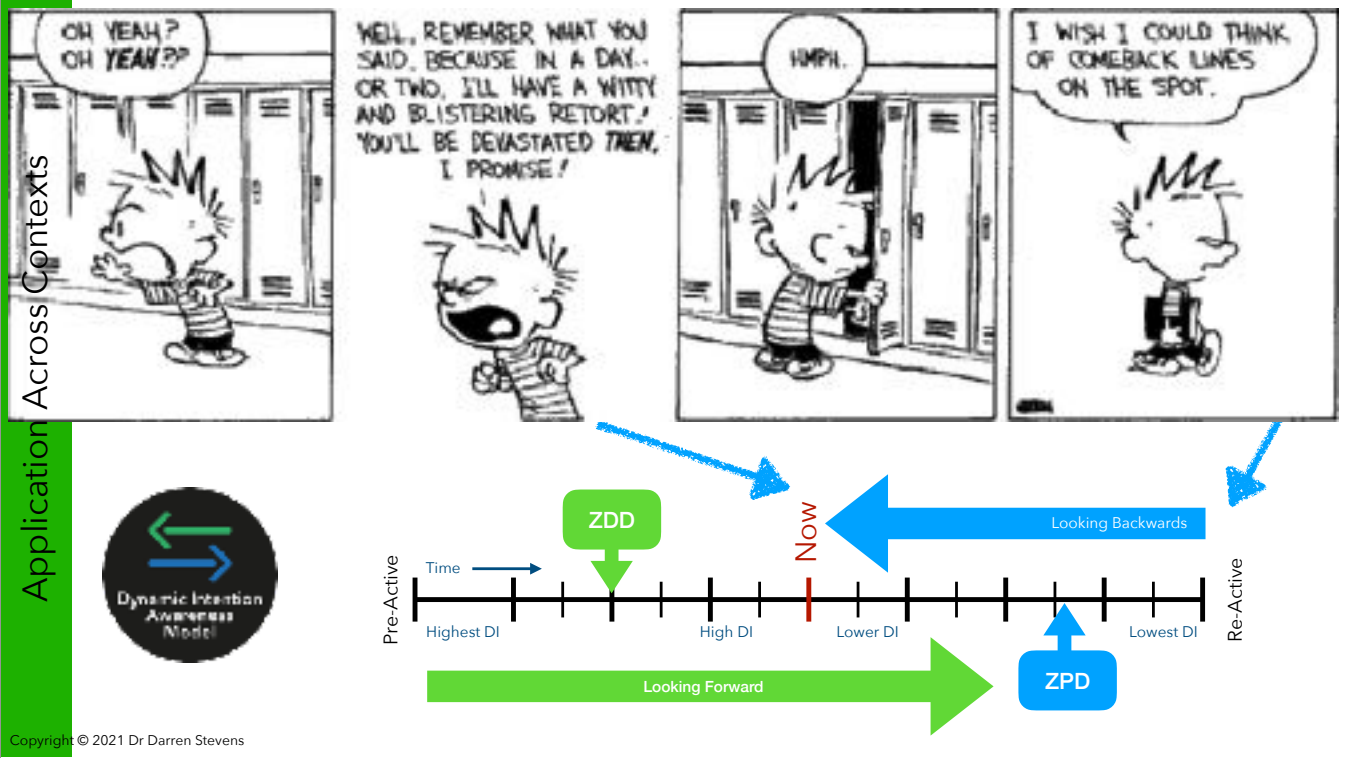And it's now measurable from a Choice perspective.
I'm not the first to say this, obviously.
But even when it's brought to awareness, the awareness is still only superficial. The psychometrics do not tell us how to change it.

Myers Briggs Type Indicator
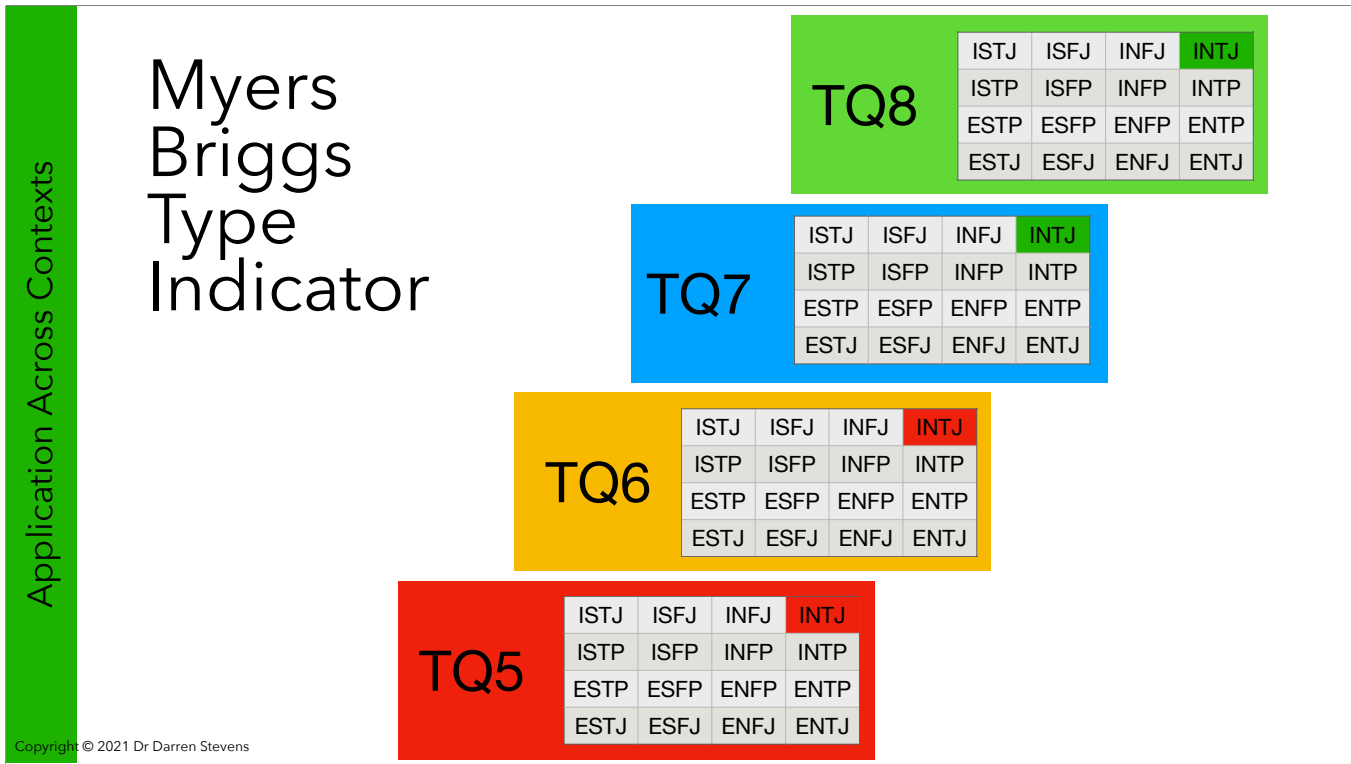
INTJ is probably not available to TQ5 people, and only available over TQ7 due to the lack of balance in their thinking.

Application Across Contexts

Dynamic Intelligence

Thinking Styles

Low DI…
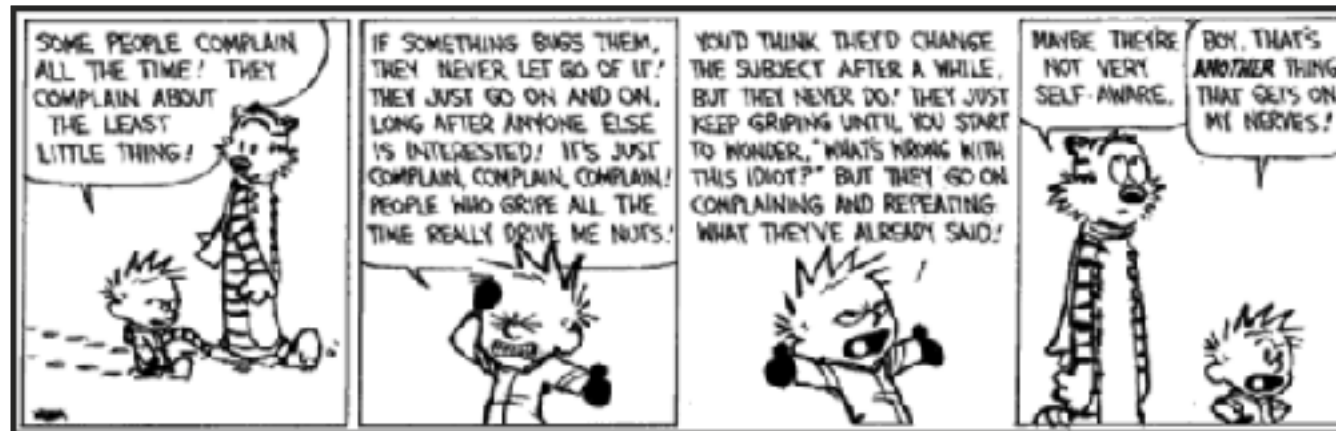
Self Awareness

If sense were common, we'd all have it.

However, can you choose to ignore yours?

Application

Thinking Styles

Meaning Making

THIS is what psychometrics tests miss out!!!!
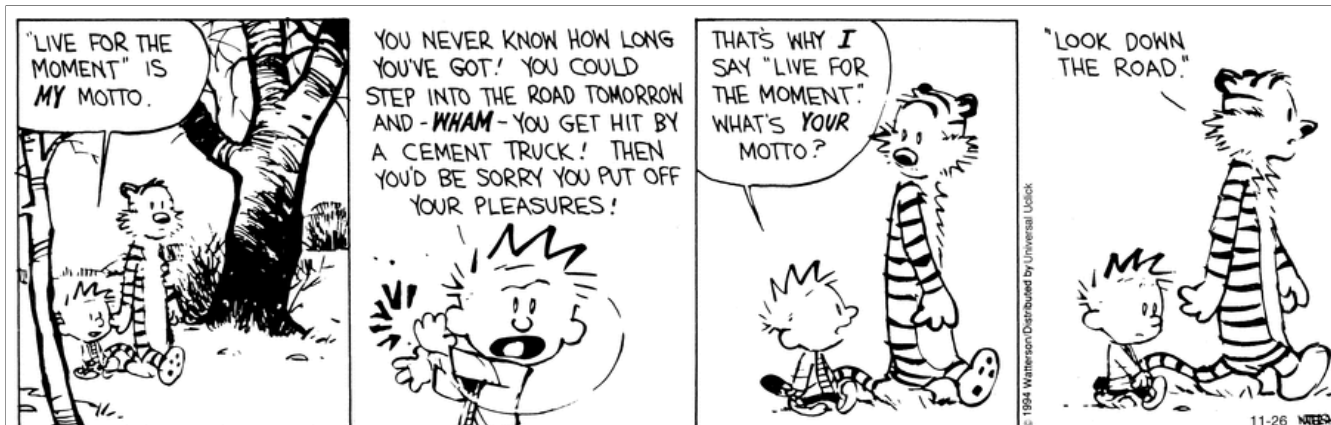
How is Calvin constructing his world view?
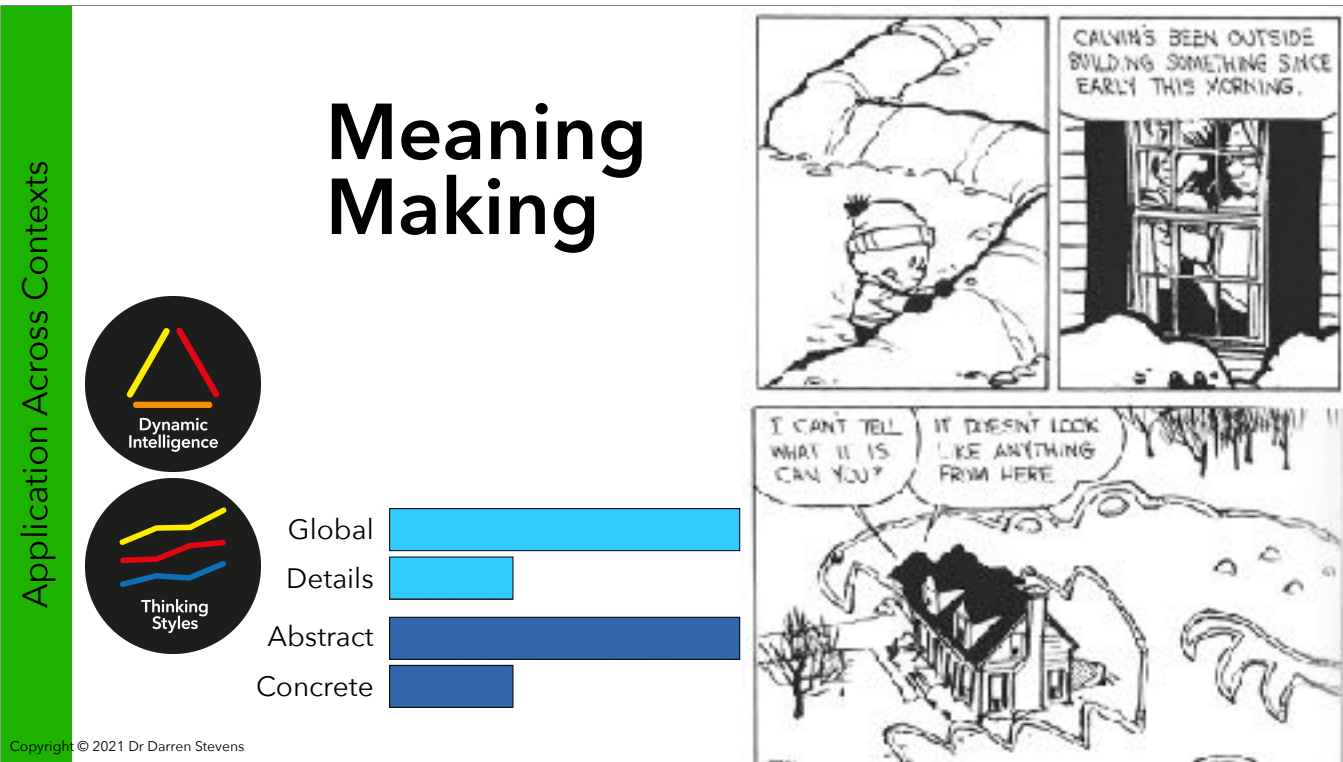
Low DI…Meaning making based on Global perspective
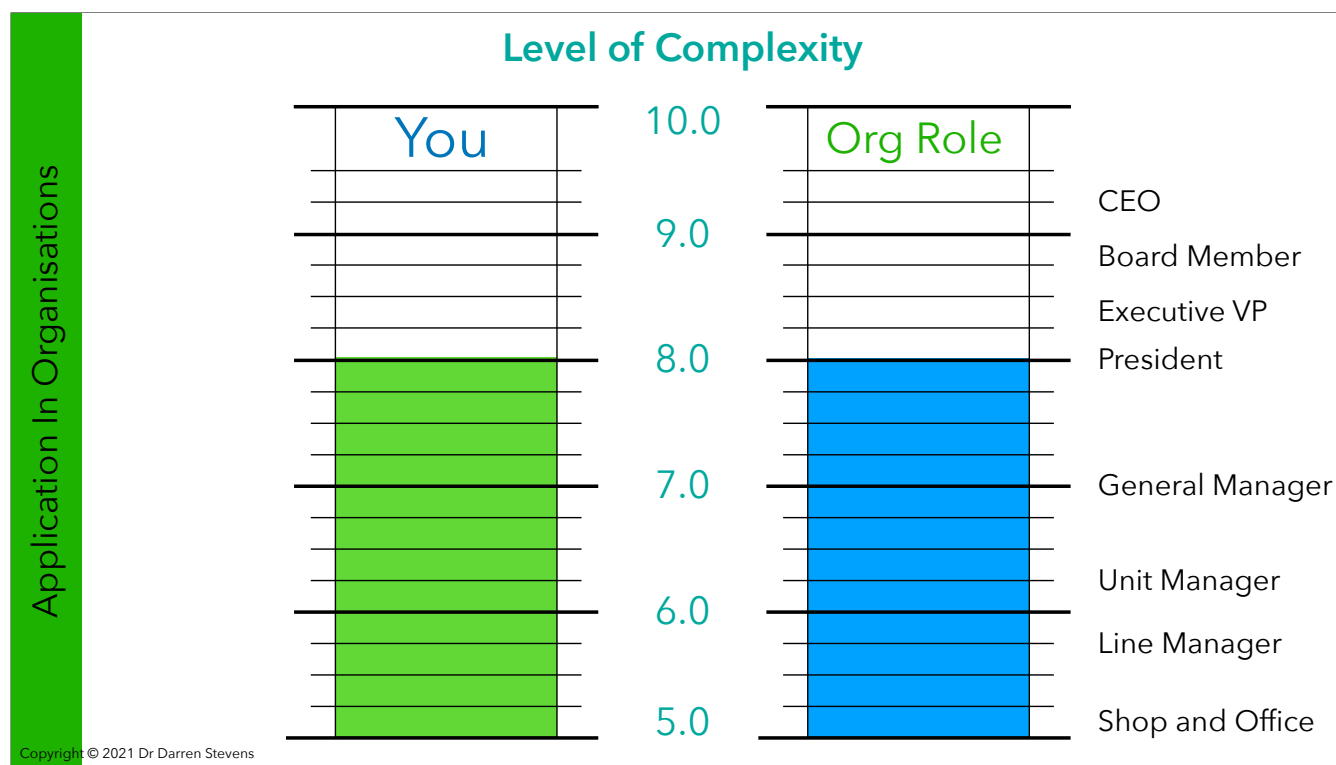
So, as long as you're the President of your section of the business - whatever that means - you're well-placed to function at that level as you both match. What this gives us that psychometrics does not is a level of capacity of the person in the role.
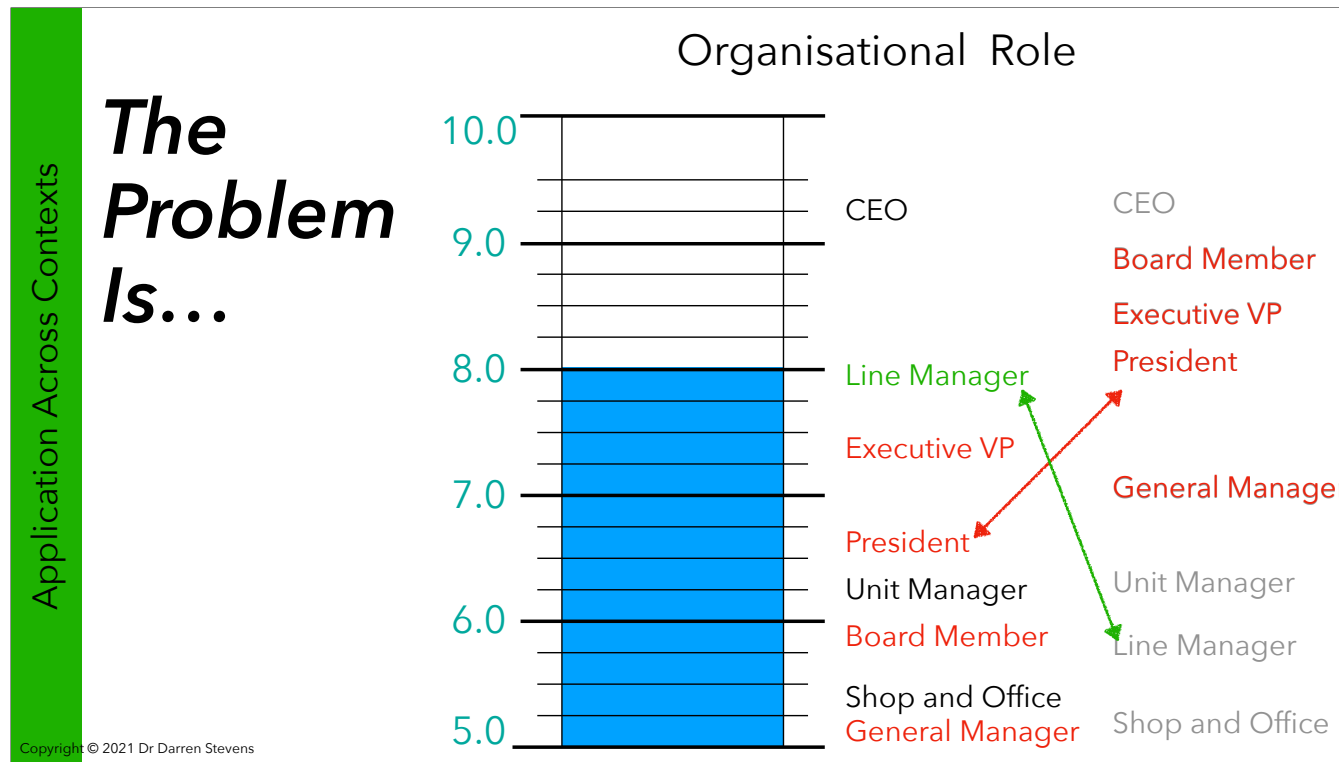
The problem is the Peter principle.
People are promoted beyond their level of competence. And then the Dunning-Kreuger effect kicks in.
So you end up with low level people following processes and bullying their way to the top of organisations.

Can our Construction Change over time?

Application Across Contexts
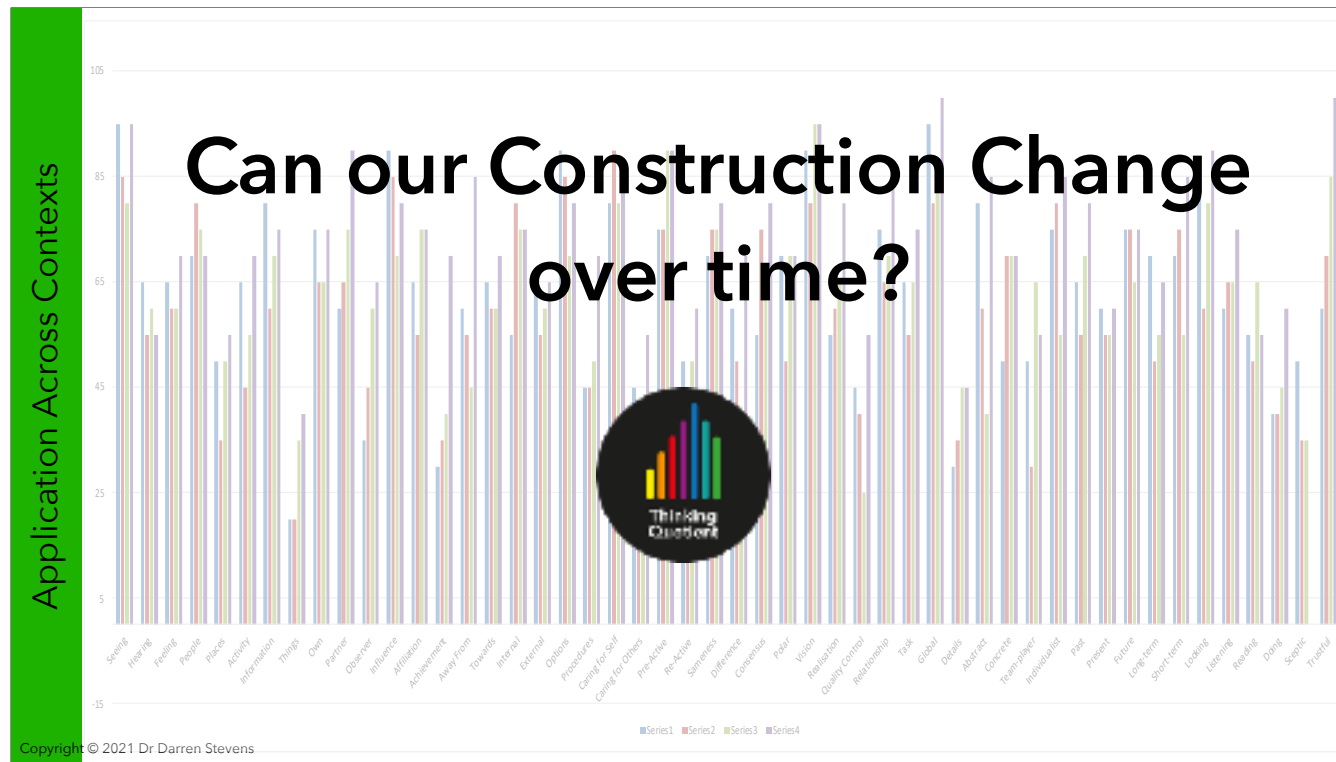
Too much. So what would be a better way to display this information?
If we have said that traits and personality are allegedly stable over time, then WAHT is it that actually changes???
Our self awareness as measured by the TQ

German Business Man

How can we show the developmental path of a person using the TQ that isn't available in psychometrics?

NHS Worker

Application Across Contexts

7.50
7.00
6.50
6.00
5.50
5.00

Demotion

Demotivation

2009   2013   2014   2016
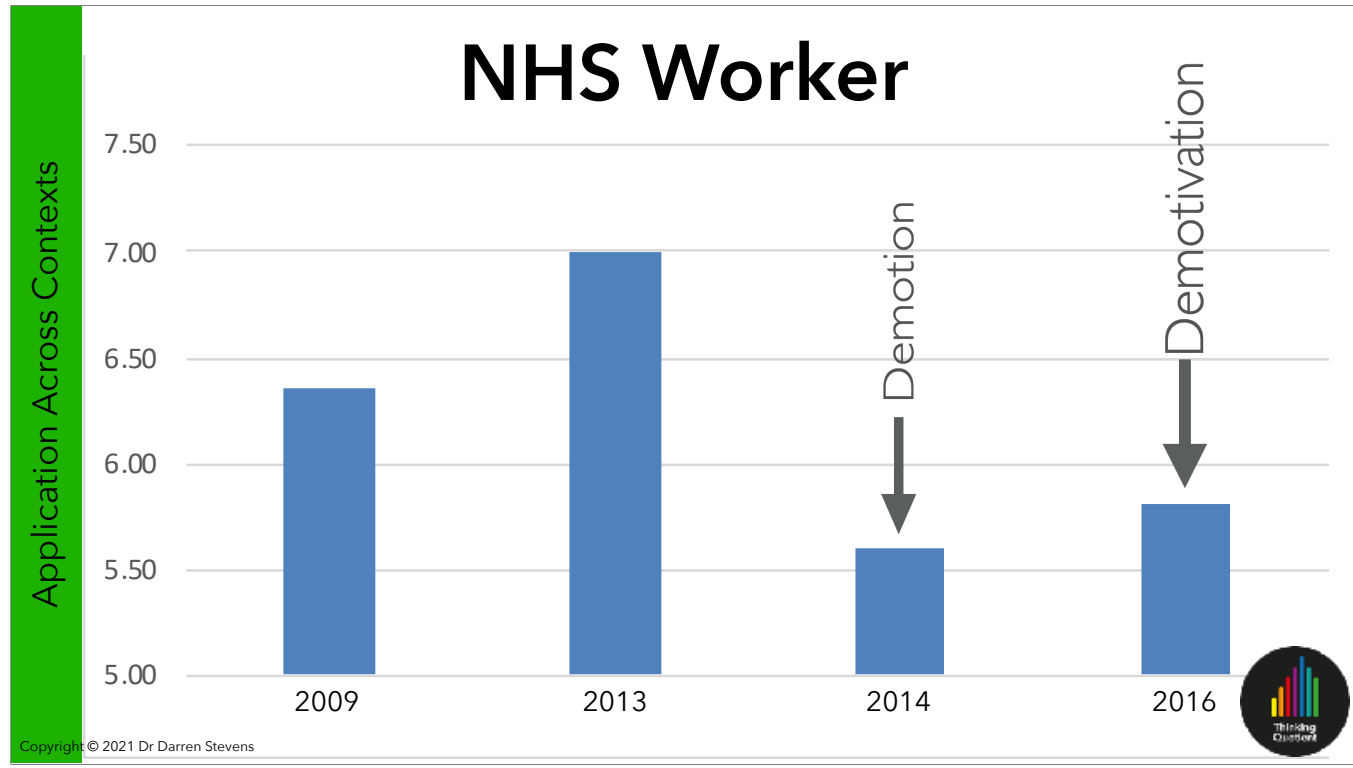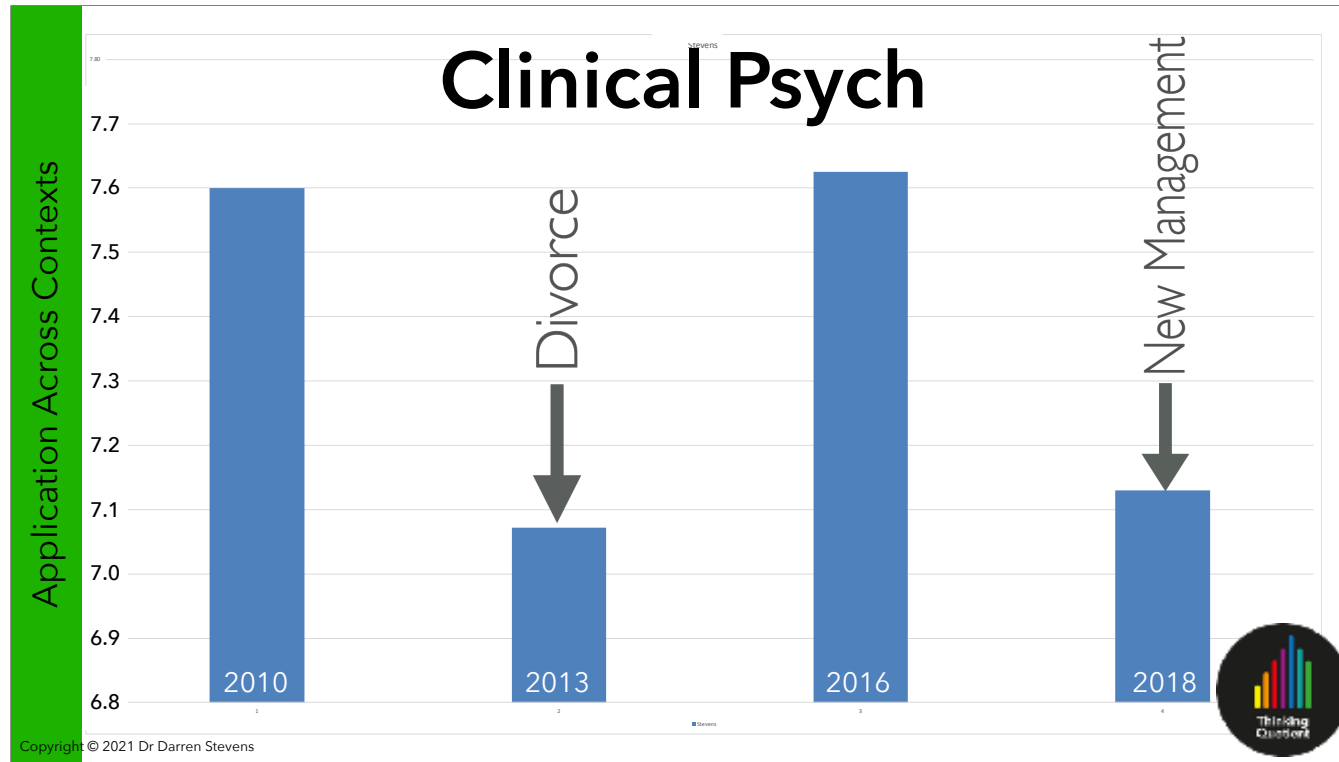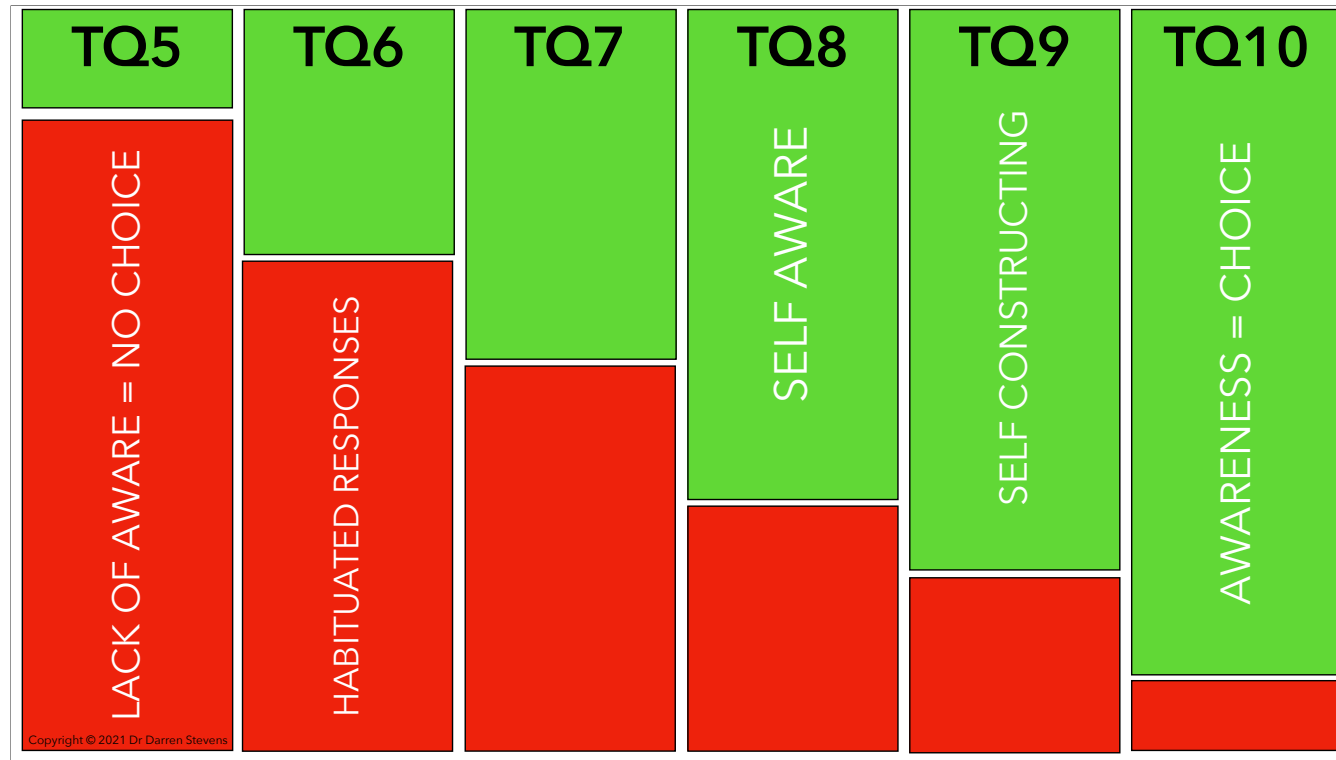
This is the simplest way to look at the TQ. A range of awareness and choice from little to lots.

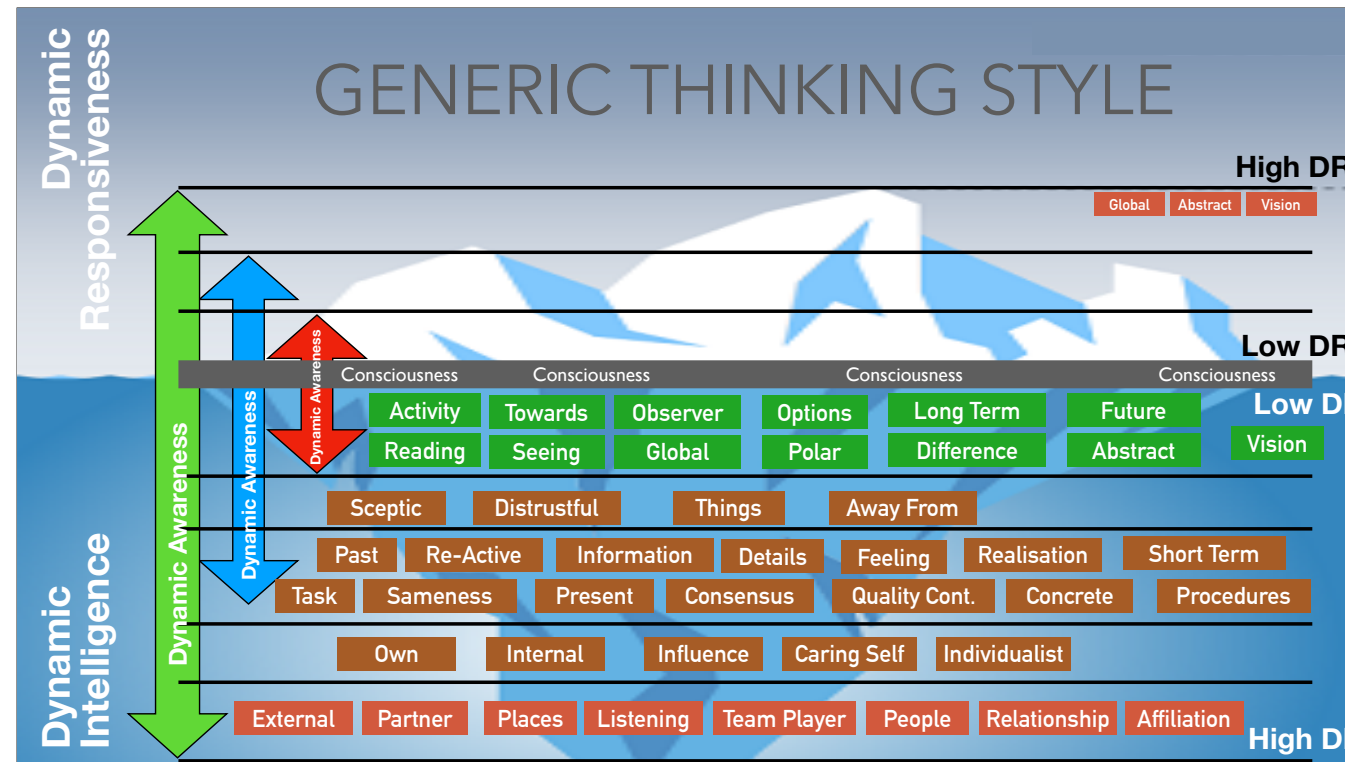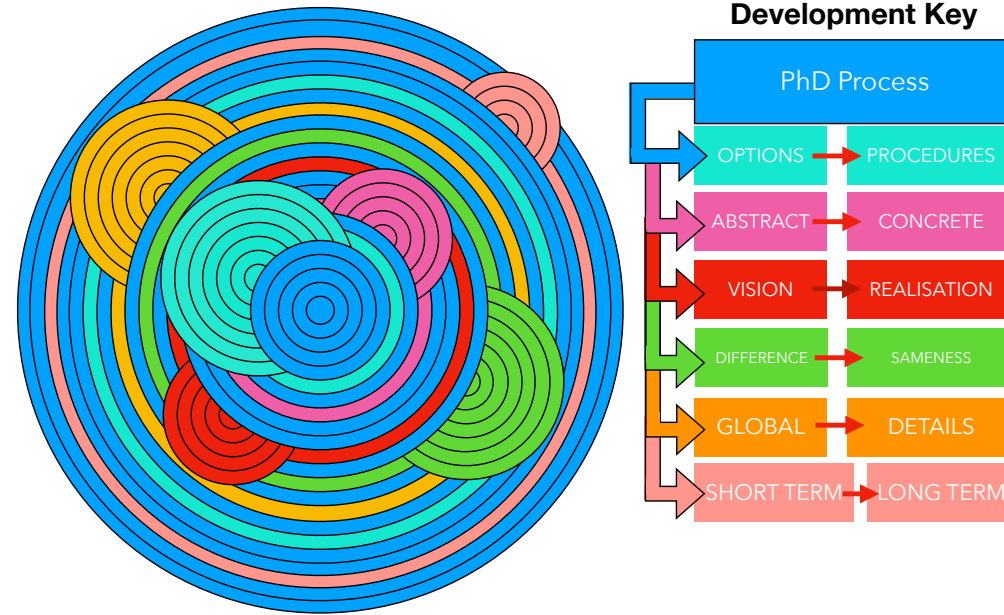| TQ Level	Construction	Thinking Style	Cognitive Intentions
TQ5 Self-Unaware	Unaware of any construction, of any patterns. Construction would focus on immediate Own, Self, Values, and be out of awareness	Unaware of any thinking style thus unable to construct a style appropriate for the immediate present. Their focus is predominantly on own needs and habituated thinking.	Own, Self, Internal. Unaware of their opposite CI. Focused on using the same CI's that have always worked for them.
TQ6 Other-Unaware	Constructing themselves according to other people's needs	Predominantly concerned with Other, Partner, External and is thus focused on other's needs. It could be within or without awareness. The key is they cannot change it.	Other, Partner, External, Caring for Others - predominantly based on what others need
TQ7 Other-Aware	Still constructing self according to the needs of others, but beginning to recognise the separation of self from group.	Focused on the needs of the other and although this might be within awareness, they do not know how to stop doing it	Gaining balance between Internal/External and Own/Partner. Ability to choose which in context
TQ8 Self-Aware	Aware of the constructed nature of self. Able to construct themselves in the moment up to a point.	Aware of the nature of their Thinking Style and able to choose to be self or other-oriented in context.	Balance between Self and Other. Balanced in their driver CI's and can choose which to use.
TQ9 Self-Constructing	Moving through Self-Aware we actively become conscious of the construction of self in the moment. As we choose how we construct ourselves, this impacts our awareness and understanding of the nature of construction itself.	Our Thinking Style and thus personality is at choice.	Balanced Abstract, Global, Own, Partner, Observer Detail, Concrete….
TQ10 Construct Aware	The recognition that everything is constructed, from self to culture to politics and one is capable of seeing the construction and the pattern within the system and beyond the system.	Fluid. It changes from requirement to requirement in the moment. The awareness that we construct the dialectic is key.	Able to choose which CI is needed on the fly, according to the context and environment. Welcomes Dissonance as a growth factor.

People can be aware of their limitations in their thinking, which seems contradictory, until you recognise that they cannot change their thinking whereas a Self-Aware person could.
HOW do they construct MEANING????

Construct Aware

10 The recognition that everything is constructed, from self to culture to politics and one is capable of seeing the construction and the pattern within the system and beyond the system. The awareness that we construct the dialectic is key.

Self-Constructing

9 Moving through Self-Aware we actively become conscious of the construction of self in the moment. As we choose how we construct ourselves, this impacts our awareness and understanding of the nature of construction itself. Our Thinking Style and thus personality is at choice.

Self-Aware

8 One is aware of the constructed nature of self. Our construction is limited to how we think and how aware we are of our Thinking Style. The important point is the recognition of how we construct our thinking to conform to existing heuristics in order to counter them. We are not aware that what we are not seeing is also a construction.

Cultural Awareness

7 Still constructing self according to the diminishing need of others, and the needs of their in-group. Beginning to recognise the separation of self from group. We recognise it is now possible to construct ourselves according to our own criteria, separate from the group but still inseparable.

Cultural Unaware

6 A more Externalised way of constructing our thinking, based on how we unconsciously construct others' thinking about us. A lack of awareness that our Intention is Externalised. Constructing our own needs based on the needs of others. The Thinking Style is typically External, Partner and Caring for Others.

Self-Unaware

5 Unaware that construction is possible and that our thinking conforms to an habituated Style. Construction would be almost totally automated and focus on immediate own needs and their Intention would be out of awareness.

Authority Aware

4 Adolescent stage where the child is told what to do. The child constructs their thinking based on peer groups, authority figures and the system.

GENERIC THINKING STYLE

Dynamic Responsiveness

Dynamic Intelligence

Dynamic Awareness

High DR

Global | Abstract | Vision

Low DR

Consciousness | Consciousness | Consciousness | Consciousness

Low DI

| Activity | Towards | Observer | Options | Long Term | Future |
| Reading | Seeing | Global | Polar | Difference | Abstract |

Vision

| Sceptic | Distrustful | Things | Away From |

| Past | Re-Active | Information | Details | Feeling | Realisation | Short Term |

| Task | Sameness | Present | Consensus | Quality Cont. | Concrete | Procedures |

| Own | Internal | Influence | Caring Self | Individualist |

| External | Partner | Places | Listening | Team Player | People | Relationship | Affiliation |

High DI

So, the data in Study 3 showed me this: there are different Cognitive Intentions available at different levels of thinking.

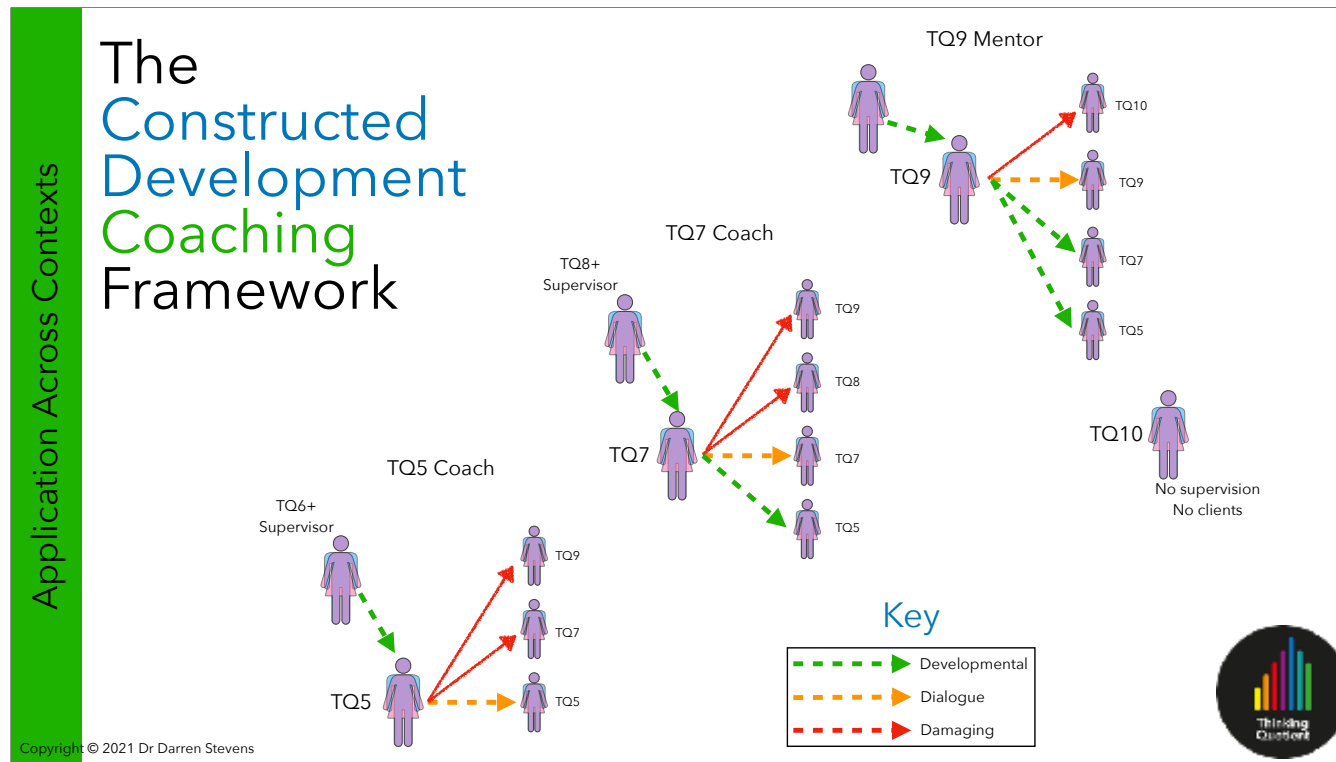The Endogenous Developmental Onion Holarchy

Development Key

PhD Process	
OPTIONS →	PROCEDURES
ABSTRACT →	CONCRETE
VISION →	REALISATION
DIFFERENCE →	SAMENESS
GLOBAL →	DETAILS
SHORT TERM →	LONG TERM

THE PHD ONION - If we mapped my thinking at the beginning of the PhD onto my thinking now, what has changed? What did I focus on? How has my thinking grown? What do the bulbous sections look like?
Dynamic Intelligence

There are no unique stages: it is a continual growth in layers of DI. The way the onion layers develop depends on the environmental impacts at various stages in one's life. Hence why the individual development layers in the image occur on different layers of the main developmental onion.
They are incorporated into, and add to the DI heuristic over time. Each growth ring is an INTENTION!

The Constructed Development Coaching Framework

Application Across Contexts

TQ9 Mentor

TQ7 Coach

TQ5 Coach

Key
- Developmental
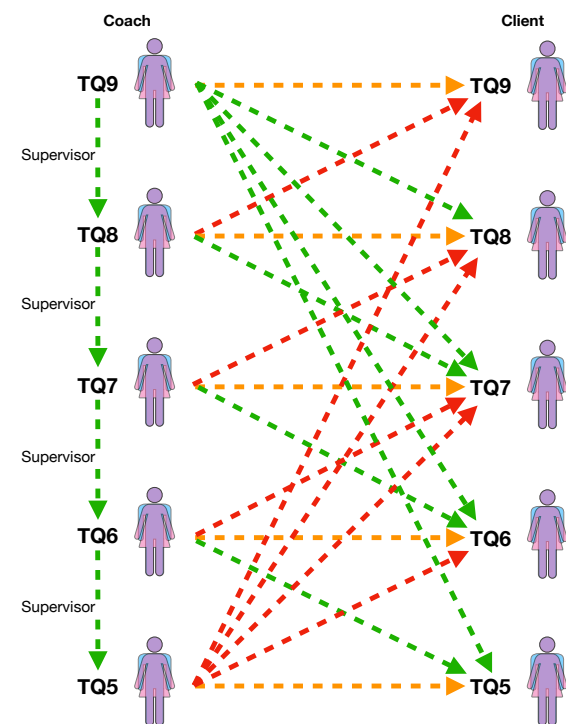- Dialogue
- Damaging

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In the context of Coaching, CDT offers a more ethical framework for coaching.
I also have this principle being used in a therapy environment. More on that in my next talk :)

The Constructed Development Coaching Hierarchy

Coach   Client

TQ9   TQ9
  Supervisor
TQ8   TQ8
  Supervisor
TQ7   TQ7
  Supervisor
TQ6   TQ6
  Supervisor
TQ5   TQ5

Key

- - - ▶ Developmental
- - - ▶ Dialogue
- - - ▶ Damaging

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If you're TQ5, you cannot see the change that the TQ5 person needs in order to change. A TQ8 coach can. How can coaching overcome this limitation?

Disruption
If we're not developing our thinking to go above its current level, then what are we doing this for?
Behavioural change doesn't work.
Emotional change doesn't work, because it's still TQ5.
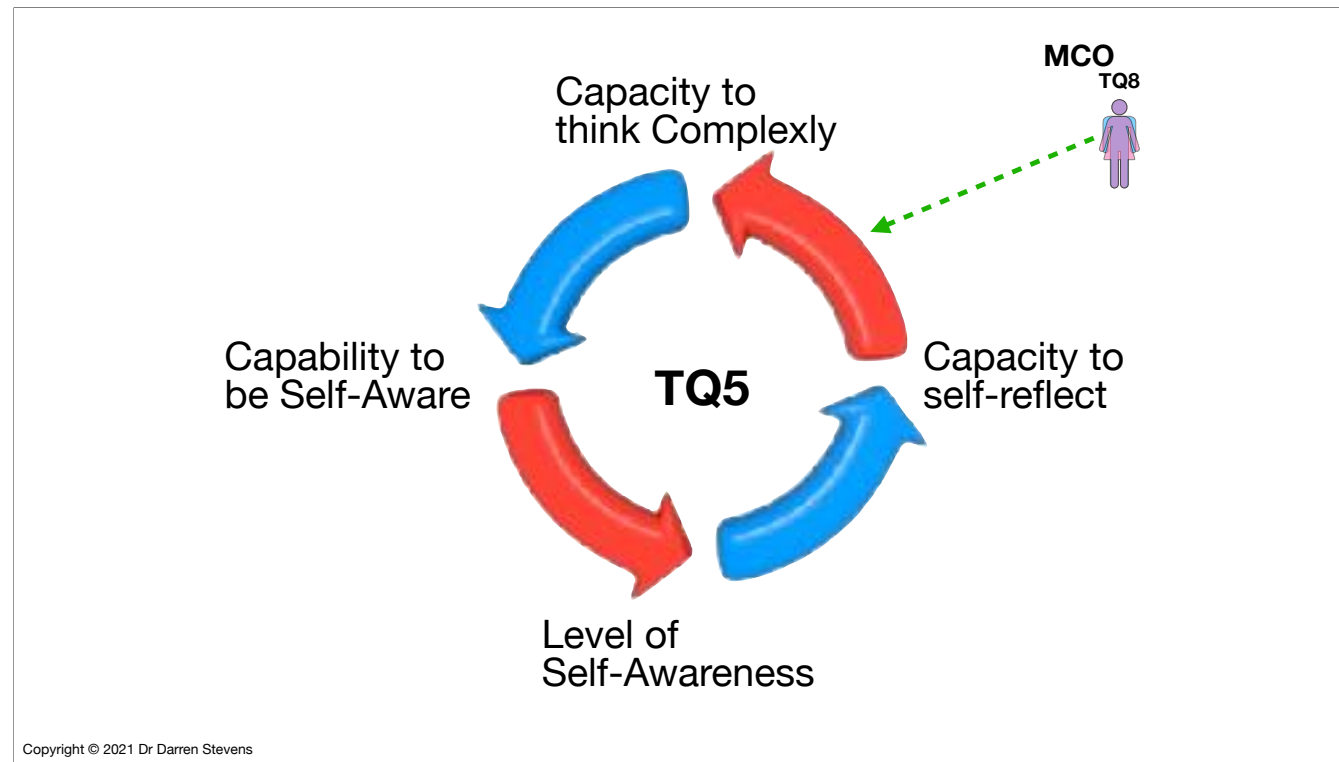
MCO = More Complex Other

They need to perform an intervention in order to disrupt your thinking to facilitate growth.
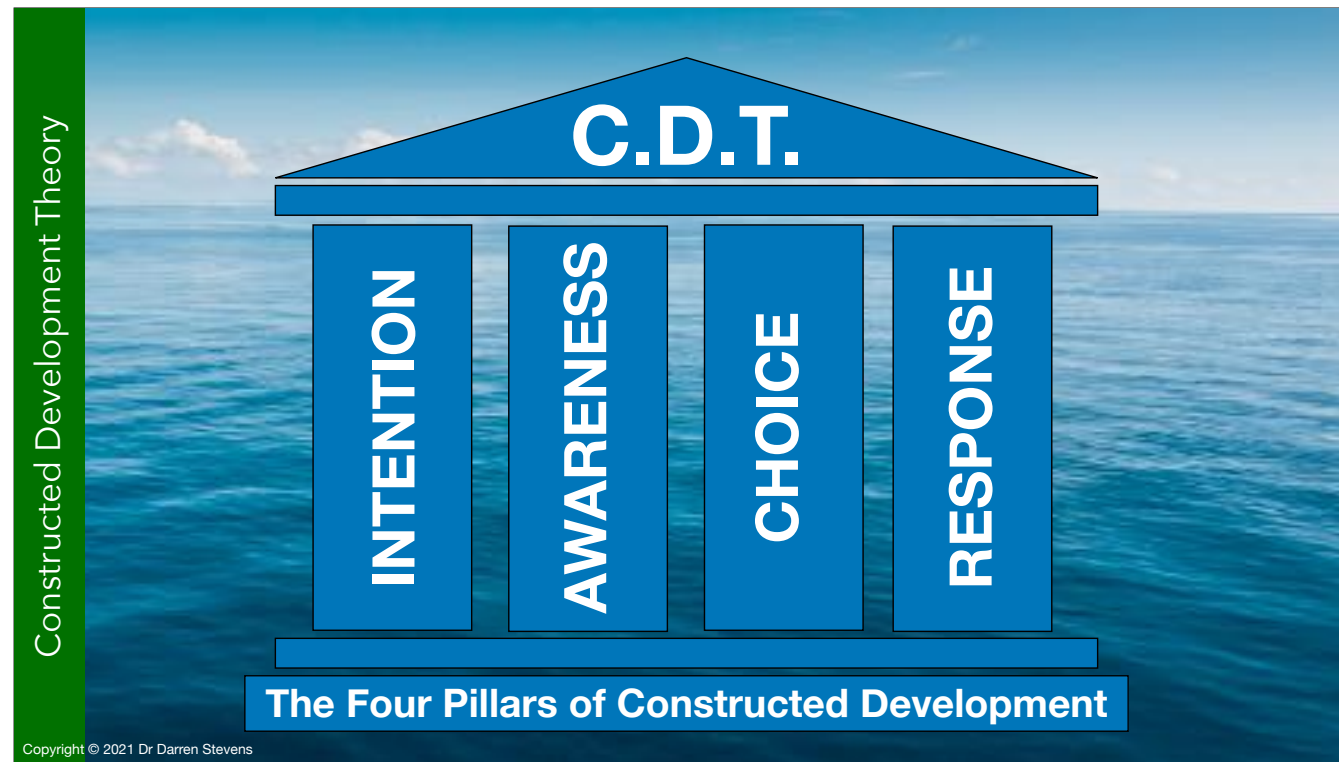
You cannot do it alone.
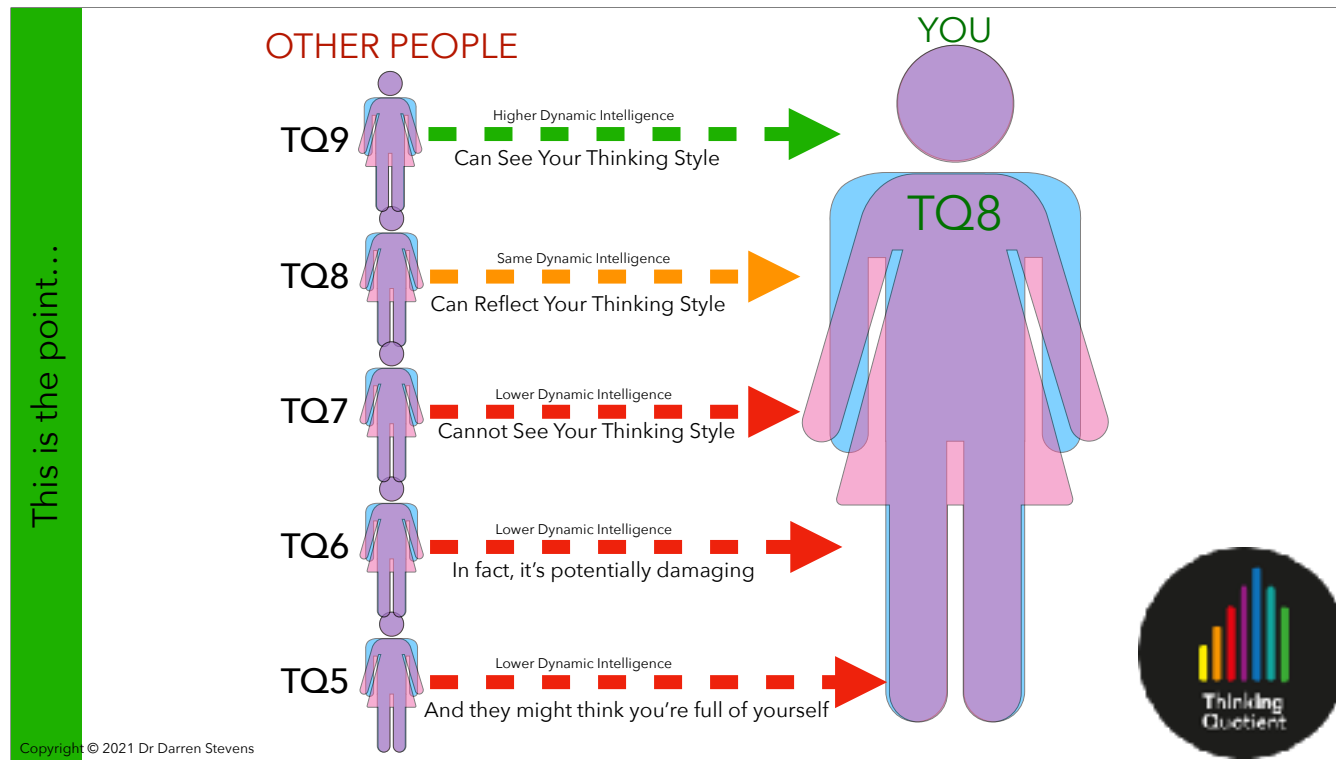
THIS is the final outcome. If you are performing a psychometric on someone who is a decent level of DI above your position, how on earth can you know how they construct themselves enough to give them a job based on lower level criteria?

AND for those wondering, it doesn't matter if you use CI's or another method for measuring self-awareness, the outcome is still one's Dynamic Intelligence.

The Essence of CDT is:

- The first measure of **Adult Metacognition**.
- Piaget's **disequilibrium** principle.
- The foundation of **self-awareness (DI).**
- It allows one to become a:

  Constructed Developmental Psychologist

Constructed Development Theory

C.D.T.

INTENTION AWARENESS CHOICE RESPONSE

The Four Pillars of Constructed Development

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For me, as I look at the last image, I think Attention is subsumed by Intention as that dictates to what you pay attention. Your Attention is unconscious, which means it's not being paid conscious attention to.
Then Awareness of your Intention/Attention is back in play….
Dynamic Intelligence is a measure of one's Constructed Development. A person's level of awareness of the (process through these pillars of awareness) various combinations of these pillars is their Dynamic Intelligence, and the Thinking Quotient is the scale used to measure this awareness.
We can be aware of a pattern but not at choice to change it. THAT is key!!!!

What's Next?

A PhD student in Australia is using my framework as the foundation for his research into adult development in a Leadership context.

Three therapists are using IACR as the framework for their therapy sessions. These are being written up and evidenced.
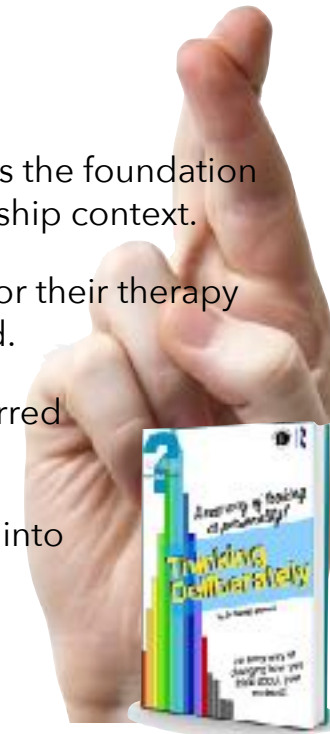
Two business coaches are using CDT as their preferred method for Developmental Coaching.
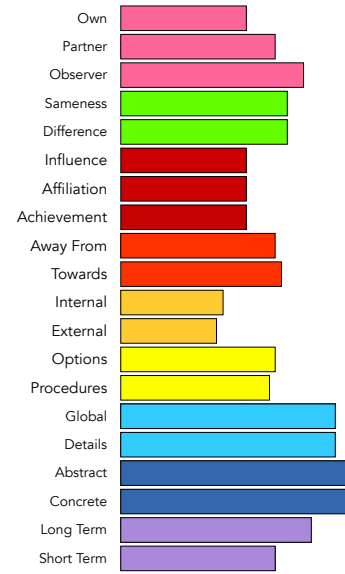
Hopefully, two universities will be introducing CDT into their curriculum in 2021 at UG and PG levels.
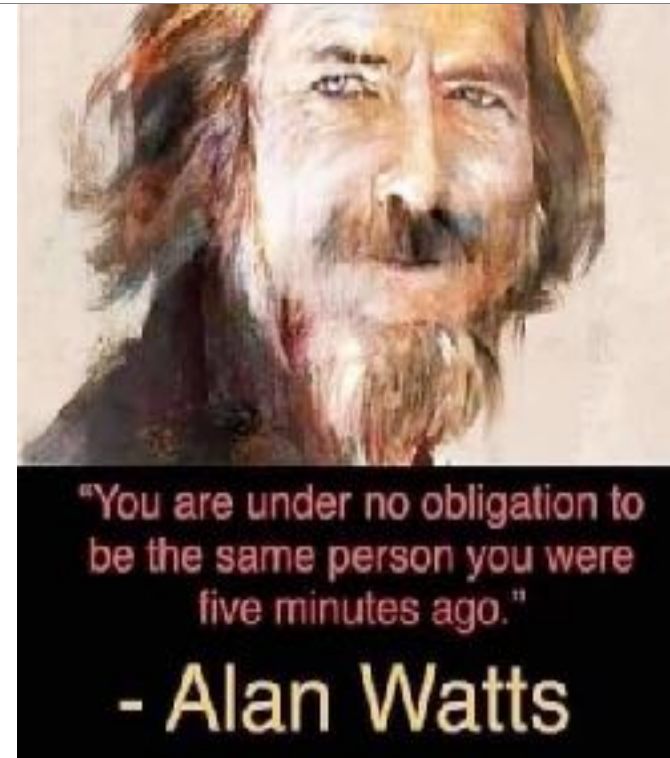
Email: dr@darrenstevens.co.uk

Constructed Development Theory

This is the point…

Own	
Partner	
Observer	
Sameness	
Difference	
Influence	
Affiliation	
Achievement	
Away From	
Towards	
Internal	
External	
Options	
Procedures	
Global	
Details	
Abstract	
Concrete	
Long Term	
Short Term	

"You are under no obligation to be the same person you were five minutes ago."

- Alan Watts

Constructed Development and Psychometrics:

the Missing Link to Better Personality Data!

Dr Darren Stevens
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