



DISC based personality assessment

The history, current status, and the fascinating life of William Marston

*Realise what you really want.
It stops you from chasing
butterflies and puts you to
work digging gold.*

William Marston



Overview

DISC based personality testing - typically characterised by a short forced choice questionnaire format constructed around four fundamental dimensions - is a multi million pound industry. Completed by over 10 million people each year in recruitment, personal development, coaching and team building, there are now scores of variations from a range of test publishers and distributors.

Hundreds of thousands of consultants, trainers and coaches have been accredited in its use. Initially a US product, DISC based assessment is now a global phenomenon, available in scores of languages and countries.

The pitch of DISC based assessment is remarkable, ranging from the admirable but vague promise to “create an alignment between employees’ drive and organizational goals” to the more precise but preposterous claims that it “possesses 85% plus validity” or “is 91% predictable in classifying people into superior performer or inferior performer categories.”

Since the early versions, designed in the 1950s, through to the updated versions of the 70s and 80s, and parallel formats of recent times to reposition DISC within the neuroscience of brain functioning or hormonal patterns, or which draw on simple colour-based systems, what do we know about DISC?



- what is the underlying theory? where did it come from?
- how well have the theory and the measures of the DISC framework fared after over more than 60 years usage and research?
- what are the implications for practitioners in recruitment and selection, learning and development, and coaching?
- and who was the originator of the DISC model in the first place?

To understand the DISC framework and how an industry evolved, we should begin with that remarkable man William Marston.

William Marston: renaissance man or eccentric charlatan?

“Throughout his career Marston consistently disregarded the apparent boundaries between academic and popular psychology, between science and values, and between the legitimate and the illegitimate.

Geoffrey Bunn



Self proclaimed inventor of the lie detector test, academic, media consultant and advertising executive, adviser on sexual matters and techniques for marital success, writer of self help books and sexcapades, feminist pioneer and creator of comic book character Wonder Woman, William Marston was no ordinary individual¹.

Born in Massachusetts in 1893, Marston was a lawyer and psychologist with a personal life as controversial as his ideas. Marrying Elizabeth Holloway who became his research assistant, he later asked a student Olive Richard to join the household. Marston had two children by each of his “wives”, who seemed to live together as one big happy family.

Professional peers dismissed him as an intellectual charlatan, “a mix of unabashed hucksterism, earnest utopianism, insightful criticism, and calculated subterfuge” and the FBI in an official report suggested he was a phoney and crack pot.

William Marston was full of complexities and contradictions. Capable of immense intellectual fire power to connect developments in physiology with the emerging science of psychology, Marston also lacked rigour in his own experimental research. A sociable and affectionate husband and father, whose life doctrine was “to live, love and laugh”, Marston was also a schemer quick to take short cuts to advance his commercial interests. A progressive thinker who contributed to feminist thinking, his fascination with sex was also played out in strange theories of “sexual allure” and the importance of captivation and bondage.

Creator of a four dimensional theory of human behaviour, that is now hard wired into many different personality tests, he himself went on to map out another framework of personality, but didn’t develop it as an assessment instrument.

A “strange and fascinating” man indeed.*

Marston's DISC theory of human behaviour

In 1928 Marston made his big conceptual breakthrough with the publication of "Emotions of Normal People". Informed by a combination of psychodynamic and evolutionary theory, he set out to establish the "elementary units of human behaviour and consciousness." For Marston the goal was to place psychology on a similar footing to the hard sciences of physics, chemistry and biology. Psychology lacked the equivalent of a "matter unit", a "psychon". It was Marston's task to identify and define these psychons.

"Emotions of Normal People" is a sprawling mess of a book that is almost unreadable. "All phasic motor impulses are compelled to combine with or to conflict until, the tonic motor impulses continuously discharging in a pattern which may be called our natural reflex equilibrium" is a typical sentence. It was a brave if flawed attempt to synthesise developments in physiology with the results of Marston's own lie detector research and importantly his personal views of human nature, gender differences and social interaction.

Marston outlined his version of the "psychon" with the four themes of: Dominance, Inducement, Submission and Compliance, the primary types of human response: "fundamental ways in which the organism responds to the environment, and in their mutual combinations, gradations and conflicts are to be discovered all of the behaviours of the human being as we find him."

"Dominance is characterised by actively using force to overcome resistance in the environment; Inducement involves using charm to deal with obstacles; Submission is a warm and voluntary acceptance of the need to fulfil a request, whereas Compliance represents fearful adjustment to a superior force."



Marston's thinking about personality

The “Emotions of Normal People” was Marston’s first confusing attempt to outline his model. “Integrative Psychology” in 1931 was his second but equally baffling attempt.

Others went on to suggest a more direct explanation of Marston’s model and mapped out the four emotional responses against the two axes of attention (passive or active) and environment (favourable or antagonistic).

- Dominance: activity in an antagonistic environment
- Inducement: activity in a favourable environment
- Submissive: passivity in a favourable environment
- Compliance: passivity in an antagonistic environment

Dominance reflects the need to overcome and “conquer”, Inducement to persuade and motivate, Submissive to support and be of service, and Compliance, to avoid trouble and to be correct.

“His theorizing might have been somewhat pedestrian, his philosophy inconsistent, and his experiments morally dubious, Marston nevertheless believed that psychology was a force for good.”

Geoffrey Bunn

Marston’s theory was not well received by his scientific peers at the time. A review in the American Journal of Psychology, noted: “this book illustrates the folly of trying to write a systematic psychology with all the impedimenta of a new vocabulary, new definition and a unified idea.”

Initially Marston persisted, although he didn’t see his DISC model as any taxonomy of personality traits, even though he was fully familiar with the emerging psychometric enterprise of the time. Quite the opposite: “Compliance must be adapted to dominance, and inducement to submission, if human beings wish to remain normal”. For Marston, his framework was a summary of the dynamics of different emotional responses not a way to describe personality patterns².

Instead Marston went on to identify three personality themes of Love (givers), Appetitive (takers) and Duplex (both Love and Appetitive) types, against which he described sensory, intellectual and emotional variants, nine personality types in total.

In summarising his thinking about personality, Marston was wise:

“We urge another precaution upon the reader. Human personalities are very complex and many-sided. In our experience it is rare indeed to find a person who fits squarely into one of the personality pigeon holes suggested”; insightful advice that was to be largely ignored in the design of many of the instruments that later adopted the DISC model.

Marston's thinking is neglected but DISC continues

“*Marston's own theories of human behaviour did not stand the test of time, but their introduction into the Wonder Woman stories enabled him to become one of the 20th century's major myth makers.*”

Les Daniels



Marston was a man of impressively wide ranging interests and motivated to translate new research into practical applications. Capable of penetrating wisdom - “any life which is both successful and happy must adapt its success to its happiness. Certain types of individuals who habitually attempt to adapt happiness to success ultimately fail in both” - he also made appallingly bad errors of judgement.

His commitment to social justice is evident. But he was also a maverick whose academic rigour and business ethics were often questioned. And his feminist outlook seems to have been more a projection of his own sexual peculiarities.

Marston's books are largely out of print and his scientific articles ignored.

So how did an idiosyncratic model of human behaviour - a mishmash of psychoanalytical theory, out-dated physiology and Marston's own strange ideas - developed in the 1920s come to dominate a significant section of the personality assessment business?

And given his chequered career and bizarre theories, it's puzzling that Marston's influence is so openly recorded across a range of DISC publishers and distributors. Professor Irvine at Plymouth University in his evaluation of one DISC instrument, acknowledged “the thought of William Marston that is the backbone of the system.”

Marston's model of DISC and its temperamental parallels



Although Marston himself seemed more interested in a programme of “emotional re-education” than in any attempt to develop psychometric tests of personality, others began to see a pattern within the DISC dimensions reminiscent of earlier models of temperament.

As one distributor boasts: “what we call the DiSC profile today is actually the first, original, oldest and most valid system of teaching people their personalities ever discovered. Discovered 2,400 years ago.”

DISC advocates (and opponents) point to the connections with the astrological theory of the four elements of Earth, Water, Air and Fire, and their relationship with the twelve signs of the Zodiac. Significantly the ancient Greeks also identified a fifth element - “quintessence”. This is the factor that keeps the other opposing and unstable elements bound together in balance³.

The connection with Hippocrates' taxonomy of the four humours is also cited. People have different proportions of these humours, with one humour tending to dominate. Here a preponderance of one of the four bodily fluids affects functioning. Only when the fluids are “tempered”, could full health be maintained. Galen progressed this thinking with the suggestion that personality differences are a reflection of the balance of the four humours, and described the patterns of choleric, sanguine, phlegmatic and melancholy personality types.

Others have attempted to position the DISC dimensions alongside Jung's theory of psychological types to map the relationship with the four themes of the Myers Briggs Type Indicator.

Marston's breakthrough of four fundamental “psychons” it can be argued is a way of reframing enduring differences in human behaviour, or yet another variation of “devalued relics of ancient attempts to understand and deal with individual differences.”⁴

DISC assessment and the early days

It isn't clear from the historical evidence how or why Walter Clarke in the late 1940s saw the potential of Marston's DISC framework for use in personality assessment. But he did.

The Activity Vector Analysis (AVA) was an "open ended list of 81 non derogatory words describing human temperament. Individuals check those words which have ever been used by anyone in describing them, and then go back to check those words which are really descriptive of themselves."

When Clarke crunched the numbers from his data set he named his four vectors: Assertiveness, Sociability, Tranquillity, and Dependence, or in some other accounts, Aggressive, Sociable, Stable and Avoidant.

An associate of Clarke's then developed a version for John Cleaver. The design was again a self report questionnaire, this time based on a 24 tetrad forced choice instrument, utilising the response task of "most like me and least like me".

It was John Geier in the early 1970s at the University of Minnesota who was the commercial pioneer of Marston's model. Acquiring the copyright of Marston's work from his widow, Geier through the development of the Personal Profile System (PPS) can be seen as instrumental to the popularity of DISC based assessments today.

The Personal Profile System has passed through several hands and a variety of imitations and alternative versions (DISCUS, PDA, Predictive Index, Style Analysis, Insights Discovery, Strategic Assessment System, and more) have since been developed and translated, with ongoing spats between the different publishers as to which system is more or less faithful to Geier's original work.

Most acknowledge William Marston and the four dimensions of DISC, though Marston's original vocabulary has shifted to variations of Dominance, Influence, Steadiness and Conscientiousness or Cautiousness. Almost all have followed the lead of John Geier's PPS in questionnaire design to incorporate a forced choice format around an adjectival or short phrase based questionnaire to generate summary profiles.

The results are typically presented in graphs that display "most like" - the "external self" and how an individual thinks they should behave, "least like" - the internal self and a reflection of the individual's true motivations, and a combined profile that aggregates most and least results to describe the individual's likely normal behaviour.

It is clearly impossible to evaluate the claims and research base of the scores of DISC based instruments that are now in use. However, it is possible to review those popular DISC derivations that have reported their statistical analyses and evidence base.

The analysis on first inspection seems discouraging.

DISC and competing views of its value

The authoritative Buros Mental Measurement Year Book in its evaluation of the highly popular Personal Profile System summarises: “a serious concern with this instrument is its lack of reported research. While the authors state the instrument has good reliability and validity they provide users with virtually no data to support these claims.” The report concludes: “such vague and incomplete information regarding the construct or convergent validities of the Personal Profile is unacceptable.....the clear lack of data to support this instrument should preclude its use.”

In the UK, test reviews conducted by the British Psychology Society also express concerns, noting for PPA, “considerable caution, therefore, is required when interpreting the evidence presented in the technical documentation concerning the psychometric properties of the PPA”.

And in the case of Insights Discovery, an instrument that has its origins in both DISC and MBTI, “it is difficult to uncover relevant information about the development of the instrument and about consequent studies that support the psychometric properties of the instrument.”

In the review of the McQuaig Word Survey, “there needs to be a much greater emphasis on validation data to support the claims of relationships between certain types and success...given the technical problems associated with short ipsative instruments, any claims for validity need to be very clearly supported by hard empirical data. At present these are somewhat lacking.”

This is representative of much of the dissatisfaction with DISC based assessment, and the gap between the claims of its impact and the frugality of its research base, and specifically its minimal coverage in peer reviewed professional publications.



DISC and competing views of its value



Professional responses can be summarised as one of three stances:

- **Defenders** are the handful of academics who spot glimmerings of hope for DISC based tools. Accused of operating as “hired guns” who only report their findings in proprietary in house reports, the Defenders argue that research has demonstrated the robust measurement properties and utility of DISC instruments. The Defenders also suggest that dismissal of DISC instruments is largely driven by a kind of professional “closed shop” in which the major test publishers continue their lucrative agenda of advanced training and accreditation with products that are in reality not much more sophisticated than DISC methodology.
- **Sceptics** take the view that personality is an important predictor of work place effectiveness, but are highly doubtful that the model and methodology of DISC assessment are well placed to measure the complex dynamics of personality. The sceptics point to the idiosyncrasies of a four factor framework in a forced choice format and the associated distortions for the reporting of reliability and validity. The sceptics argue that an assessment rooted in an out-dated theory of human nature and flawed questionnaire design can only result in caricatures with little relevance to the dynamics of work place outcomes.
- **Adversaries** see DISC as an extreme example of the general bad science within the world of personality testing. The adversaries accept that personality is played out in differential work place outcomes (although suspect its impact is over stated) but doubt that self report measures will ever provide a meaningful insight, especially in selection applications. For the adversaries, DISC based tests are simply a symptom of a bigger problem in assessment practice.

The defenders of DISC

Although DISC based research has appeared in only two to three professional publications (and none in the heavy-weight academic journals) in the last forty years or so despite DISC's high level of usage, the developers and distributors list an array of technical reports in which DISC assessments have established robust levels of reliability and validity.

The Defenders note exceptional levels of face validity, citing Russell Watson's research⁵ in which participants were asked to rate the perceived accuracy of their DISC reports. His results demonstrated that 89% of users agree with their reports.

The Defenders also point to high levels of scale reliability, indicating high levels of internal consistency and stability over time. DISC instruments it is claimed deliver reliability estimates of the order of .8 to .9, which at first sight look impressive.

Construct validity it is argued is well established in studies that evaluate DISC's correlates with other personality measures, e.g. the OPQ and 16PF.⁶ Consistent relationships are observed with other traits to substantiate the view that the four dimensions of DISC are measures of coherent and meaningful personality patterns.



The Defenders cite a range of validation studies that suggest the power of DISC to predict meaningful outcomes.

In one of the few professional publications of DISC research, Sidney Irvine⁷ summarised the results of specific job roles (e.g. 155 tour guides, 30 pub landlords, 122 graduate applicants) for PPA and concludes: “predictive validities for ratings are average values in the range of .25 to .3”, figures that suggest DISC can account for around 5 - 10% of the variation in employee performance, and argues that the simplicity of the DISC assessment is in fact the reason for its validity.

“The profile patterns may reveal as much of the subject as the user can usefully comprehend” proposing that more complex personality instruments create information over-load that weaken their practical application. Here Irvine is less of a reluctant defender and more on the attack of those tests that in promising more precision are in fact too complicated to use in the practicalities of real life selection.

In a subsequent technical report for the publisher Thomas International, Irvine summarises a revalidation exercise and argues “Personal Profile Analysis has finally come of age.”

It should be noted however the key section that reports the detail of this validation research is unavailable.⁸

The ad hoc findings of DISC defenders

The defenders continue to draw on a series of ad hoc findings which due to the lack of clear reporting of statistics are often difficult to interpret:

Bill Bonnstetter of Target Training International⁹ summarises a series of studies that suggest the impact of DISC in the reduction in driver accidents and compensation claims in freight companies.

David Warburton¹⁰ reports evidence for DISC patterns of “disparity between adapted and natural style” against measures of physical and mental health as well as alcohol and cigarette consumption, arguing that the “evidence gives us confidence that DISC disparity is a predictor of problems at work and at home.”

Larry Price at Texas State University¹¹ assessed the impact of a DISC based programme with university students on study skills, adjustment to college life, confidence in making career choices and retention rates.

Kirk Wakefield at the Keller Center for Research¹² examines DISC behavioral styles and sales performance, but seems puzzled that Influence scores aren't associated with sales effectiveness. Dominance and mid scores on Steadiness he suggests are the better predictors.

Ingram¹³ used DISC as an evaluation tool to track change in a middle management group undergoing coaching, finding that the intervention resulted in lower levels of Dominance and Caution. The overall organisational impact is not reported.

And this pattern of results reflects the fundamental problem for the defenders.

A series of doctoral dissertations of the type “Behavioral Style as a Predictor of Hearing Aid for Credit” or proprietary research when commissioned by the test publisher, which does not report the detail of methodology or specific findings, lacks credibility in the professional community.



The defenders of DISC come under sustained attack

Face validity looks at first sight impressive.

For the sceptics, the fact that 9 out of 10 individuals agree with the narrative of their DISC reports is in fact an odd finding, begging the question why the instrument has any value in the first place. Here the cynics point to the Forer effect¹⁴ in which most people will agree with the accuracy of personality reports if the narratives are written in a sufficiently positive way. They note the parallels with astrological charts that also provide remarkably accurate descriptions. The sceptics suggest that the credibility of Watson's research would be enhanced if Watson had introduced controls to assess participant reactions to randomly generated reports.

Doubtful of the statistical robustness of DISC's reliability estimates in a forced choice format, the sceptics see "accuracy" as a red herring. Shoe size may be accurately measured but if it has little relevance to work place outcomes, then its assessment is a pointless exercise. Here the sceptics began to examine the claims of the type that "the validated accuracy of DISC is as high as any assessment of this type in the world."

The sceptics dispute the kind of claim: "PPA gives good predictive validity when objective and verifiable criteria are used. It shows clearly distinguishable profiles for different job types and also differences within profiles for successes and failures in these jobs." Here they point out that using a DISC profile of successful sales people as a blue print for future selection, for example, is simply to confuse the causes and consequences of sales success.

“Disciplined and self controlled you tend to be worrisome and insecure inside. At times you have serious doubts you have made the right decision or done the right thing. You prefer a certain amount of change and variety and become dissatisfied when hemmed in by restrictions and limitations.”

Bertram Forer

Is for example confidence a cause or an outcome of sales effectiveness? If Dominance is found to be associated with superior sales performance, should we recruit applicants with high Dominance in their DISC profiles? Yes, but only if high levels of Dominance within applicants turn out to be a predictor of superior sales in future rather than a reflection of the assertive confidence that arises from the current good fortune of exceeding sales targets.

The three concerns of the sceptics

The sceptics, wary of the absence of research in peer reviewed professional publications, cited references to technical reports that are now unavailable¹⁵, and puzzled by many of the statistical findings in proprietary research, express three distinct concerns:

The first argues that Marston's four dimensional framework is an **incomplete map of personality**. The sceptics note the difficulty in replicating the proposed factorial structure - "we were unable to find supporting objective construct validity of the instrument."¹⁶ They also point to the emerging consensus of the "big five" personality dimensions and that DISC frameworks, in failing to identify emotional stability/neuroticism as an explicit factor miss a key dynamic in explaining individual differences.

The debate on personality frameworks continues (is there a sixth factor as identified in HEXACO?) but the sceptics argue that the four dimensions of DISC are an inadequate model to "hit the targets" of personality that are associated with important life outcomes.

Other sceptics note that any personality framework based only in the domain of fundamental traits of temperament is unlikely to provide a meaningful account of differences in work place effectiveness and success. Here they argue that personality frameworks need to go from four, five or six dimensions of temperament to incorporate an assessment of values, interests and motivation.

The second focuses on the **mystery of the DISC graphs**. In classic DISC questionnaire design, respondents highlight their most and least like preferences from a series of quartets, statements based on either adjectives or short phrases.

The most like selection is interpreted as how the individual projects themselves and is viewed by others at best, the Mask or Adapted behaviour. The least like selections measure behaviour under Pressure or Natural Behaviour. The combination of the two is the individual's likely normal behaviour.

There is no evidence for this claim. The selections of "most and "least like" simply reflect different aspects of self perception.

As the test reviews from the British Psychological Society point out there is no research to support the logic of Mask and Under Pressure profiles. "There is considerable confusion within the documentation that was supplied by the publishers for the purposes of this review as to the precise meaning of the L (least) pattern".

“ I propose that there are two kinds of people in the world: those who believe there are two kinds of people and those who don't. ”

Paul Chance

The three concerns of the sceptics



The third problematic issue is the **ipsative nature** of DISC based instruments.

Conventional personality tests ask individuals to evaluate themselves across a series of statements. Here individuals can rate themselves high or low in any permutation of responses. The advantage of this approach is that - at best - it reflects the “amount” of different personality traits and allows comparisons across different candidates. The disadvantage is that responses can be distorted by levels of self esteem. Here candidates with “naive arrogance” grab more personality points than those in possession of “critical humility”.

Ipsative formats were seen as a way to control the combination of self deception (unconscious bias) and impression management (faking good). Rather than allow self confident or pushy candidates to gain personality points at the expense of their more self aware and humble peers, ipsative measures force respondents to make their choices of most and least from a series of blocks of statements. As a way of highlighting relativities of importance for the individual (e.g. career aspiration, life values or leadership style), this format works well.

The problem arises for ipsative instruments when we attempt to make comparisons across different candidates.

Looking at a DISC profile that shows high Dominance but low Influence we can assume that Dominance is a more prominent theme for that individual than Influence. But what we can't do is assume that the individual is relatively higher on Dominance than other respondents, whatever their reported level of Dominance. Ipsative measures allow a comparison of relative strengths for an individual, not the comparison of strengths across candidates.

The three concerns of the sceptics

The issue of normative (single stimulus questionnaire items) and ipsative formats within personality testing continues to vex developers and practitioners alike.

One group of psychometricians suggest that “the limitations inherent with ipsative measures pose too great a threat to the validity of the selection tools to make it a useful instrument for selection.”¹⁷ Others argue that under specific circumstances (arising from the number of scales and items), the application of item response theory can “recover the properties of normative scores.”¹⁸ And the more mathematically minded point out the constraints of item response theory and the futility of attempting to turn “ipsative chalk into normative cheese.”¹⁹

The debate continues to rumble on in the psychometric world.

What is however clear and no professional psychometrician disputes is the specific measurement problem for the four dimensions of DISC in its forced choice format. Here the sceptics also highlight the modest correlation between ipsative and normative versions of DISC instruments²⁰ and the substantial inter-correlation between the scales of Dominance and Steadiness (-.82), and for Influence and Compliance (-.71).

Apart from making conventional psychometric statistics - factor analysis, reliability and validity estimates - meaningless, the sceptics point to the practical implications of a four factor model within a forced choice format and how the results become a distortion and caricature of personality.



The adversaries

For the toughest grouping of critics, DISC based assessment represents an extreme example of the futile attempt to measure personality through self report measures. Some adversaries dismiss the entire DISC enterprise as irrelevant. Like magazine quizzes, the use of DISC instruments amount to little more than what Carl Jung called a “childish parlour game”.

Other opponents adopt a more assertive stance, suggesting that the popularity of personality assessment is in fact holding back progress in improving predictive power in selection decision making. Yes, DISC instruments draw on an antiquated theory and a flawed methodology that results in distorted profiles, but the DISC portfolio of products are essentially part of the same grouping of personality tests that have failed to deliver anything resembling decent predictive power of important outcomes in the work-place.

The adversaries accept that people are different, and that personality is an important dynamic of these differences with implications for significant work and life outcomes, but also note that personality is only one of any number of other factors that may provide predictive power.

In “Outliers”, Malcolm Gladwell provides an alternative account of success. Instead of asking the usual questions (what are successful people like? what kind of personality do they have? what personal talents are they born with?), explanations he argues that don’t work, Gladwell suggests that “successful people are invariably the beneficiaries of extraordinary opportunities and cultural legacies that allow them to learn and work hard and make sense of the world. “It is only by asking where they are from that we can unravel the logic behind who succeeds and who doesn’t.”

The adversaries over-state their case²¹ but they make two important points:

- 1.** While there are good reasons to think that personality differences are played out in organisationally valued outcomes such as engagement, productivity, accident rates, progression and leadership impact, etc, after decades of research and the outcomes of meta analyses to consolidate research findings, the evidence base is less than conclusive ²². Here the adversaries point to the predominance of concurrent studies in meta analyses rather than those based on genuine predictive methodology to track applicant personality data against future work outcomes, and the difficulties in generalising from studies of role incumbents to candidates applying for these roles.
- 2.** While DISC based instruments have their constraints, these limitations also apply to any number of other personality tests used in selection practice. For the adversaries, DISC tests are not a million miles from well established and researched psychometric solutions, accepting that DISC instruments represent particularly badly designed and executed attempts at personality assessment.



Explaining DISC's popularity

The mainstream psychometricians continue to gnash their teeth²³ in exasperation at the popularity of DISC based instruments. They look at the new variants and the attempt to update DISCology within neuro-science²⁴ and they despair.

The critics argue that a combination of a four factor framework within an ipsative design makes conventional estimates of reliability and validity farcical, and the attempt to report conventional measurement metrics is statistical flim-flam.

DISC profiles are largely a display of a simplistic typology based on two bi-polar factors, assertiveness vs. agreeableness and extraversion vs. conscientiousness. Those versatile individuals who can direct with sensitivity or can energise in a disciplined way presumably don't exist within DISC world.

DISC based assessment continues to dominate the personality testing business because:

It is **simple**. Users “get it” and remember it. “The language has swept throughout our organisation because it is fun to learn, inspirational to experience, easy to remember, effective and practical in application.”

Why worry about more complex models of employee performance when human behaviour can be summarised by the four colours of Sunshine Yellow, Fiery Red, Earth Green or Cool Blue. “You behave the way you do because you are “red” and we find it difficult to interact because I am green.”

This is a simplistic explanation, that obviously ignores the complexity of work design, corporate culture, reward systems and organisational politics, the more nuanced reasons for interpersonal conflict.

But rather than address these bigger systemic issues, we can sweep any organisational difficulties under the carpet by organising a self development programme around DISC to suggest the “problem” is about the individual, their personality and how they understand the personality of others.



Explaining DISC's popularity

It has **sufficient plausibility**. DISC assessments do seem to measure “something”²⁵, a something that is indicative of work outcomes, albeit in a limited way.

Yes the validation evidence is spotty and sporadic, and any assessment instrument that taps into the recurring themes of broad based temperament will find “something” in what Steve Blinkhorn calls “fishing expeditions” from time to time.

The predictive power is probably insignificant in selection situations, but DISC developers and distributors can find enough evidence, however statistically massaged, that can be referenced in sales presentations and training programmes to impress the psychometrically naive.

“*They offer simple explanations for the complexity of individual differences and propose simple solutions to complex problems.*”

Martin & Deirdre Bobgan

It is interesting to identify the parallels with DISC based assessments and William Marston's original invention, the Lie Detector test.

“The dirty little secret of the polygraph is that it depends on trickery, not science.” If the lie detector does “work”, it only works by virtue of the fact that some people think it works because they are fooled by the deceptions of the tester to convince individuals that the test is infallible.

A typical trick in the use of the polygraph. Individuals undergoing the lie detector are asked to select a playing card from a deck and asked a series of questions about their selected card while their responses are monitored by the lie detector, and are astounded by the responses from the lie detector - unaware that all the cards in the deck are identical.

The scientific consensus of the polygraph: “to place trust in it one would not only be foolish, it could be dangerous.”

DISC “works” only because of a similar deception that combines the power of the Forer effect and the disingenuity of the sales and marketing enterprise to claim exceptional levels of accuracy and validity. And like the polygraph it's probably foolish to use it given the available alternatives in personality testing, and probably dangerous to deploy it in selection situations.

Or as Anita James and Edward Baum recommend: “decisions to purchase should be made with caution.....the bells and whistles may obscure the self report accuracy and lack of third party support of the psychometric claims.”²⁶

William Marston travels in time

What would William Marston have made of the DISC personality assessment business?

It's an interesting thought experiment. Just as it would be fascinating to know Jung's view of the Myers Briggs Type Indicator, what would the originator of DISC make of the proliferation of personality tests that acknowledge his theory?

William Marston is asked to complete a DISC based questionnaire. He's shown his profile. How would he respond?

It is highly likely that his commercial instincts would make him smile, albeit ruefully. Having negotiated a good deal with DC Comics he would wonder how John Geier managed to negotiate such a good deal with his smart wife. But he would also be pleased to find that his legacy went beyond Wonder Woman to extend into the new business of personality testing.

Marston though would be puzzled that his ideas had been summarised into a model that had changed his original terminology. He would be unhappy that Submission had evolved into Steadiness, a complete misreading of his vision for understanding differences.

Most of all he would be astonished by the crude caricature of his own profile. He would be confused that his scores on Dominance and Steadiness are on the flat line.

For such a forceful individual who seized life to establish his own agenda, but was also highly responsive to others and their demands and believed that men are "happiest in submission to loving authority", he would question the test's power to reflect his own personality.

The tester would then explain the forced choice format of the test and Marston, no fool, would then point out, in which case, the test design must be fundamentally flawed.



Where does this leave us?

DISC based systems can be seen as an early attempt to create a simple test that was accessible to organisations without any reliance on the expert. As such this type of instrument was never going to be popular within the community of professional psychologists and was always going to face criticism, for the most part justified.

Despite the superficial appearance of a psychometric test (structured questionnaire responses and graphical outputs that look scientific), their measurement properties and practical utility are probably more similar to the kind of personality typologies of the Smalley Trent Personal Strengths Survey Chart (the personality patterns of the animal types of Lion, Otter, Beaver and Golden Retriever), or the Ice Cream test (different flavour preferences map against personality descriptions).

DISC measures do provide some kind of insight, but an insight that may be limiting rather than liberating given the psychometric reality that they seem to squeeze the variation of personality differences into two dimensions. And as Jim Morgan observes, these caricatures encourage our tendency to fall back on simplistic stereotypes of others that become self fulfilling. ²⁷

But DISCology developers and distributors do not limit their claims to personal development. DISC is clearly marketed as a tool with applications in recruitment and selection, career development, and redeployment. “DISC can be an invaluable resource in selecting existing staff for redeployment.”²⁸

As one DISC distributor asks: “Is the PPA questionnaire really useful in the context of selection and development?” and responds: “The PPA system is used daily in 50 countries and the feedback confirms that empirically PPA has a utility value that is extremely high.”

Given this vague approximation to anything like meaningful predictive validity, practitioners of DISC who successfully out manoeuvred one type of expert, may soon be in need of a different professional expert, one that specialises in employment law.

William Marston was often foolish, but he was wise when he observed: “Realize what you really want. It stops you from chasing butterflies and puts you to work digging gold.”

DISC systems have chased butterflies rather than conduct the hard work of digging for gold.





Appendix 1: the strange and remarkable life of William Marston

The lie detector and the FBI

Undertaking his doctoral research in 1915 on the physiological detection of deception under the supervision of Hugo Munsterburg at Harvard University, Marston is often credited as the creator of the systolic blood pressure test. “The method was simple. Take and record the subject’s blood pressure, release the cuff. Ask the subject a question. Take and record the subject’s blood pressure again.”

Encouraged by his early findings that verbal deception could be recorded in changes in systolic blood pressure, Marston began a research programme that continued over the next two decades. Testing a range of groups that included soldiers, prisoners in Texan penitentiaries, delinquent school children, he also evaluated the emotional responses of “blondes, brunettes and red heads. Here Marston claimed “the experiments more or less proved that brunettes enjoyed the thrill of pursuit, while blondes preferred the more passive enjoyment of being kissed.”

Marston’s favourite test subjects however appeared to be female students. Attending the initiation parties “at which the young women would tie each other up and wrestle” Marston would measure their systolic blood pressure during their hazing rituals at sorority parties.

Later Marston would apply his test technology to resolve marital difficulties; the “love detector”. Blood pressure changes indicated if the “neglected wife still loved her roving husband and that a young couple, despite being engaged were still in love with others.”

After the United States entered the First World War, Marston attempted to interest the National Research Council in his work and the applications of the lie detector test to spot espionage. He wired Robert Yerkes: “Remarkable results. Thirty deception tests under iron clad precautions”.

The FBI in an official report reviewed Marston’s work, objected to the “egotistical vein” of his findings, and expressed their scepticism about the infallibility of his test. It also doubted the claim that “once the deception has been detected it has been his experience that if this is pointed out to the subject he will admit his guilt and it will have the psychological effect upon him of making him always in the future tell the truth.”



The Gillette shaving experiment



In the late 1930s Marston, always the entrepreneur, contacted the Gillette Razor Company to demonstrate how his lie detector test could be used to indicate the superiority of Gillette's razor blades to those of its competitors. Marston saw his ability to identify emotional truthfulness as a potentially powerful tool to evaluate consumer attitudes to product advertising.

In a series of advertisements in "Saturday Evening Post" and "Life", the "piercing eye" of Dr William Marston, the pre-eminent psychologist, observed the emotional responses to the different groups of shavers. The results were astounding. "My study enables me to state flatly that Gillette blades are far superior in every respect to the competitive blades tested."

The results of his bizarre experiment proved nothing of the sort, and Marston was accused of instructing an advisor to tamper with the results. John Bugas, FBI agent, investigating the scam noted that "Marston indicated he stood to make around thirty thousand dollars for his part in the entire scheme."

In a hand written note Bugas summarised his view of Marston: "I always thought this fellow Marston was a phoney and this proves it".

Marston as writer and consulting psychologist

Having worked at a series of universities, Radcliffe, Tufts, Columbia, Southern California - although without tenure - Marston left formal academia to spend a year as Director of Public Services for Universal Studios. Using the lie detector test he helped the studio evaluate the emotional content of movies in pre-screenings before their release.

Outside academia Marston was a liberated man who pursued a new career as a journalist and novelist.

“Venus With Us: A Tale of the Caesar” was his 1932 sexcapade, a tale of “debauchery, wars, barbaric revels and cruelties....and the personal history of the young Julius Caesar. From Egypt to England, Greece to Gaul, he came, he saw, he conquered. But slave girl and vestal virgin, courtesan and queen, each in turn conquered Caesar.”

Three self help books followed:

“You Can be Popular”, “Try Living”, and “March On: Facing Life With Courage”.

Here Marston outlined his belief that “erotic love is the emotional source of that all important social trait, willing submission to other people, their needs, their opinions, their manner of living and submission also to the leaders who govern the social group.”

In a series of articles in “Family Circle” and “Look”, Marston as an early pop psychologist began to outline his social agenda .

The most pressing problem facing civilization he argued was to find a way to increase women’s dominance. Marston’s feminism however seemed less about gender equality or addressing sexism, and more a “variation of the 19th century’s temperance movement which held that women were morally superior to men” and key to controlling their baser instincts and appetites. As Geoffrey Bunn notes: “like so much of his work, his ideas about liberation were intimately related to his fascination with sex”.

Here Marston drew again on the results of his lie detector experiments to suggest that women were superior to men in many aspects of judgement and reasoning, more honest and reliable, and could work faster and more accurately.

“It’s the glands that give women three times as much explosive urge as men.” For Marston, society’s problems would only be overcome - and the “way to compassion, peace and justice secured” - through the advancement of women into leadership positions.



The creation of Wonder Woman

“*Wonder Woman is psychological propaganda for the new type of women who should I believe rule the world.*”

William Marston



In a 1940 Family Circle article, “Don’t Laugh At The Comics” Marston responded to the growing concern about the impact that comics were having on American youth. Maxwell Gaines, publisher of All American Comics, identified a useful ally, and Marston was asked to offer advice to make “comics more psychologically beneficial to young readers.”

Marston saw his opportunity to introduce a female sensibility into the male dominated world of super-hero stories. Gaines, initially sceptical of Marston’s pitch: “women are stronger than men because they wield the force of love, and that war and evil are produced by men’s violent quest for illusory power over men, and that secretly, boys and men are looking for an exciting beautiful girl stronger than they are”, was convinced by Marston's persuasive charm. Gaines gave him the go-ahead to develop a female comic hero. And Marston was uncompromising in his project: “I fully believe that I am hitting a great movement now underway; the growth in the power of women and I want that theme left alone or I’ll drop the project.”

The first character Suprema, renamed Wonder Woman, appeared in 1941 under Marston’s pseudonym Charles Moulton. As “beautiful as Aphrodite, wise as Athena, swifter than Hermes, and stronger than Hercules”, it became clear that Wonder Woman was a projection of Marston’s sexual idiosyncrasies. As he himself stated: ““Tell me anybody’s preference in story strips and I’ll tell you his subconscious desires.”

His dominance submission fascination was reflected in Wonder Woman’s costume, and the recurring plot lines of kidnapping, imprisonment, slavery, punishment and torture. Even the lie detector test puts in an appearance in the magic lasso that Wonder Woman uses to “oblige anyone caught up in its coils to tell the unvarnished truth.”

The final years

Facing criticism about the sado-masochism of the Wonder Woman stories, Marston responded that having devoted his entire life to working out psychological principles, he deserved “free rein on fundamentals.”

The last few years of Marston’s life were dedicated to the adventures of Wonder Woman. Rumours still persist that one book remains hidden in the vaults of DC Comics, a story that is “so deranged, it’s like the guy just done mescaline or something, talking about his sexual theories” that its publication will never be permitted.

Diagnosed with polio, then lung cancer, Marston spent the last phase of his remarkable life in a wheel chair. Two days before his death he was still busy editing Wonder Woman stories. Calling for seventy five panels showing women in bondage, he has Wonder Woman’s mother have the final say:

“The only real happiness for anybody is to be found in obedience to loving authority.”



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2. Later research would indicate that the core emotions are better represented as happiness, surprise, sadness, anger, disgust, contempt, and fear.
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4. Bobgan M & Bobgan D, 1992, "Four Temperaments, Astrology and Personality Testing"
5. Watson R (1989) "Statistical comparisons between the TTI Style Analysis and the Performax Profile System", Department of Education, Wheaton College
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8. PPA Technical Resource Book, chapters 1 and 10 downloadable at:
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12. <http://www.baylor.edu/content/services/document.php/87076.pdf>
13. Ingram C (2004) "A case study of executive coaching as a leadership intervention in a bureaucratic organization", PhD dissertation
14. Bertram Forer gave a personality test to his students and then issued their personalised analysis. The students gave their results an impressive accuracy rating of 85% only to discover each had received an identical generic report. See also Dickson D & Kelly I (1985) "The Barnum effect in personality assessment", Psychological Reports, 57
15. The often cited, but inaccessible, 1983 Kaplan Report, is an example of DISC validation research that is unavailable for informed comment and debate.
16. Henkel T & Wilmoth J (1992) "Factor analysis of the Personal Profile System", Journal of Experimental Education, 60
17. Meade A (2004) "Psychometric problems and issues involved with creating and using ipsative measures for selection", Journal of Occupational and Organizational Psychology, 77

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19. Blinkhorn S et al (1988) "Spurious and spuriouser: the use of ipsative personality tests", Journal of Occupational Psychology, 61

20. Martinussen M et al (2001) "Validation of an ipsative measure (DISCUS)", Scandinavian Journal of Psychology, 42

21. See for example, Ozer D J & Benet-Martinez V (2006), "Personality and the prediction of consequential outcomes", Annual Review of Psychology, 57

22. Morgeson F et al (2007), "Are we getting fooled again? Coming to terms with limitations in the use of personality tests for personnel selection", Personnel Psychology, 60

23 Arguably the professional psychological community contributed to this situation. When, through the 1970s, any psychologist who suggested that differences in work outcomes may be shaped by fundamental personality traits rather than simply be the outcome of situational factors, was ignored, and psychometric research was conducted only in a handful of academic institutions, practitioners had to find tools that helped them in recruitment and selection applications. DISC instruments represented an accessible option.

24. See for example PRISM Brain Mapping;
<http://www.prismbrainmapping.com>

25. Is the "something" of DISC the "general factor of personality"? Musek J (2007) "A general factor of personality: evidence for the Big One in the five factor model", Journal of Research in Personality, 41. Alternatively the modest correlation between the DISC Dominance and the general factor of intelligence (accepting the limitations of the 16PF B scale) may underpin the occasional glimmer of validity.

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