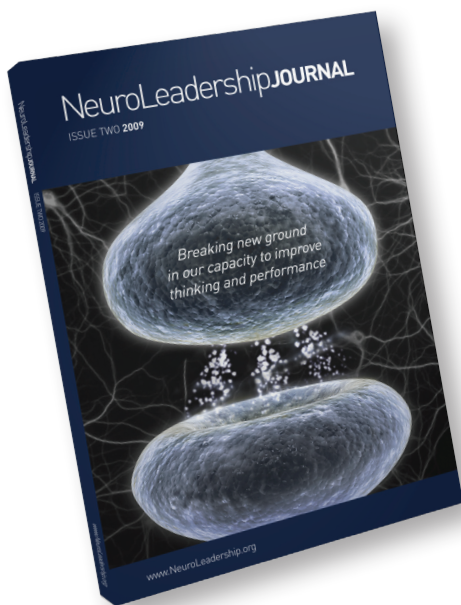


Accessing the chemistry of wellness and performance

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Accessing the chemistry of wellness and performance

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Research in the area of mind-body influences has revealed the significant effects that thoughts and feelings have upon body function by altering body chemistry. Equally dramatic has been the findings that these induced changes in body chemistry in turn affect our thoughts and feelings. No longer can we neatly remove the phenomenon of consciousness or the psyche, from the dynamic of body structure and function. For the inescapable truth is that our thoughts and emotions are intimately connected to our body structure and function by heavy two-way traffic. In this article, a working model is described which we currently use to define the relevant variables of this dynamic and which also forms the basis for accurate diagnostic evaluations and intervention.

Introduction

Identifiable mind states are associated with the secretion of neuro-transmitters and neuro-peptides which then circulate

in the blood stream and impact upon body metabolism. In this way, mind states influence wellness and performance in a profound way. The study of these chemical pathways and their effects is referred to as psychoneuroimmunology (PNI). The challenge is to be able to access the core processes of consciousness and thereby move the individual into a resourceful neuro-chemical configuration. The context of this dynamic is summarized by the illustration in figure 1.

In effect our nature-nurture heritage gives rise to our world-view or subjective reality. If this heritage is comprehensive and free of deprivation, then when we interact with the external environment we see things as they really are and consequently make accurate decisions. This leads to success and we thus return with a positive *feeling*. Conversely, if the nature-nurture heritage is a product of deprivation, we will not see things as they really are and thus experience failure. We return with a negative feeling. These feelings; products of the *external loop*, drive our PNI chemistry from the feeling areas of the brain via the *internal loop*. This will determine ultimately our levels of wellness and performance.

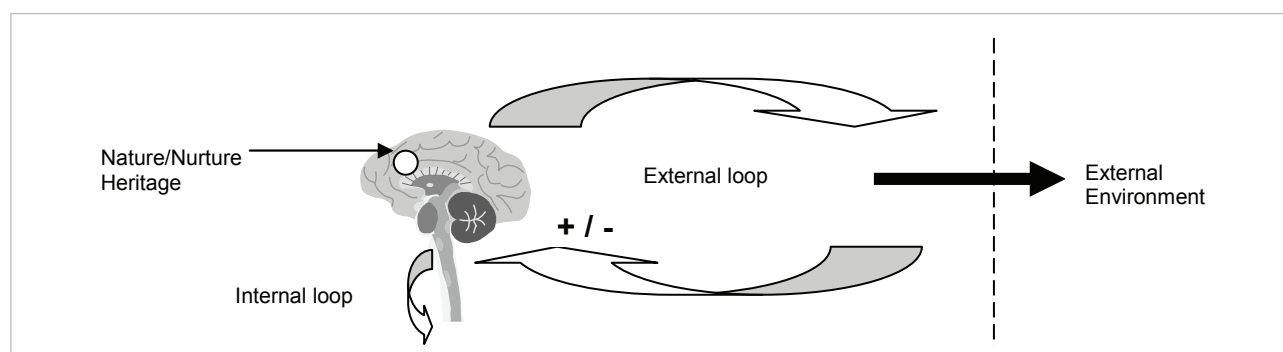


Figure 1

The Triangles Model ©

In 1992 the author developed a neuro-psychological model termed the *Triangles Model*, which was based on the physiology of the visual cerebral cortex. Over the ensuing years, the model evolved and was subsequently validated in corporate and clinical testing. Today, the *Triangles Model* has evolved to become the foundation for accurate diagnostics and appropriate intervention, thereby enhancing the chemistry of wellness and performance. It is fully quantifiable by an online diagnostic which measures stress profiles, PNI resilience in terms of wellness and performance, as well as cardiac risk. Due to the comprehensive quantification, the effectiveness of intervention may be evaluated on an ongoing basis.

Central to the *Triangles Model* is the *energy-integration* curve. This is illustrated in figure 2.

The Y-axis or height of the triangle represents passionate, purposeful energy input, while the X-axis represents the spectrum of the environment that has been integrated in the subjective world-view. The volume within the triangle has been shown statistically to represent the PNI chemical resilience as manifest in wellness and performance. Three archetypes of behaviour are described which reflect differing nature-nurture dynamics reflected in variations of the basic energy-integration curve.

The first of the archetypes is referred to as the Bravo Archetype. This is illustrated in figure 3.

This archetype is represented by a tall and narrow-based triangle. The spectrum of the environment that is integrated in the base represents only 'my needs'. This is therefore an archetype obsessed only with own needs and driven ambitiously to achieve these needs. The first drive is essentially one of fear – fear of failing to achieve the objectives. The second drive is one characterized by the need for recognition and adoration. The excessive drives give rise to the very tall triangle. This archetype has integrated only 'own needs' into the baseline. Therefore everything which lies outside of the triangle of interest (subjective world-view) is judged to be unimportant and of inferior value. This archetype is thus insensitive to all that lies outside of the triangular configuration. The volume of the triangle is statistically adequate to drive PNI resilience in terms of wellness and performance.

The next archetype is termed the Charlie Archetype. The Charlie traits are illustrated in figure 4.

This archetype is represented by a small triangle, both in terms of height and base. Once again the narrow spectrum of integration represents 'own needs'. The difference between the Bravo and Charlie archetypes in terms of the height of the respective triangles is that while the Bravo archetype has experienced success, the Charlie archetype

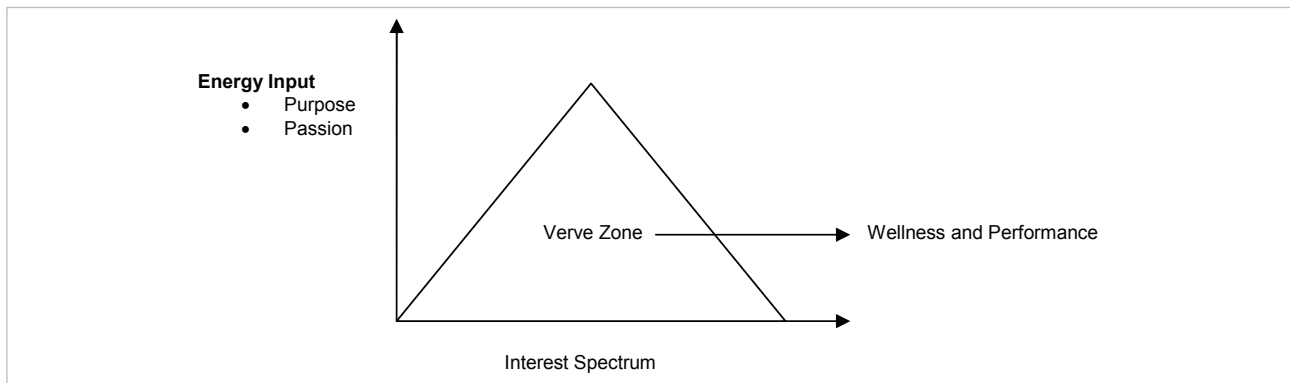


Figure 2: Energy-Integration Curve.

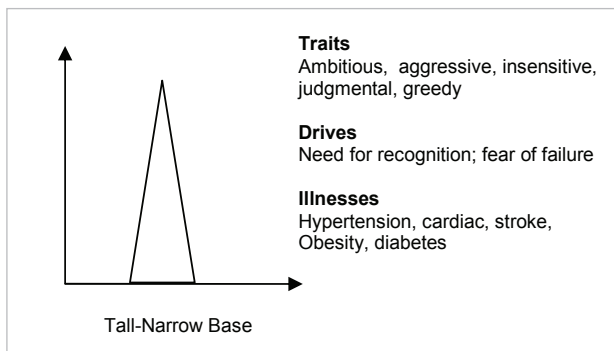


Figure 3: Verve Archetype 1: Bravo.

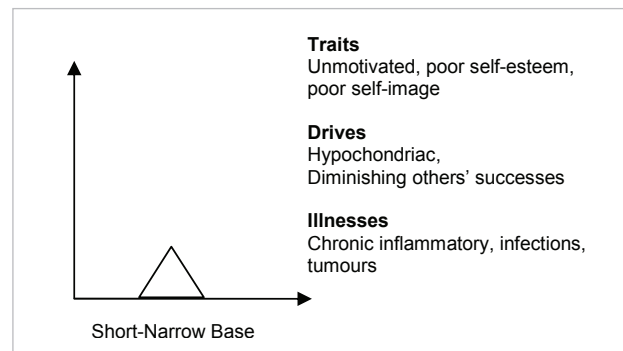


Figure 4: Verve Archetype 2: Charlie.

has only experienced very limited success and gratification. Therefore the Charlie Archetype emerges from a heritage of futility. This futility results from continued failure to experience success and gratification despite the repeated attempts in this regard. A point is reached where subjectively the Charlie Archetype believes that no amount of energy input will result in any meaningful result. This mind state is termed hopeless-helpless and is associated with self-destructive chemistry. As a consequence of this dynamic, the energy input diminishes as manifest by the low triangle height. Statistically there is insufficient PNI resilience to positively drive wellness and performance.

Two noticeable drives of the Charlie Archetype include hypochondriasis and the need to diminish the successes of others. The former reflects the need to be noticed and acknowledged while the latter results from a situation wherein the Charlie Archetype, having never really experienced success and gratification, finds it difficult to share an environment with successful individuals. The Charlie Archetype therefore sabotages the successes of others to lessen the pain of failure. The Charlie Archetype is prone to suffering the ailments of inadequate PNI resilience such as recurrent infections and tumours.

The final archetype is the Alpha Archetype. This is the 'gold standard' and is illustrated in figure 5.

The Alpha type is driven by the need for personal development and fulfillment as well as enjoyment.

In this Archetype we find adequate triangular height signifying a healthy purposeful energy input together with a very broad base reflecting an environmental integration well beyond 'own needs'. In this way the volume of the Alpha Archetype triangle reflects a significant surplus of PNI resilience in terms of wellness and performance. The broad environmental appreciation precludes the development of insensitivity and/or judgmentalism which is found in the Bravo type. The Alpha type is driven by the need for personal development and fulfillment as well as enjoyment. There is very little fear of failure in this confident and self-assured individual. Illness occurs very rarely.

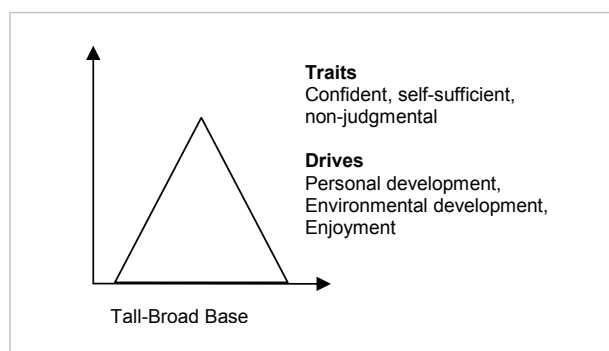


Figure 5: Verve Archetype 3: Alpha.

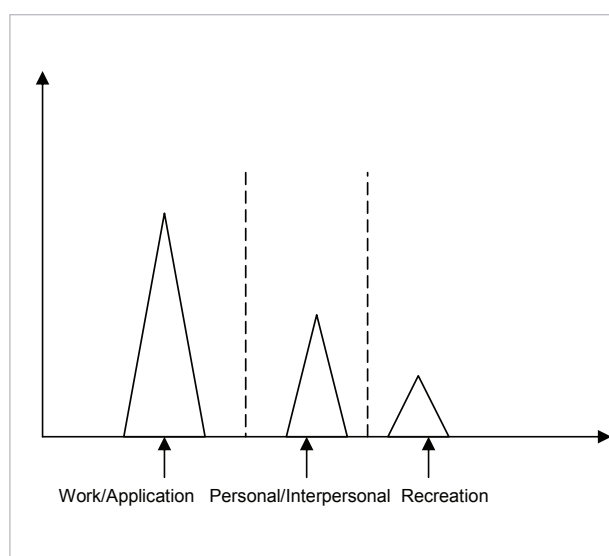


Figure 6

Applications

We spend most of our lives in one or more of three areas of interest. These are:

- Work or application
- Personal or inter-personal
- Recreation

As a result of the requirements of daily life, we will prioritize these areas of interest accordingly. Furthermore, because each of these interest areas occupy a different segment of the environment our triangular configuration will separate into three independent, identifiable areas. The separation of these interest areas is termed un-integration. As a result of the different priorities given to these areas and the subsequent energy input, the triangles of interest representing these interest areas may range from Charlie to Alpha in their configurations.

When functioning within a specific interest area, we take on all the traits of that specific configuration. We also become unaware of the other triangles of interest. This concept is illustrated in figure 6.

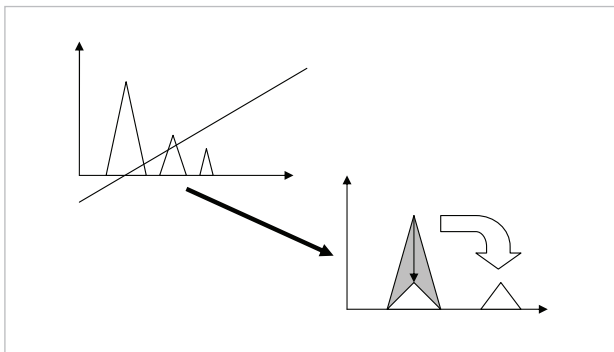


Figure 7

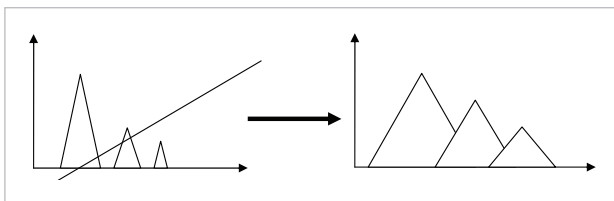


Figure 8

The illustration (left) depicts three un-integrated areas of interest where work/application is a Bravo Archetype while personal/interpersonal and recreation triangles reflect Charlie Archetypes. In this situation, most of the PNI resilience in terms of wellness and performance is derived from the Bravo work triangles. Should circumstances such as retrenchment or retirement result in loss of the work triangle, the individual will be catapulted into the remaining un-integrated Charlie triangles and experience the traits of hopeless-helpless. This will further diminish the available PNI chemical resilience, manifesting in compromised wellness and performance.

The loss of the Bravo triangle may also be subjective in that the apparent activity and interaction still exists but passionate and purposeful energy within the Bravo triangle has diminished. Outwardly the individual still appears to be interacting normally. However the loss of purposeful energy has resulted in the individual imploding into a functional Charlie Archetype within that specific sphere of interest. We refer to this as a *pseudo-verve* phenomenon. Within a Charlie pseudo-verve, the individual will once again experience all the subjective traits of the Charlie Archetype as well as a significant loss of PNI resilience. See figure 7.

The solution to this problem is to develop a triangular configuration characterized by the overlapping of Alpha triangles reflecting each of the three areas of interest. This is illustrated in figure 8.

The overlapping of Alpha triangles is the optimal configuration in terms of PNI resilience. It is the consequence of expanding the base of integration of each triangle of interest such that an overlap occurs. In this way awareness is maintained of other

areas of interest even while prioritizing the environment in which we find ourselves at a given time. For example, while functioning in the work environment awareness is maintained of personal as well as recreational needs. This translates into a sensitivity of the full environment irrespective of the priority area in which we are interacting at a specific time. Functionally this translates into a situation of balance. Furthermore, should a specific triangle of interest pseudo-verve, there will still be adequate purposeful energy to drive the re-creation of a new triangle of interest.

Inter-personal dynamics

At this point we are in a position to review the dynamics that occur when different archetypes interact with each other.

The first example reflects the interaction of the Alpha with Bravo and Charlie Archetypes. The fundamental characteristic of the Alpha configuration is that its broad base and adequate height incorporates the Bravo and Charlie triangles well within its subjective world view. In this way, all aspects of the subjectivity of Bravo and Charlie are integrated within Alpha, thereby maximizing sensitivity and minimizing judgmentalism (from the Alpha perspective). This is illustrated in figure 9.

Consider the next example in which a Bravo Archetype interacts with a second Bravo. This is illustrated in figure 10.

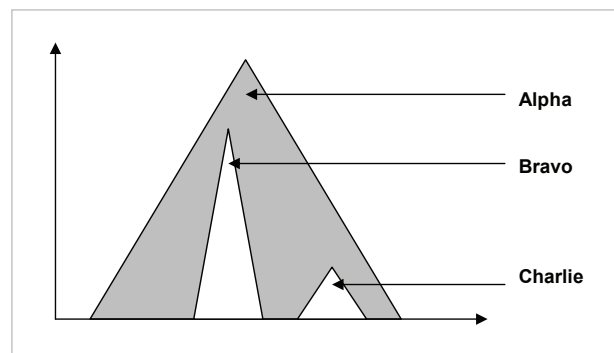


Figure 9

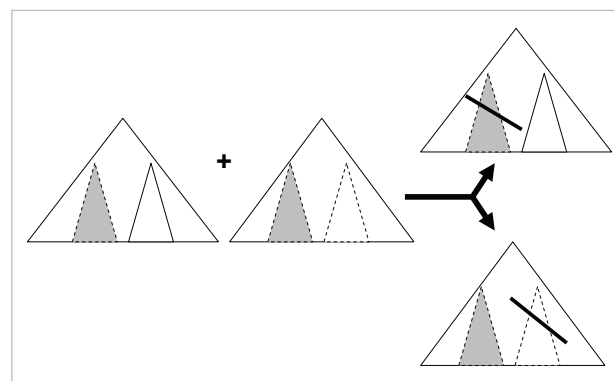


Figure 10

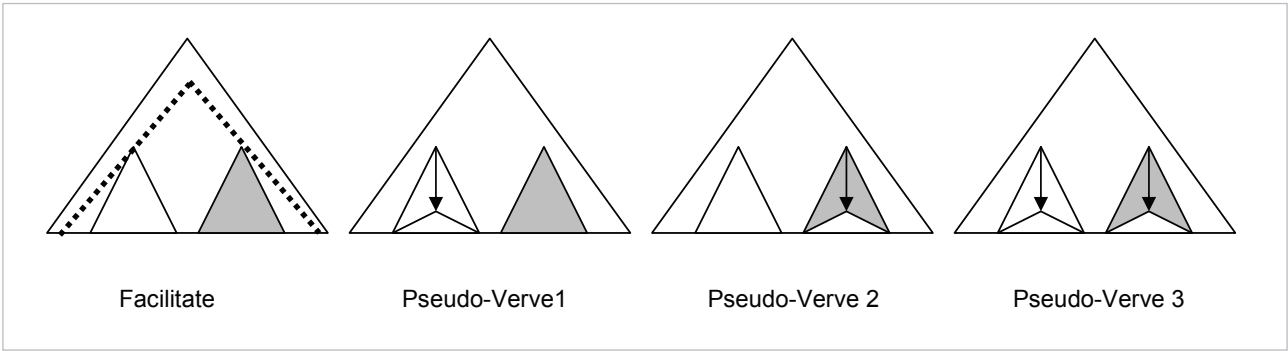


Figure 11: Possible Bravo-Bravo Outcomes.

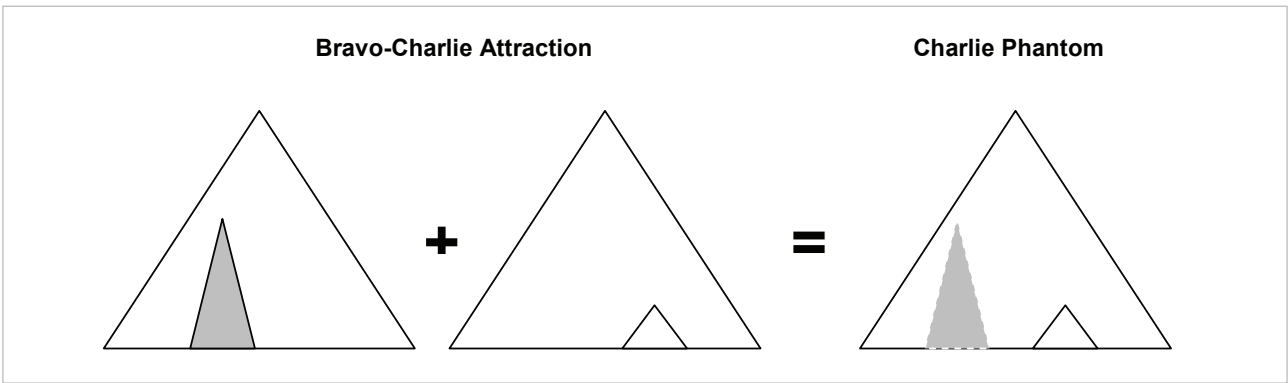


Figure 12

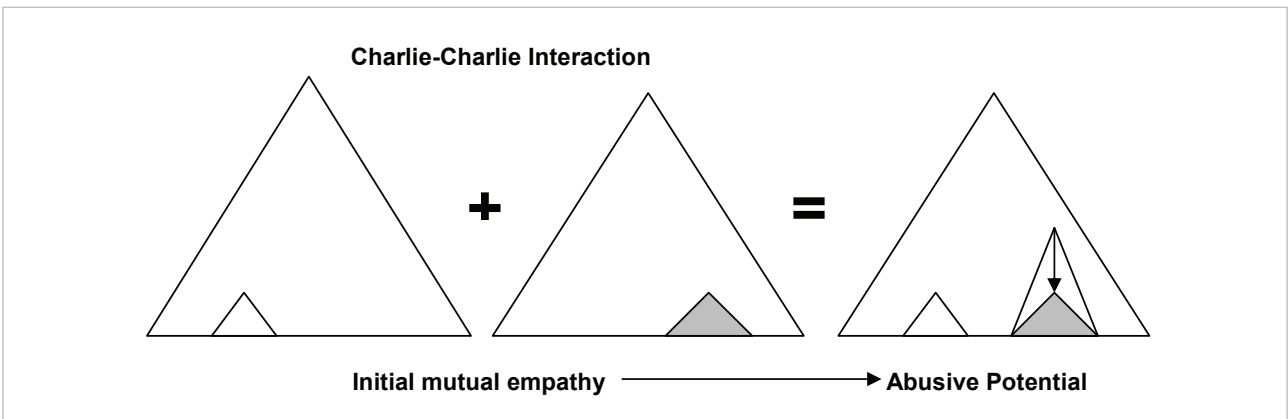


Figure 12

In this situation each Bravo occupies a different segment of the prevailing environmental spectrum. As a result, each will take a judgmental stand against the other and attempt to deny their existence. This is because each falls outside of the other's subjective reality driven by own needs. There are several possible outcomes to this interaction as indicated in figure 11.

The most optimal outcome is arrived at through facilitation. When facilitated by an Alpha Archetype the fears, aspirations and preferences of each are incorporated into a phantom Alpha triangle which will function as a vehicle of co-operation

for the specified environment. This facilitation may need to be repeated on a regular basis. Without facilitation, either or both of the two conflicting Bravo's may devolve into *pseudo-verve* Charlie's with all the associated hopeless-helpless traits. This situation is commonly seen in inadequately facilitated mergers where merging groups assume the postures of fearful Bravo's.

The union between a Bravo and a Charlie occurs as a result of the needs of each. The Bravo needs an individual to control (and in some cases, to abuse) and someone to provide ongoing adoration. The Charlie on the other hand

requires recognition which, in this union, is derived from the accolades bestowed upon the Bravo partner. The Bravo triangle is therefore incorporated by the Charlie into his/her own configuration – but as a phantom. It is a phantom because on dissolving the union, the phantom Bravo triangle will disappear leaving the Charlie in hopeless-helpless wretchedness. This is illustrated in figure 12.

Charlie-Charlie attraction occurs because each Charlie empathizes with the other. Each identifies with the other's loss of self-esteem as well as misfortunes which may prevail. In this way they find mutual solace in each other. However, should the female of the union experience any success or gratification, the male will be quick and brutal to bring her back to wretchedness because her success or gratification is too painful for him to bear. This is therefore the configuration that may lead to physical and emotional abuse. The dynamic is illustrated in figure 13.

Archetypes and leadership

Archetypal traits directly determine leadership styles. Thus in the case of Alpha, the broad-based integration reflects the traits of unprejudiced sensitivity, adequate self-confidence and an appreciation of the bigger picture. This translates into an individual who leads by facilitating dialogue between Archetypes. The intrinsic understanding that the Alpha has for the Bravo's aggressive ambition and judgmentalism, fuelled by self-interest and the fear of not achieving, gives rise to facilitation in which the fear element is neutralized. Once fear is minimized through assurances of value within the team, the Bravo is reconciled with the bigger picture and encouraged to contribute to the collective dynamic. In effect, the Alpha functions as facilitator and mentor. In regard to the Charlie, the Alpha understands the deficient self-esteem and self-worth of this archetype. Sensitivity and support are essential in buffering the Charlie and ensuring that suppressed value gains expression. Through facilitation, Alpha maximizes the human resource potential. Supported dialogue contributes to morale and enhanced productivity.

Anyone expressing a view which falls outside of the triangle of interest is regarded as a threat to the organization.

The Bravo leads by prescription. The management structure is denoted by a collective Bravo configured triangle; tall and narrow-based. Anyone expressing a view which falls outside of the triangle of interest is regarded as a threat to the organization. Thus unquestioning conformity is a prerequisite for tenure and promotion. Unfortunately a significant amount of intrinsic human resource potential is lost as a result. This leadership style is driven by fear.

The Charlie in a leadership position may result in a potentially damaging situation. The Charlie's with significantly compromised self-esteem may surround themselves with competent Bravo's. In effect the Bravo's are held to ransom by the leading Charlie. As long as the Bravo's perform, they remain in good standing with the Charlie. If the Charlie perceives questionable loyalty, vengefulness born out of a threat to self-esteem and self-worth may cause the Charlie to inflict damage upon the offending Bravo.

In a business environment, the Alpha tends to become the entrepreneur...

In a business environment, the Alpha tends to become the entrepreneur in that they are devoid of fear, see the bigger picture and are adequately self-assured. Conversely the Bravo, with inherent fear and a narrow base centered upon self-interest, is more orientated to success within a corporate hierarchy. In terms of their respective approaches, the Bravo is driven by ambition to achieve an objective/destination. Inherent in this drive is the fear of not achieving. Very little regard is given to the journey in pursuit of the destination. The Bravo thus lives almost entirely in the future which is invariably fear-based. Alpha on the other hand confidently aspires to the objective/destination. In this case however, Alpha attributes as much importance to the journey in the present as to the destination in the future.

Intervention

The principles of intervention are based upon the requirements of broadening the bases of the triangles, together with increasing the heights of the triangles. The former is achieved through enhancing the integration of the environment while the latter, the increasing of triangular height, is achieved by purposefully energizing activities in each of the three areas of interest. See figure 14.

1. Maximize **meaning** and **purpose** ... **Energy**
 - Establish own mission statement
 - Maximize positivity – distance from negativity
 - Diversify within environment
 - Re-structure

2. Maintain **broad base** of activity ... **Integration**
 - New activities, people, environments – sensitize and empathize
 - Prioritize and manage

3. **Mind-State** Enhancers

Live in the present	maximize the present
Acknowledge feeling, express feeling	empathy and gratitude
Strive for Alpha	neutralize Bravo, Charlie
• Shirking responsibility	Bravo + Charlie
• Envy and malice	Charlie
• Self-interest and insensitivity	Bravo
• Fear	Bravo
• Guilt and regret	Charlie

Figure 14: Principles of Approach.

Practically, each aspect of enhancement is facilitated through a logical process. Energy enhancement is achieved by maximizing *meaning and purpose*. This in itself is a function of one’s mission statement. It is fundamental to establish genuine needs, aspirations and preferences before embarking on a process of re-structuring in any of the areas of interest. In most cases a radical re-structuring is not required to enhance purpose, meaning and gratification. All that may be required is to add new activities or approaches to enhance gratification. Generally, adopting a mind-set of hopefulness in which positivity is emphasized and negativity avoided contributes significantly to purposeful energy.

Integration is enhanced by incorporating new elements in existing areas of interest. As an example if a Bravo employer is introduced to the concept of sensitivity to the personal and recreational needs of employees, productivity is usually enhanced. In many cases one arrives at this point for the wrong reasons – the Bravo is generally only driven by profit. But if the Bravo is shown that sensitivity to the needs of employees enhances productivity and profit, they may arrive at this Alpha state by default!

Finally an awareness needs to be established of the three archetypes and their traits so that non-resourceful and damaging PNI chemistry is avoided. Living in the present is an Alpha trait. Fear of future consequences is Bravo while previous loss, regret and guilt are Charlie traits. Acknowledging present success through the expression of gratitude re-enforces the Alpha state as does empathy towards others who are victims of a less resourceful archetypal mode.

The chemistry of wellness and performance

It should be indicated at the outset that the influences of neuro-psychological processes on the immune system alone, traditionally the PNI domain, have expanded in that we now recognize the influences of mind-states on a more diverse spectrum of body function. For example, negative mind-states have been shown to correlate with the development of osteoporosis, heart disease and even Type 2 diabetes. This is illustrated in figure 15.

At the heart of the chemical process is the interaction of brain chemistry, the neuro-transmitters, with the modulating messenger chemistry in the body; the neuro-peptides (see figure 15). The important neuro-transmitters are serotonin (decreased in depression), dopamine (increased in anticipated or experienced success and pleasure) and adrenalin (increased in stress and anxiety) while the important group of neuro-peptides have been identified as the pro-inflammatory cytokines (Interleukin 1, Interleukin 6 and Tumour Necrosing Factor α). Experiencing stress, anxiety or depression (negative mind-states) is associated with a change in the relative concentrations of the neuro-transmitters. This triggers the brain to produce increased concentrations of CRF, which stimulates the body to produce higher levels of cortisone. The effects of cortisone include diminishing the effectiveness of the immune system (decreased NK cell activity), contributing to insulin resistance and subsequent diabetes, contributing to osteoporosis and finally, feeding back on to the hippocampus, resulting in loss of cells and atrophy. The latter effect, hippocampal atrophy, has been shown to be reversible if appropriate intervention is initiated before threshold loss of tissue.

Changes in the relative concentrations of the above-mentioned neuro-transmitters may further trigger the macrophage cells of the immune system to secrete pro-inflammatory cytokines. The cytokines have a widespread negative effect on multiple target areas. Included in the identifiable effects of the pro-inflammatory cytokines are the following:

1. Precipitate or enhance inflammatory activity in any target area
2. Contribute to athero-sclerosis, most notably in the coronary and cerebral arteries. This may give rise to heart attacks and/strokes
3. Suppress cardiac muscle contractility
4. Contribute to the development of osteoporosis and Type 2 diabetes
5. Feedback on the brain and result in the following effects:
 - Disrupts hippocampal function – results in impairment of short term memory
 - Disrupts neuro-transmitter activity (diminishes serotonin and dopamine) resulting in *sickness behaviour*

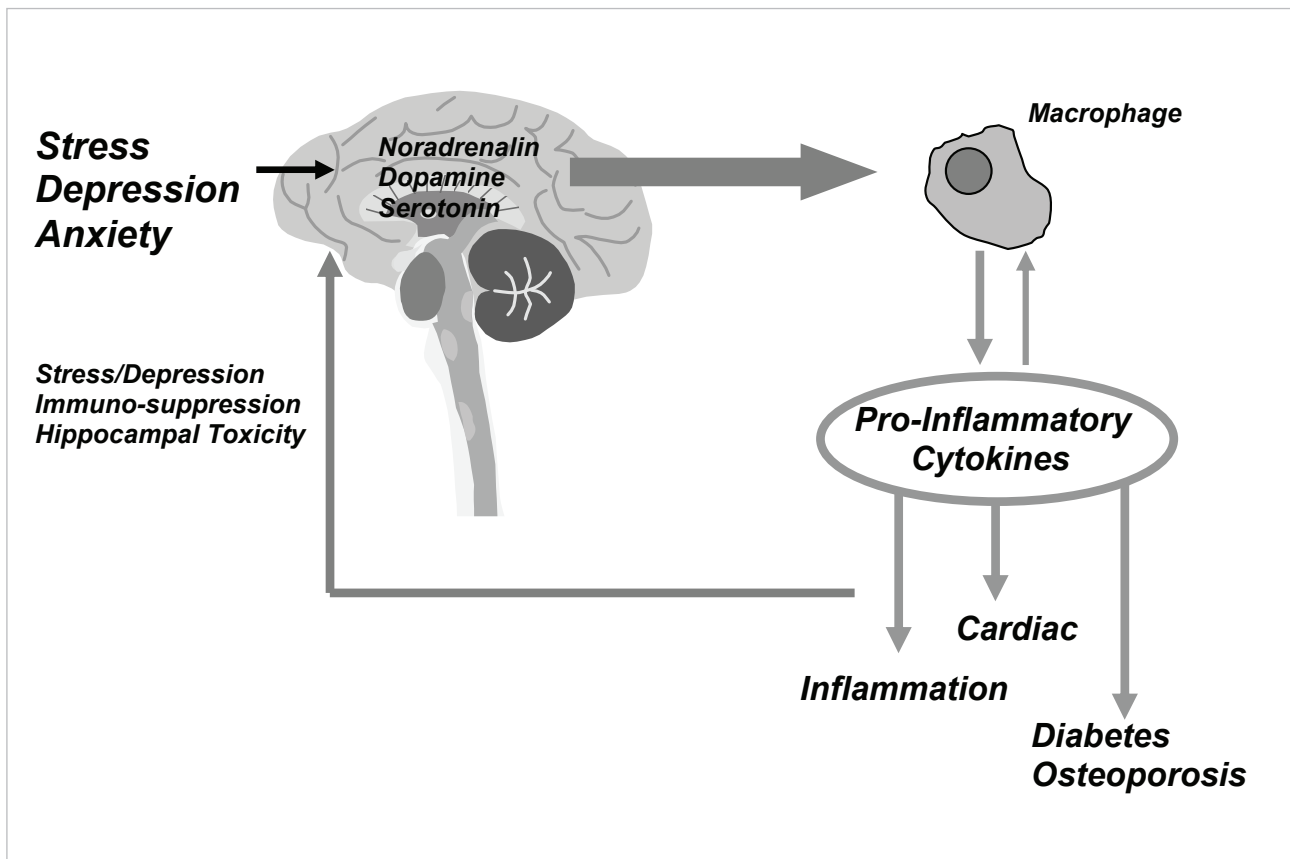


Figure 15

- The latter may go on to evolve into depression in susceptible individuals (enhancement of negative mind-states)
- Stimulate the release of CRF which increases cortisone production. This will contribute to immuno-suppression, Type 2 diabetes and osteoporosis.

The Triangles Model is currently being evaluated in terms of the correlation of the Archetypal mind states and PNI chemistry. Preliminary findings have demonstrated higher concentrations of *pro-inflammatory cytokines* in the *Charlie Archetype*.

The Triangles Model: diagnostics

The configuration of a given individual may be accurately quantified by means of the Triangles Model online diagnostic evaluation. Based on several years of accumulated data, the diagnostic evaluation provides information relating to:

- The Triangles configuration in diagrammatic form
- An average Verve score reflected in an Alpha-Bravo-Charlie range
- A comprehensive Corporate profile
- The Cardiac risk index

A given diagnostic can then be quantified with an overall score such that serial diagnostic studies can be compared and a quantified trend generated (the Triangular Index). A

collective corporate grid can also be generated thus showing the scatter of configurations within a given corporate unit.

The diagnostic may only be interpreted by an accredited facilitator with knowledge of the model and the required experience in the field.

Diagnostic review by sections

Section 1

Section 1 is an indirect reflection of the configuration profile of the individual. It is the section most prone to changes in life circumstances. The three triangles are depicted in conventional colours – red for work/application, blue for personal/interpersonal and green for recreation. The relative sizes and degrees of overlap are noted. Superimposed on the work/application and personal/interpersonal triangles are pseudo-Verve or ghost lines indicating the degree of effective Verve resilience (gratification). The pseudo-Verve line ranges from 100% gratification to a minimum of 25%. In the 100% category, the pseudo-Verve line is not visible.

Section 2

This section indicates the Verve score. This can be envisaged in the form of a single triangle reflecting the mean archetype. This value most closely reflects nurture determinants and is minimally affected by changing life situations.

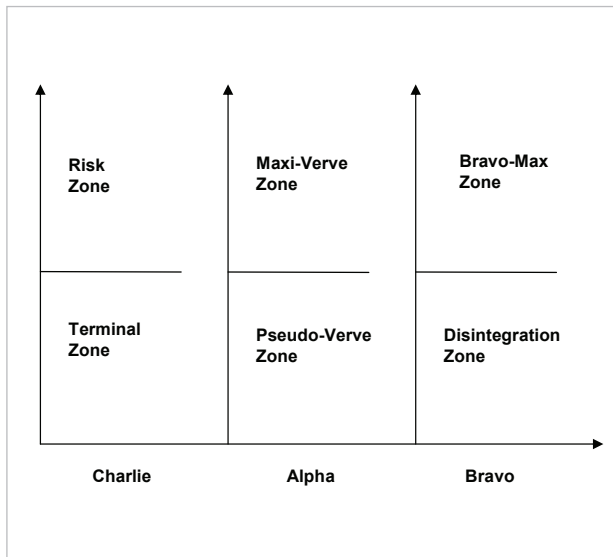


Figure 16

Section 3

The corporate profile section plots the individuals work/occupational profile on a standard grid. The grid consists of six zones depicting specific work-related traits (figure 16). The vertical columns represent the Charlie, Alpha and Bravo zones respectively. Within each zone there is a continuum of endurance and performance divided by a threshold line. Values below the threshold line depict a devolution to a pseudo-Verve situation.

Section 4

The cardiac risk index is based on the Framingham criteria. It yields an absolute as well as a group average cardiac risk value.

Summary of diagnostic correlates

In a sample of five hundred diagnostics, configurations associated with compromised wellness and performance were noted on case study analysis. These risk profiles are currently being studied in terms of their correlation with levels of pro-inflammatory cytokines.

High risk profiles

- In males: Pseudo-Verve line of 50% and less in work/application associated with an un-integrated configuration
- In females: Pseudo-Verve line of 50% and less in personal/interpersonal associated with an un-integrated configuration.
- Verve scores in Bravo-Charlie or Charlie ranges
- Corporate grid plots below the threshold lines
- Cardiac risk index 5% and higher in relation to the group average

Discussion

The Triangles model is proposed as a working application in which individuals and their unique behavior can be defined and quantified in the context of the full spectrum of daily life. The model, which was derived from neuro-physiological processes occurring in the visual cortex, provides the means whereby the chemistry of wellness and performance may be accessed. This is achieved consequent upon the fact that the three defined archetypes reflect not only traits of behavior but also associated chemical activity. Cognitive intervention therefore results in a profound effect upon body physiology, including consciousness itself.

The vast majority of individuals live their lives in default mode. They remain unaware of their strengths and weaknesses and make no attempt to engage fundamental neuro-psychological processes. If in fact they are the products of significant deprivation in their heritage, by not engaging and initiating appropriate intervention, they may remain victims of a less resourceful configuration. In this way they compromise themselves in terms of wellness, performance, quality of life and longevity. In this regard, the Triangles model can be viewed as a practical, empowering application supporting the enhancement of wellness and performance and thus personal efficiency and gratification. The application is not restricted to personal coaching of the individual. Rather, it should be viewed as providing a comprehensive framework for the implementation of multiple modalities of intervention, including leadership training, team-building, management re-structuring, and wellness enhancement.

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