# Reframing Environmental Scanning: An Integral Approach*

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**Abstract**

The basis for a broadened scanning framework is described which may also function as a means for understanding how human minds filter their perceptions of the world. The framework is based on the Four-Quadrant Integral model of Ken Wilber and the Spiral Dynamics model of Don Beck and Chris Cowan. An analytical tool (cross-level analysis) is presented for examining views of the world in terms of both the perceptual filters of the viewer as well as the aspect of the world being viewed, a technique which is also useful for analysing how other scanners do their scanning. A notation for cross-level analysis is presented and described, with examples of its use.

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# 1 Introduction

It is a truism that all of our environmental scanning (ES) is undertaken through perceptual filters. These filters are mostly not conscious, but rather act as pre-conscious conditioners of what we see. Any framework which helps to expand the range of our perceptions may thus help us to become more attuned to more of the world out there. The age-old tension in ES is that existing between breadth and depth, and it is commonly believed that they are mutually exclusive. The use of a scanning framework deliberately designed to be *both* broader *and* deeper would therefore be a useful step in helping to open out the 'mindspace' which scanners need to inhabit if they are to recognise the weak signals coming from the future. It is also necessary for scanners to become aware not only of how they perceive the world, but also of what types of filtering are likely in their own minds. Thus, one major aim of this paper is to open out in scanners' minds an understanding of some of the ways that human minds filter and perceive the world — that is, to become aware more explicitly of some of our different 'ways of knowing'.

In several papers, Richard Slaughter has begun a process of attempting to integrate some of the key insights from the work of the contemporary philosopher Ken Wilber into futures studies.[1] Recently, he has argued that ES as currently practised is somewhat narrow and shallow in focus, and calls for a move from the largely 'exterior' focus presently employed, to a greater emphasis on the 'interior' world, offering Wilber's so-called Four-Quadrant model as an example of such an expanded framework.[2] In other words, he has suggested that ES take a broader and deeper view of the world.[3] This paper is intended as a further contribution to this suggestion. Specifically, the idea is to extend or 'reframe' ES to include not only thinking in terms of Four Quadrants (which is a good start), but also in terms of explicit *ways of thinking*. These different ways of thinking represent, in essence, alternative ways of knowing and the reflexive use of them is able to contribute many new insights into how we filter, both consciously and unconsciously, what is going on in the world.

The ideas to be presented here are to do with defining explicit levels within the four quadrants as a means of analysing how we view the world when engaged in ES. This is an aspect of what Wilber calls an 'integral' approach — or, in his phrase, an 'all-quadrant, all-level' (AQAL) view of the world. Defining explicit levels also allows for reflection on how the perceptual filters we all possess actually filter out large tracts of the world. With a better understanding of what we do and don't allow ourselves to see, we can take steps to consciously widen and deepen our scanning frame. Such a scheme also provides a basis for analysing both the approach to and results of scanning activities (our own and that of others). This critical analysis of scanning itself — which Slaughter has called 'meta-scanning'[4] — allows scanners to fill gaps in their personal scanning frame by using sources explicitly chosen for their focus on distinct areas of the overall framework, as well as appropriately placing the work of other scanners, in those instances when their own scanning resources are limited.

# 2 Rationale for an integral approach

In terms of the model to be described below, much of what passes for 'wide' ES and futures thinking today will be seen to be confined almost entirely to only one or two levels in one quadrant, with occasional and mostly unsystematic forays into the others. Such a 'pre-filtering' of the world is already contrary to the spirit of ES, which attempts, in a sense, to 'cover the world'. Obviously, the more we can include in a systematic way, the more likely we are to avoid blind spots in our scanning.

Recently, at a seminar to a government authority where I was presenting the idea of all-quadrant, multi-level ES, I made the observation in the previous paragraph about the limited nature of much of present-day ES. One participant commented that some people in her scanning team were already using an expanded notion of scanning which also encompassed aspects of the other quadrants. Interested by this, I asked if it was common; the answer was that it 'depends on the scanner'. As I

thought about this response in order to phrase an answer, it occurred to me that it was precisely this implicit, subjective, uncontrolled, scanner-specific aspect of scanning which I was trying to bring explicitly into the design of the scanning frame. As this thought occurred to me I said: 'It sounds to me like it happens by accident rather than by design; I would like it to happen by design rather than by accident'. And this, simply put, is the basic rationale for the integral approach being presented here.

# 3 The integral model

The philosopher and transpersonal synthesist Ken Wilber has spent the past quarter-century creating an 'integral' model of the development of human consciousness, by studying the work of hundreds of researchers, Eastern and Western, ancient and modern.[5] One of the key aspects of Wilber's integral framework stems from its syncretic nature — it represents an accessible integration and summary of the work of countless other people, so it is as much the creative, synthetic work of one man as it is a distillation of the wisdom of the ages. An exposition of the complete integral model was published recently as *Integral Psychology*[6] while the overall 'integral vision' appeared as *A Theory of Everything*.[7] These two books give the primary overview of the underlying framework and its application to numerous areas of human interests. It is important to realise however that what I attempt here is only the barest sketch of decades of work (by Wilber himself, and thousands of years' work by others synthesised by Wilber), so the reader is asked not to form any too-firm opinions about the model solely on the basis of what is written here.

## 3.1 Summary of the integral framework

In the integral model, entities such as human beings exist in a dual context — both as individuals in their own right and as part of collectives. Added to this dual context are the distinctions of an *interior* and *exterior*. Anything exterior is something which has simple location (that is, it can be pointed at) and can be objectively measured using empirical-reductionist techniques, such as my height, weight and brainwave patterns. In contrast, the interior is not objectively measurable but, rather, something experienced subjectively, like my sense of right and wrong, meaning, purpose and whether or not I'm happy with my height and weight. Thus, there emerges a four quadrant framework, summarised in Figure 1, which shows the relationships of the interior (left-hand side, LH) and exterior (right-hand side, RH) of the individual (upper half) and the collective (lower half). The four quadrants may be conceived of as four aspects of any entity, the upper half corresponding to its individuality ('agency'), the lower half to its 'communion' with the collective. In this system, every entity exists as 'agency-in-communion' — an individual embedded in a collective. The four quadrants are thus: interior-individual (UL, upper-left, intentional; the subjective realm of 'I'), exterior-individual (UR, upper-right, behavioural; the objective realm of 'it'), interior-collective (LL, lower-left, cultural; the inter-subjective realm of 'we'), and exterior-collective (LR, lower-right, social; the inter-objective realm of 'its'). The major levels within the quadrant framework are conceived of as 'matter to body to mind to soul to spirit.'

The upper right quadrant deals with the objectively measurable aspects or behaviours of single individuals, and is thereby termed *behavioural*. The lower right deals with communities or societies of these individuals and their external interactions, and so is termed *social*. Technological, economic, political and social systems are found here, so this is where much of STEEP analysis takes place.

While the right hand side is the arena of objective measurement, the left-hand side is the realm of subjective awareness. The upper-left quadrant deals with the interior of the individual; that is, with individual subjective awareness. This is where we experience our hopes, joys, dreams, cognitive capacities and intentions. It is thus termed *intentional*. When individuals exchange their beliefs and

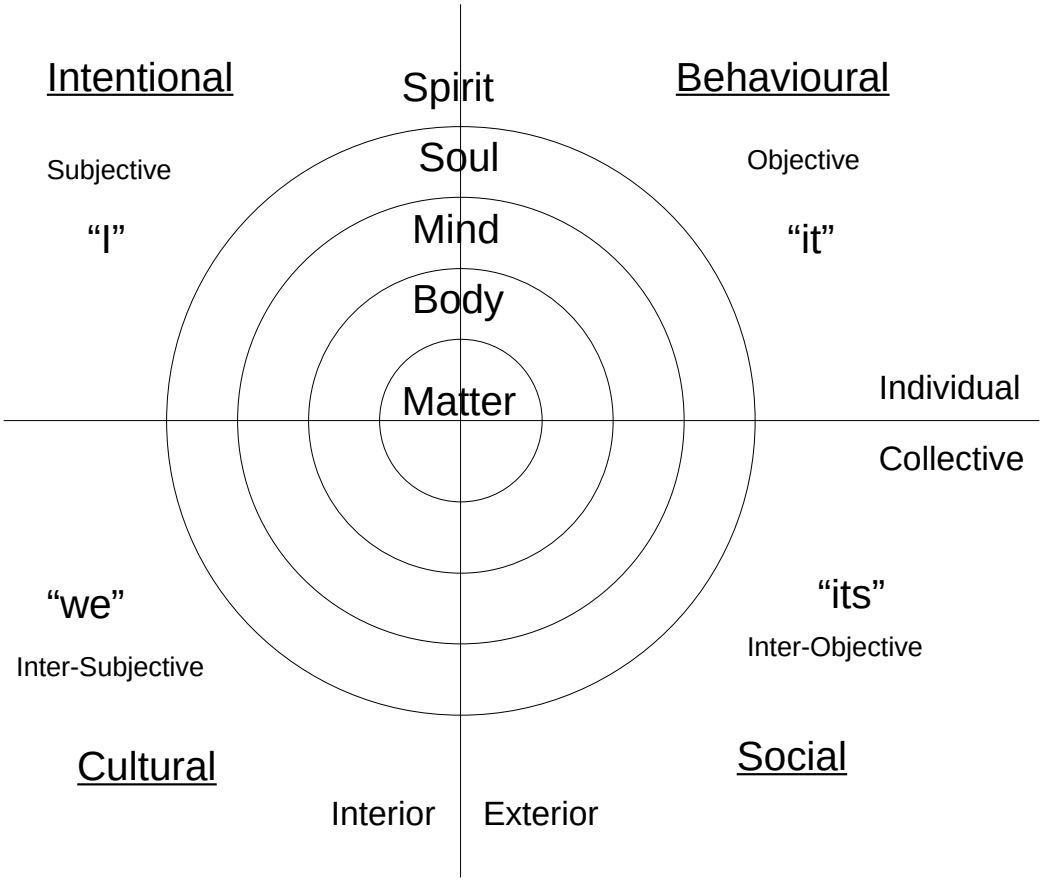


Figure 1: The Great Nest of Being in the Four Quadrants. After Wilber, K.

experiences with others, a shared awareness, worldview or culture is established, so the lower left quadrant is termed the *cultural*.

Of course, correlations exist between all the quadrants, but it is not possible to reduce any of these four separate aspects to one another without losing something in the reduction. For example, the upper-right quadrant is where my brain can be measured and analysed in terms of its neurotransmitters, brainwaves and so on (that is, what can be seen from the 'outside'), but the upper left is where I actually experience my mind (that is, what I see from the 'inside'). No amount of analysis of my *brain* will ever allow anyone to really know what it is like to be inside my *mind*. They are certainly correlated, but they cannot be reduced to each other. In order to find out what is on, and in, my mind, you need to engage me as a *subject*, not measure me as an *object*.

A more detailed map of the four quadrants, up to the level of mind, is shown in Figure 2.

Figure 2 is related to Figure 1 in the following way: the level of 'matter' in Figure 1 corresponds roughly to levels 1 to 2 of Figure 2, while the level of 'body' in Figure 1 corresponds roughly to levels 3 to 8 in Figure 2. This is most easily and clearly seen in the UR quadrant of Figure 2, where atoms and molecules are obviously the gross level of 'physical matter', while prokaryotes, eukaryotes, neuronal organisms, neural cords, reptilian brain stems and limbic systems all clearly correspond to biological organic states ('body'). The distinct level of 'mind' does not emerge until

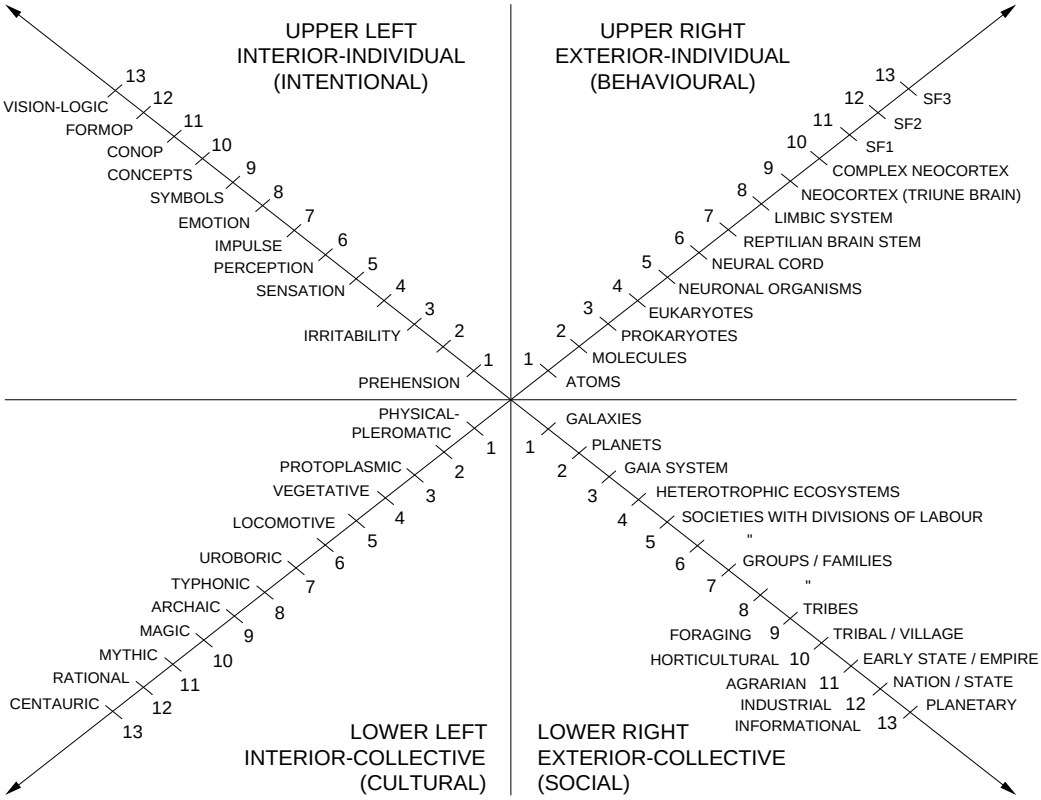


Figure 2: The Four Quadrants in detail, up to the level of 'mind'. From: Wilber, K., *An Integral Theory of Consciousness*.

level 9 of Figure 2, with the appearance of a neocortex or triune brain system. These levels in the Upper Right have correlations in the other quadrants at the same level. Thus, as an example, a limbic system in UR (level 8) correlates to an interior capacity of 'emotion' in UL (level 8), and a 'typhonic' worldview in LL (level 8). (The LL quadrant shows the 'worldview' on its main axis; this refers to 'the way the world looks' at each level of the Great Nest.) As another example, a reptilian brain stem in UR supports a 'uroboric' worldview in LL. A complex neocortex and higher structures in UR supports interior capacities for 'concepts', 'concrete operational thinking' or *conop*, and 'formal operational thinking' or *formop* in the UL, yielding 'magic', 'mythic' and 'rational' worldviews, respectively. These last three worldviews correlate, also, with 'horticultural', 'agrarian' and 'industrial' techno-economic systems, respectively, in the Lower Right quadrant.

Thus, in brief, consciousness unfolds and 'tetra-evolves' outwards from the centre simultaneously in all four quadrants, from the level of matter to body to mind (in detail in Figure 2), and thence to higher levels of consciousness (soul and spirit), which enfold, transcend and include the lower levels (absent detail in Figure 1). The integral model therefore extends beyond human mental capacities (which are designated by the sequence extending from 'symbols' to 'vision-logic'[8] in Figure 2) to several trans-mental and trans-personal structures: psychic, subtle (both 'soul'), and causal and non-dual (both 'spirit').[9] The evidence for these trans-mental and trans-personal capacities is gathered from many contemplative traditions which all show broad agreement about the overall landscape of these 'farther reaches of human nature'. Anyone who undertakes a meditative

or contemplative discipline is preparing the ground for the emergence of these potentials and the realisations they may bring. This is analogous to someone studying tensor calculus at the level of formop preparing the ground for realisations about, say, General Relativity. There is nothing particularly mysterious about it — it simply takes time and practice to become proficient, and the price of admission to the world seen from that vantage point is, at the very least, the actual undertaking of the practice itself; there is no substitute. Above all, the traditions tell us, it takes a contemplative *practice* to see the world from there — one cannot *think* one's way to trans-mental cognition!

# 4 The futures field seen from an integral perspective

I will now sketch in some of what such an 'integral perspective' might bring to the Futures field and especially the way that ES is done. The use of quadrants to broaden our view of the world is already under way[10] so I will not dwell explicitly on this here. Rather, I will focus mostly on the presence of *levels* within this quadrant framework to deepen our view.

As can be seen from Figure 2, there is a considerable amount of detail to be found in the integral framework. The diagram is essentially a summary of the work of many researchers, cross-correlated from a broad perspective, seeking 'orienting generalisations'. The sequence of basic structures in the UL quadrant (individual interior consciousness) begins at the centre and evolves outwards, with levels in this quadrant correlated with the levels in others.[11]

One interpretation of the integral model is that human evolution may be conceived of as an expression of the unfolding of the basic structures of consciousness in the UL quadrant, and that social systems and cultural forms are, in this view, collective reflections 'writ large' of the unfolding of these structures. While the general sequence of these structures has been mapped (as is clear from the partial map in the UL quadrant of Figure 2), this does *not* imply predictable or predetermined futures. The actual manifestations of the unfolding of these structures remain open, within the constraints of the structures themselves.

Thus, for example, symbols (in UL) are correlated with the existence of a neo-cortex (in UR). This structure of consciousness supports an archaic worldview (in LL), and yields associated social/political structures of families/tribes (in LR) with a techno-economic system of foraging. Or, to take another more familiar example, the presently emerging informational techno-economic system (LR) probably couldn't have arisen before the structure formop (UL) became widespread in individuals and had stabilised as the rational worldview in a large part of the collective (LL).

The basic structures (or deep structures, as Wilber sometimes has it) express *potentials*, not *givens*.[12] Therefore, in this view, the overall shape of the future unfolds as a particular expression of latent deep potentials which allow for many possible futures to emerge 'on top'. This means that the integral model may also be viewed as a model of macrohistory — a very broad overall shape is roughly known, given by the basic (deep) structures, but the details (the surface structures) remain to be unfolded and filled in.[13] The details remain unspecified in advance because it remains up to us to *create* these specific details. As a concrete example of this, consider the emergence in consciousness of the ability to use language — the actual languages created as surface structures of this deep structure are multitude. There is therefore no conflict with the futures programme — we are still the artists of our own destiny. The integral model simply shows us the edges and extent of the canvas upon which we are creating it. This view of macrohistory can easily encompass possible, plausible, probable and preferable futures. The vexed question of preferred futures (vexed because 'what' is preferred depends on 'who' is doing the preferring, and the associated issues this raises) may be understood much more clearly within the context of the value systems described by the interior (ie. left hand) aspects of the model, something that rational-analytic approaches to futures cannot adequately deal with.

# 5 Spiral Dynamics: a more detailed framework for the 'mind'

I now want to consider the way that human minds filter their view of the world. To this end, I want to expand the 'mind' level of the integral framework using a system that deals specifically and in detail with minds.[14] This more detailed and specialised model, called Spiral Dynamics, is one of about a hundred systems that the integral framework incorporates into its broader meta perspective of 'orienting generalisations'. It has the great utility of being simple enough to apply fairly quickly, without being a caricature of, or too simplistic towards, the complexities of human consciousness.

Spiral Dynamics is based on empirical studies of human thinking and value systems, undertaken originally by the American psychologist Clare W. Graves. The possibility of applying Graves' work to the futures field was suggested by him as early as 1974.[15] This work was taken up Don Beck and Chris Cowan, who reworked and extended it into its present form as Spiral Dynamics (SD).[16] SD describes some of the organising principles and landmark states of the human mind as it develops, including motivational factors, views of the world and, most importantly for our purposes here, *ways of thinking and perceiving*. Most significantly, SD is a system for understanding *how* people think about things (ie. the *process*), not simply the *things* they think about (ie. the *content*). Beck and Cowan commonly express this as 'describing the containers that *shape* worldviews, not the contents that *fill* them (beliefs, values, etc)'.[17] Again, I recommend the reader consult the original sources before forming a firm opinion of this framework.

Briefly, SD models the evolution of human cognitive capacities in terms of a spiralling double-helix. On one side of the double-helix are the 'life conditions' — external environmental pressures and forces which the individual experiences. These are paired on the other side of the helix with the cognitive capacities within the human brain/mind system that are appropriately 'matched' to these life conditions, and which provide an 'adequate' coping mechanism. Thus, the helical model pairs up 'conditions without' with corresponding 'capacities within'. The combinations of life conditions and cognitive capacities are usually represented by colour codes which symbolise their interaction (Beige, Purple, Red, etc.; see below). The use of colour codes can be a bit off-putting at first, but after a little while the terminology becomes simple, powerful and second-nature. They are just *labels*, after all; it is what they *describe* which is important. The great utility of the colour codes is that they short-circuit the common tendency of some people to play 'better-than/worse-than' ranking games with any sort of system which looks hierarchical. It is difficult to say that Red is better than Purple, for example. In essence, the thinking structures of SD are, both figuratively and literally, filters on the world — ways of knowing — and that is precisely their utility here.

The SD structures have nothing whatsoever to do with levels of intelligence, so SD is not a system for ranking intellects. Rather, they describe emergent thinking systems, which tend to become more expansive and able to perceive a wider and broader 'worldspace' the later they are in the sequence. The earlier systems are necessary in order for the later systems to emerge, and cannot be skipped. They continue to remain present and available to us should the need arise to activate them. We all pass through them in our growth and development, although the life conditions (and possibly the neurophysiology) of some people will be such that the later structures might not be activated.

So far, eight core thinking systems have been identified, with others expected to follow as life conditions themselves evolve. The sequence at present is as follows: beige, purple, red, blue, orange, green, yellow and turquoise. The colours have no significance whatsoever, except insofar as they are chosen as mnemonic devices (see below). In real life, of course, there are no pure states, but rather combinations of them. We need to keep in mind always that these idealised states are not found in isolation and that real people have different admixtures of the various systems. A detailed explanation of SD now follows.

## 5.1 Spiral Dynamics structures in detail

Each SD structure transposes itself into: a world view; a value system; a level of psychological existence; a belief structure; an organising principle; a way of thinking; and a mode of living.[18] Here I will attempt to give a flavour for each of the SD structures so that the reader might get an intuitive grasp of this model. As before, the value to us of this model is the way it allows us to understand the perceptual filters which may be operating within an individual consciousness, which obviously has implications for the way ES is carried out and reported.[19]

1. Beige—*archaic-instinctual*. The basic theme is 'do what you must do just to stay alive.' Popular name: *Survival Sense*. The level of basic survival, food, warmth, sex, water and safety. The worldview of Beige is summed up as: 'the world is a state of nature.' A distinct 'self' is barely awakened. Motivation is largely physiological. The characteristic 'energy' of this level is 'survivalistic'—thinking is automatic, processes are instinctive (*ie* using habits and instincts to survive). The social structures tend to be loose bands. The characteristic mode of living is: behave instinctively much like other animals according to biological urges. The colour code derives from the colour of 'savannah grasslands.' The image/colour is meant as a mnemonic device for the main characteristics of the thinking structure. Picture in your mind survival bands roaming across the savannah. . . .

2. Purple—*magical-animistic*. Basic theme: 'keep the spirits happy and the tribe's nest warm and safe.' Popular Name: *Kin Spirits*. Characteristic energy: magical. The world is mysterious and frightening, full of spirits which must be appeased. The thinking involves animism and magic, the processes are circular (*e.g.* rituals which must be repeated at interval). Structures are tribal—usually ethnic tribes. Motivation is to achieve an assurance of safety. Spirits swarm the earth leaving blessings and spells which determine events. Mode of living is therefore: placate spirits and join together for safety and to honour tradition and ancestors. Colour derives from the royal colour of tribal chiefs and emperors.

3. Red—*impulsive-egotistical*. Basic theme: 'be what you are and do what you want, regardless.' Popular name: *Power Gods*. Characteristic energy: impulsive. The world is tough and hard like a jungle full of threats and predators; the tough survive, the weak serve or die. First emergence of a self distinct from the tribe. Motivation is the survival of this self, no matter what. Thinking is egocentric ('I am the centre of the universe'); others do not figure, so processes tend to be exploitative of others. Structures are empires—feudal lords control territory or people; there is a Big Boss and a Chosen Few underlings. Mode of living is: fight to survive and dominate others without guilt and to avoid shame. Colour code derives from hot blooded emotions and the 'fire in the eyes.'

4. Blue—*mythic-purposeful*. Basic theme: 'life has meaning, direction and purpose with predetermined outcomes.' Popular name: *Truth Force*. Characteristic energy: purposeful. The world is divinely controlled and guided by a Higher Authority or Order with a distinct right and wrong; those who are righteous are rewarded, those not are punished, possibly forever. Guilt reigns. Motivation is to achieve everlasting peace of mind and security. Thinking tends to be absolutistic, the processes authoritarian. There is one and only one right way to think or do anything. Structures are pyramidal authority structures—classic hierarchies—basis of ancient nations. Mode of living is to obey rightful higher authority and find meaning and purpose in sacrificing individual desires for later reward. Colour code derives from the sky (the Heavens) and/or the True Blue believer.

5. Orange—*rationalist-achievist*. Basic theme: 'act in your own self-interest by playing the game to win.' Popular name: *Strive Drive*. Characteristic energy: achievist. The world is a

rational, well-oiled machine full of viable options and plenty of opportunities and alternatives for success and prosperity. Progress is made by (rationally and scientifically) learning nature's secrets and seeking the best solution. Basis of the scientific-industrial worldview. Societies prosper through strategy, technology and competitiveness. Self-reliant people deserve their success. Highly achievement oriented, especially towards materialistic gains. Motivation is independence; thinking is multiplistic, processes are strategic. Structures tend to be delegative, yielding strategic enterprises—basis of corporate states. Mode of living is to test options for greater autonomy and compete for success and influence. Colour code derives from the radiating energy of steel in an industrial furnace.

6. Green—*pluralistic-communitarian*. Basic theme: 'seek peace within the inner self and explore, with others, the caring dimensions of community.' Popular name: *Human Bond*. Characteristic energy: communitarian. The world is the habitat for all humanity to share together and find affiliation, through consensus and reconciliation. The human spirit must be freed from greed, dogma and divisiveness. The Earth's resources should be spread equally among all. Motivation is affiliation; thinking is relativistic; structures are egalitarian and heterarchical, yielding social networks; processes are consensual. Basis of value communities, and a distaste for cold rationality and hierarchy. Mode of living is to join communities to experience harmony, love, and mutual growth for self and others. Colour code derives from green politics, forests and ecological awareness.

7. Yellow—*systemic-integrative*. Basic theme: 'live fully and responsibly as what you are, and learn to "become".' Popular name: *Flex Flow* (Flexible; Flowing). Characteristic energy: integrative. The world is a chaotic organism where change is the norm and uncertainty an acceptable state of being; life is a kaleidoscope of natural systems and forms—there are natural 'flows.' Flexibility, spontaneity, and functionality have highest priority. Knowledge and competency should supersede rank, power and status. The magnificence of existence is valued over material possessions. Motivation is existential—to learn and experience the wonder of life. Thinking is systemic; processes are integrative; structures are interactive (systemic processes open to negotiation). Conflict and disagreement are natural and necessary for revitalisation. This is the first thinking structure which can integrate all the preceding structures and their worldviews into a 'big-picture' view. Mode of living is to learn and discover what it is be human without doing harm to others or the environment. Colour code derives from solar power and alternative technologies.

8. Turquoise—*globalist-holistic*. Basic theme: 'experience the wholeness of existence through body, mind and spirit.' Popular name: *Whole View*. Characteristic energy: holistic. The world is a single, dynamic organism with its own collective mind—a delicately balanced system of interlocking forces in jeopardy at humanity's hands. Everything connects to everything else in ecological alignments. There is universal order in a living, conscious fashion. Feeling is united with knowing. Turquoise thinking sees and uses the entire Spiral, sees multiple levels of interactions, and detects harmonics and undertones. Holistic, intuitive thinking and cooperative action are to be expected. Self is both distinct and a blended part of a larger, compassionate whole. Motivation is experiential; thinking is holistic; processes are ecological; structures are global (holistic organisms). Mode of living is, as above, to experience the wholeness of existence, in a holistic way, through body, mind and spirit, with others. Colour code derives from the colour of the oceans and Earth when viewed from space.

Every SD thinking system has an Entering phase, a Nodal (or peak) phase and an Exiting phase. When a distinction needs to be made between the phases, the Nodal phase is often designated with

all capital letters, hence ORANGE, for example. The entering phase of ORANGE would be designated blue/ORANGE, and the exiting phase would be ORANGE/green. Thus, each transition zone between Nodal phases has two sub-phases — the exiting phase of the prior structure, and the entering phase of the subsequent structure. In the BLUE to ORANGE zone the transitional sub-phases would be designated BLUE/orange and blue/ORANGE, for example. These transition zones contain quite some degree of turbulence. Most of the really interesting interactions take place in these transition zones, where the thinking systems are vying for control of the 'mindspace'. I mention them to highlight the degree of complexity this model can handle within such a relatively simple framework. For the purposes of notational simplicity, I will use lower case letters to designate the structures unless there is an explicit need to distinguish non-nodal sub-phases. Hence, I will use Blue to designate the pure state, but BLUE/orange to indicate the exiting phase, as per the notational convention above.

It is important to stress that the SD model is not a typology for categorising people. The phrase to repeat always when using SD is 'systems *in*, **not** types *of*, people'. It is not considered a skilful use of the model to assume or believe that a person is located 'at' a particular level of the Spiral. Beck and Cowan often caution SD practitioners that 'people are not *on* the Spiral; the Spiral is *in* people'. In other words, everyone has a spiral 'stack' which is the set of different admixtures and strengths of the various systems which have arisen during our growth and development in life. Different areas of our lives could be dominated by different parts of the stack. Depending on the life conditions, different thinking systems may 'light up' while others 'dim down'. In a typical day we might activate any or all of the capacities available to us, depending on the conditions we encounter in the world. For example, tribal Purple is often seen active in the crowd at sporting events; materialist-achievist Orange is readily visible in some cut-throat TV game shows, and impulsive-egotistical Red is too often visible on the freeway!

## 5.2 Spiral Dynamics and worldviews

There are some correspondences that I want to mention explicitly, and which are important when they inform worldviews.

Blue corresponds to the late mythic worldview; its absolutist and authoritarian thinking is the home of many forms of fundamentalism — one and only one right way of thinking about or doing anything. The actual *content* of the fundamentalism is variable (as with different religions, for example), but the thinking *process* itself is absolutistic (The Truth has come from the One True Higher Authority). In its healthy form, it gives rise to a profound sense of order and confidence in a higher purpose — hence the worldview of mythic order.

Orange corresponds to formal operational thinking (formop) in the UL of Figure 2 and to a rational (ie. mental) worldview in the LL. In its unhealthy form it is highly reductionistic, tending to reduce everything to material (or materialistic) interactions. One consequent associated worldview is thus scientific materialism. One can discern the presence of Blue-Orange transitional structures in the worldview of economic rationalism — there is only one right way to do things, namely economically (which focuses on materialistic interchanges undertaken rationally by Adam Smith's rational economic man). In its healthy form Orange sees many possibilities and pragmatically gets the job done.

Beyond formop is the structure labelled as 'vision-logic'. This is also known as 'creative reason', 'network logic', 'integral-aperspectival thinking' and a variety of other names; the point is that it is a well-documented cognitive capacity which goes beyond the confines of purely rational formal operational thinking. It is able to hold multiple perspectives *simultaneously*, and reconcile differences and paradox.

The Green structure is a transition from Orange (rational, formop) to early vision-logic. It begins to see multiple perspectives and is distinctly relativistic in outlook; this worldview is sometimes known as 'pluralistic relativism'. It is where many elements of postmodernism emerge for the first

time. In its unhealthy form, it is also where excessive political correctness rears its cosmetically-challenged head! Yellow and Turquoise correspond to middle and late vision-logic. Yellow, as was mentioned above, is often referred to as being systemic in outlook, and Turquoise as holistic. The worldview associated with the presence of both active Yellow and Turquoise is sometimes known as 'holistic integralism'.

Of course, SD also has room for more structures beyond Turquoise; the first such is designated Coral (the colour code derives from 'life deep within the seas'). It is, after all, an open-ended, descriptive, evidence-based model of the emergence of new thinking systems. Based as it is on empirical evidence, and given the current relative rarity of individuals with active Yellow and Turquoise (in their book, Beck and Cowan suggest 1% for Yellow, and 0.1% for Turquoise), the precise nature of subsequent structures is not yet clear in SD. On the other hand, the Wilber model is very clear about what sort of structures follow vision-logic. They are the psychic, subtle, causal and non-dual structures of consciousness. Therefore, the Coral structure might end up being an even more integrated sub-level of late vision-logic; or, it might be at the psychic level itself; or possibly it might be an early transition to it (compare Green and vision-logic). At this point, its precise nature is unclear, so I do not include it in the scanning framework to be described below.

SD is founded upon the observation that different people possess different combinations of active thinking and value systems and that, therefore, their worldviews will differ. Futurists are not exempt from this observation, of course, so their approaches to futures work will also differ accordingly. This has implications for understanding how various traditions of futures work have arisen.

For example, the rational empirical-analytical tradition of futures work is seen, in this model, to flow from the presence of an Orange influence (rational, scientific approach, an 'objective' focus on the RH realms). The critical-interpretive tradition has more of a Green influence (deconstruction of worldviews, renegotiation of meaning, social construction of reality, a focus on the LH realms). The activist tradition has some elements of Green and some of Yellow; activists against industrialism (Green), for example; or activists for new technologies which are cleaner (Yellow), for example (there are obviously very many other examples, and these are clearly very broad-brush generalisations being made here). There is undoubtedly a great deal which could be revealed by a Spiral analysis of the futures field. Owing to space considerations, I can only make this scant mention here.

Don Beck has recently adopted the four quadrants into his work with SD, and is now using what he calls a '4Q/8L' approach (eight SD levels in the four Wilber quadrants) which is proving to be quite effective in a variety of situations, contexts and countries. Wilber has described it in *A Theory of Everything*. It is shown here in Figure 3. The 4Q/8L framework is specifically geared to describe human thinking systems (ie. minds), and their correlates in the other quadrants. Thus, the correspondence between the SD thinking systems in the UL and worldviews in the LL is clearly visible in Figure 3, as are the social systems and techno-economic modes of production in the LR.[20]

# 6 Choosing a system of levels within the four quadrants

The complete Wilber integral framework deals with the entire 'Great Nest of Being' — matter to body to mind to soul to spirit in the four quadrants. The SD framework focuses on minds in particular in the UL quadrant (although Beck's recent work has sought to extend this to all four). Each has distinct advantages for a more complete or integral view of the world as a basis for environmental scanning. I will therefore use a hybrid form of both frameworks to develop the basis of an expanded scanning frame for ES. I originally used 4Q/8L as a basis for my own environmental scanning, but I increasingly found it necessary conceptually to add levels at the lower and upper ends of the map, hence my move away from 8L to the hybrid framework I am about to present.

For reasons of simplicity, I will condense levels 1 to 8 of Figure 2 back into just the two broad

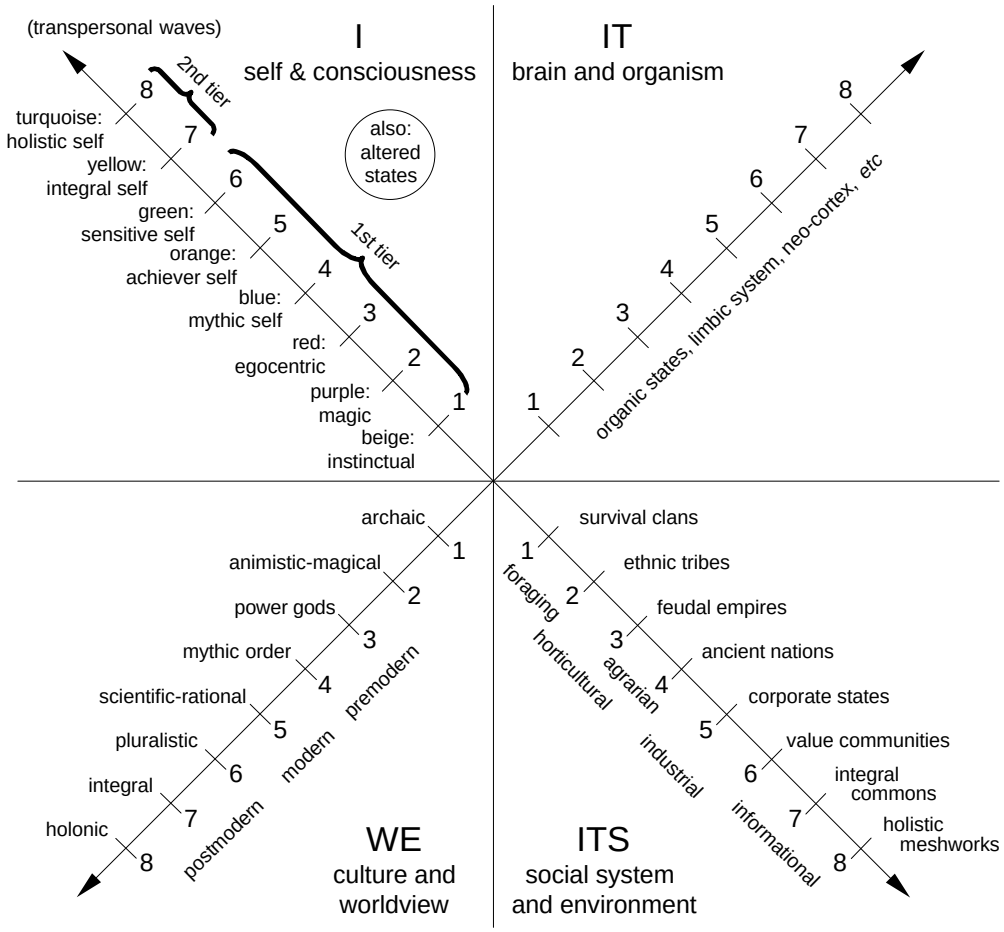


Figure 3: The 4Q/8L framework of Don Beck. See Wilber, K., *A Theory of Everything*, p43.

levels of Figure 1: Physical (matter) and Biological (body). In other words, levels 1 and 2 of Figure 2 correspond basically to the physical level, and levels 3 to 8 correspond essentially to the biological level.[21] In keeping with the notation of SD, I will designate the nodal form of these levels, where appropriate, as PHYS and BIOL.

Added to these (for mind) are the eight major SD levels: Beige, Purple, Red, Blue, Orange, Green, Yellow, and Turquoise.

We are now faced with the choice of whether to treat the further levels of soul and spirit in Figure 1 as four structures (psychic, subtle, causal, non-dual), two structures (soul, spirit) or just one (such as transpersonal).[22] Any final choice will depend on the biases of the designer of the frame, of course. If one views the world predominantly through a rational formop Orange filter, for example, such talk of soul and spirit is essentially nonsense — they cannot be measured scientifically or rationally in any way that is acceptable to Orange, so to Orange they are therefore not real. Other filters will have correspondingly different views. The point to remember is, though, that this framework attempts to consciously force us to acknowledge and look beyond the partiality of our own filters and worldviews; something which may not necessarily win it friends!

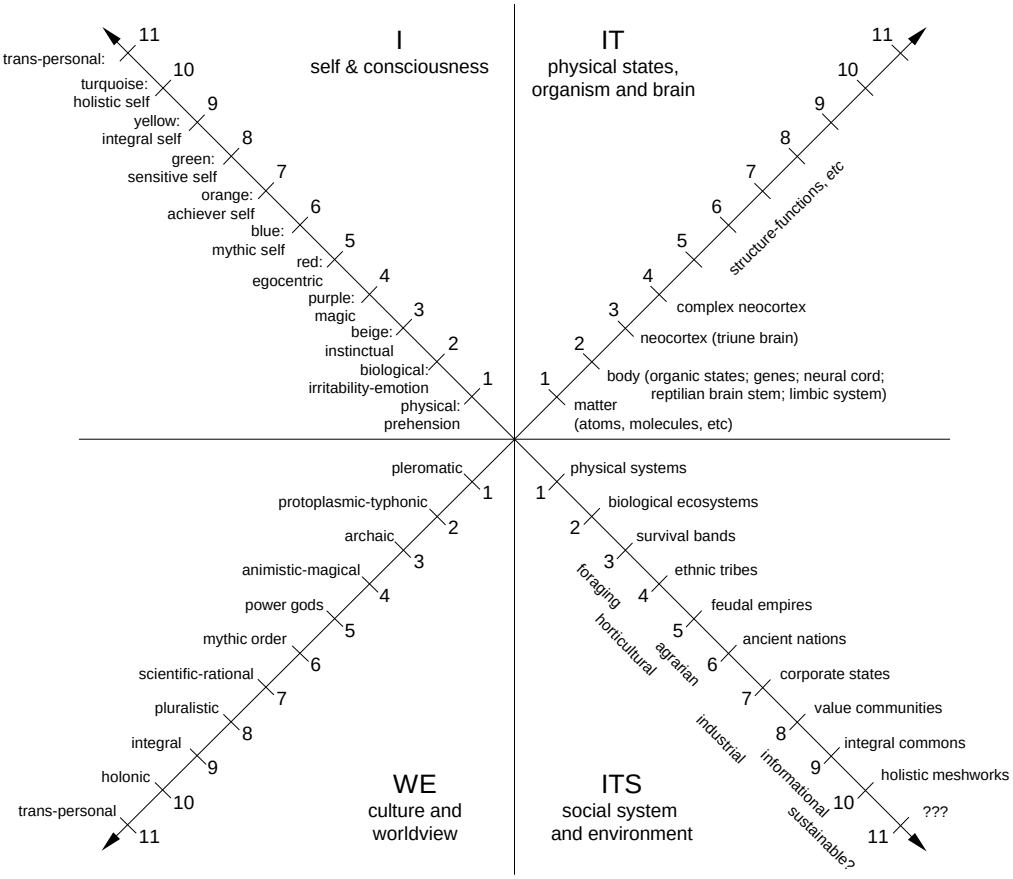


Figure 4: The 4Q11L scanning framework. Adapted from the 4Q/8L model of Beck and Four Quadrants of Wilber.

For my purposes here, I will use a single explicit scanning level, 'transpersonal' which has nodal designator 'TRANSPERSONAL' or simply 'TRANSP' for short; it stems from the presence of 'transpersonal waves' in the UL quadrant of Figure 3. The explicit inclusion of this as a level clearly requires, then, a willingness to move beyond mental and personal perspectives, which will be quite challenging for some people.

Thus, the basic structures of the scanning framework, in this particular instance, comprise:

Phys, Biol, Beige, Purple, Red, Blue, Orange, Green, Yellow, Turquoise and Transp levels within each of the four quadrants. This yields $4 \times 11 = 44$ primary scanning sectors for this version of the frame (not including transitional sub-phases between nodal phases). In your design you might choose other forms of the frame; expanding the Physical and Biological, for example, or collapsing them into one (physical-biological); treating soul and spirit as two or four levels, or the level of mind with a different system of filters, etc.

> The key point is, though, that none of the five major levels of 'matter to body to mind to soul to spirit' should be excluded *a priori* from the frame, and that *both* interior and exterior dimensions should be included *by design* rather than *by accident*. Such a

> requirement would seem to be a minimum basis for attempting to 'cover the world' in any fashion which might claim to be comprehensive.

The resulting scanning framework (which we might, acknowledging Beck, call '4Q/11L' — four quadrants, eleven levels) is shown in Figure 4, which incorporates the main elements from both Wilber's Four Quadrants framework (Figure 2) as well as Beck's 4Q/8L framework (Figure 3).

Having chosen the underpinning framework to use, the basic idea for an integral approach to ES is deceptively simple to formulate: choose scanning sources which cover all sectors — that is, all levels in all quadrants. However, there is more to this than meets the (filtering) eye!

# 7 The notion of cross-level analysis

There are actually *two* key aspects of scanning which need to be analysed: the level *from which* the scanning is being done, and the level *at which* it is being directed. Wilber has used this notion of 'cross-level analysis' to classify so-called peak spiritual experiences and worldviews,[23] and the method can easily be used for classifying any view of the world from any perspective. In other words, a cross-level analysis distinguishes both the (epistemological) perceptual filters of the *subject* doing the viewing as well as the (ontological) level of existence of the *object* being viewed.

For example. I recognise now that in my earlier career as a theoretical physicist,[24] I was part of a scientific culture engaged in an examination of the Physical level of reality (as object), coming mostly from a rational worldview (as subject). That is, *from* Orange *aimed at* Phys in the two right-hand quadrants. Of course, individual physicists may view the world through different perceptual filters than scientific-rational Orange, but to *communicate* the results of their work, it must almost certainly be phrased in the (rational) language of physics (usually higher mathematics, which is as formop as can be!) or else it will not be understood, or quite possibly not even listened to.

This last observation illustrates a key point — the community of peers with whom we interchange symbolic information is, to a large degree, also a filter on what we regard as 'real enough' to report on and on how we report it (this is an example of the influence of the prevailing collective LL worldview on the UL individual consciousness — the so-called 'situatedness' of the perceiving subject). As futurists, of course, we are accustomed to being regarded as a little bit 'out there'. The fact that some futurists might regard the scanning framework presented here as a bit 'out there' (as I have already found) is therefore somewhat ironic. It indicates that we are often able to colonise 'conceptual landscapes' on the far side of the 'conceptual mountains' beyond which others are uncomfortable, yet still be ourselves uncomfortable about looking beyond the next conceptual mole-hill.

# 8 A pause for breath — reality bites

The preceding section indicates in a general way what many of us have all-too-often experienced when attempting in real life to report on the results of our scanning — some people just don't 'get' what we are talking about, or why we consider it potentially important. From the perspective of the model presented here, we can see that it may be because *their* perceptual filters are filtering out the information we are trying to transmit through *ours*. In any communication of information through filters, there is *always* distortion, at both ends of the interaction. For example, a hard-nosed business person with very strong active Orange and no Green present ('show me the money and damn the environment!') would very likely regard information transmitted through a strong Green filter ('forests are not only beautiful but vital to our physical and spiritual life') as soft-headed, nonsensical 'tree-hugger' gibberish. Each side will be frustrated with the other. Both sides are unable to see, quite literally, what the other is talking about. There is a fundamental disconnect between their perspectives; not because 'the other one' is stupid, obnoxious or just being contrary, but simply

because they inhabit wholly different conceptual worlds. They *literally* don't see the same world, owing to the filtering processes going on in each individual consciousness.

This has led me to begin using a metaphor in workshops for how to get the message across: 'tune your transmitter to the frequency of the receiver' (accompanied, of course, by cupped-hand gesticulations representing each side of the transmission!). I have found, in this regard, that an understanding of the Spiral structures allows me to tune my transmitter more carefully to the listener; trying to make sure we are 'on the same wavelength' as it were. If I can discern which filters are active in my audience, I stand a better chance of phrasing the message in ways they are *able* to hear. Whether they are *willing* to hear it is, of course, another matter entirely. The best that I can do is to make sure that what I am saying is phrased in such a way (or on such a wavelength) that it *can* at least be heard.

# 9 Cross-level analysis — a notation

Here I will describe a short-hand notation for showing subject-object locations in a cross-level analysis. Having once been a physicist, I am always looking for ways to encapsulate a lot of information into a few well-chosen symbols!

The generic term is of the form:

$$\text{Scanner} \mid \text{Filtering Structures} \rightarrow \text{Quadrants(Levels)}.$$

The term to the left of the arrow represents the scanner or subject, separated by a vertical bar ('|') from the thinking structures or filter(s) of the subject. The term to the right of the arrow shows the levels within the quadrants of the object being viewed. For purposes of simplicity, when we are not referring to a particular *named* scanner or source, a 'generic' unspecified subject may be implied by the designator 'S' (for 'source' or 'scanner' or 'subject'), thus:

$$\text{S} \mid \text{Filters} \rightarrow \text{Quadrants(Levels)}.$$

This is useful for describing generic worldviews. For example, the earlier description of the rational scientific (Orange) culture in which I was working in my previous career as a physicist might be rendered:

$$\text{S} \mid \text{Orange} \rightarrow \text{RH(Phys)} \tag{1}$$

This is read as an 'Orange-filtered view of the Physical level of the right-hand quadrants'. Or, as 'the Physical level of the right-hand quadrants seen/viewed through an Orange filter'. I do not specify exact terms from the 4Q/11L diagram (such as 'matter' and 'physical systems') in the parentheses, because I want to keep the notation general and extensible to other aspects of those quadrants at those levels (see later).

If no specific level is indicated, or if the whole quadrant is implied, then the 'Levels' parenthesis is left empty; thus:

$$\text{S} \mid \text{Filters} \rightarrow \text{UR()}.$$

is a view of the UR quadrant without specifying levels.

If we are not specifying the 'Filters' being used by the scanner or subject, then the notation takes the abbreviated form:

$$\text{S} \mid \rightarrow \text{UR()}.$$

Please note, however, that the vertical bar should *never* be left out of this notation. The reason is so that the notation always reminds us that any scanning takes place through some form of subjective filter, even if none is explicitly noted. This serves as a constant reminder that *all* views of the world are filtered, even 'objective' ones!

## 9.1 Some examples of cross-level analysis

Here I present some 'back of the envelope' jottings of how I perceive various forms of futures-related work in terms of a cross-level analysis. These are meant to be illustrative rather than definitive.

Obviously, since my perceptual filters will differ from yours, we might not agree on some of these assessments. That is entirely to be expected. In a futures-work situation where we were working together collaboratively, we would have established a form of this model for the scanning framework up-front as a basis for our discussion of sources, and left open the option of challenging our individual interpretations. Thus, you would tell me that you don't agree with an assessment, and we would together look for why this is the case. We would therefore, as a result, have consciously surfaced some of our individual perceptual filters as part of any on-going dialogue we may have about scanning sources and choosing them as part of our scanning frames. This conscious reflection on our individual biases and filters can only help to clarify which aspects of the world we prefer to see and which we do not. If we are serious about 'covering the world' with our scanning, this set of biases and preferences needs to be consciously acknowledged as such, and steps taken to adjust our scanning frames to take these into account.

Some examples of cross-level analysis are:

- Human Genome Project:
$$\text{S} \mid \text{Orange} \rightarrow \text{UR(Biol)} \tag{2}$$
- Swinburne University of Technology Brain Sciences Institute (their focus is mainly on the complex neo-cortex and higher structures):
$$\text{SUT BSI} \mid \text{Orange} \rightarrow \text{UR(Purple+)}$$
- Environmental issues tend to be:
$$\text{S} \mid \text{Green} \rightarrow \text{LR(Biol)}$$
- Criticism of the industrial worldview is usually:
$$\text{S} \mid \text{Green} \rightarrow \text{LL(Orange)}$$
- Western medicine is generally:
$$\text{S} \mid \text{Orange} \rightarrow \text{UR(Phys/BIOL)}$$
- OECD futures work tends to be:
$$\text{OECD} \mid \text{Blue-Orange} \rightarrow \text{LR()}$$
- Rocky Mountain Institute:
$$\text{RMI} \mid \text{Yellow} \rightarrow \text{LR()}$$
- Worldwatch Institute:
$$\text{WI} \mid \text{Green} \rightarrow \text{LR()}$$
- Journal of Transpersonal Psychology:
$$\text{JTP} \mid \text{Orange-Green} \rightarrow \text{UL(Green-Transp)}$$

- Wilber Integral Model:

$$\text{S} \mid \text{Yellow-Turquoise} \rightarrow \text{4Q(Phys-Transp)}.$$

The earlier cross-level analysis of the discipline of physics, shown in expression (1) on Page 16, as well as the cross-level analysis of the Human Genome Project, shown in expression (2) on Page 17, were partly the reason I found it conceptually necessary to extend Beck's 4Q/8L framework to encompass explicit levels 'below' Beige. I felt that 'Beige' was inappropriate as a level-descriptor for either of these, and I found myself forced to write 'sub-Beige' in the parentheses. It was then just a short step to introducing Phys and Biol.

### 9.2 An applied use of cross-level analysis — 'meta-scanning'

I use cross-level analysis in my own scanning work (and I've now begun using it in the design of a scanning frame for my organisation) because it is simply not possible for me to single-handedly cover as much of the world as I would like. Therefore, I now 'meta-scan' (to use Slaughter's term) what other scanners have done, using cross-level analysis as described above. That is to say, I have begun analysing the scanning of others in order to determine their particular strengths and interests, and I am using these insights in the construction of a more complete scanning frame, drawing upon their expertise by placing them appropriately into a 4Q/$n$L framework (where $n$ depends on the exact chosen form and emphasis). I distinguish between primary sources (producers of information to scan); secondary sources (other scanners); tertiary sources (scanners of other scanners), and so on. This allows me to cover the scanning sectors of the framework map with a more informed and judicious selection of primary, secondary, tertiary, etc, sources.

## 10 All quadrants, all levels . . . and all lines

Finally, it is useful to make a few comments about breadth in this scanning framework. Wilber often speaks of an integral approach as consisting, in part, of 'All Quadrants, All Levels, All Lines' (as well as a few other things).[25] Here I have described one possible form of 'All Quadrants, All Levels.' In the context of present-day futures work (focused as it is mostly in the lower-right quadrant), 'lines' would correspond to the horizontal 'breadth' typologies of the five familiar STEEP factors — Social, Technological, Economic, Environmental and Political. The notion of treating these factors as different *lines* of development is shown in schematic (not literal) form in Figure 5.

As a concrete example, consider the lower-right quadrant of Figure 4. Figure 4 does *not* show separate lines as such, for reasons of simplicity in the diagram, but simply shows, by way of summary, the major political and techno-economic forms at the various levels along a single main axis. This quadrant is more correctly regarded as having many different lines of development, each with different structures at the different levels. The axis shown in Figure 4 shows the development of organisational/political structures through the various levels, including survival bands (Beige), ethnic tribes (Purple), feudal empires (Red), ancient nations (Blue), corporate states (Orange) and value communities (Green), as well as the development of the very familiar sequence (to futurists) of the techno-economic modes of production: hunter-gathering (foraging), agriculture (horticultural and agrarian), industrial, and informational (I have also tentatively added 'sustainable?' as a 'future' mode). Clearly, *any* chosen line of development ('STEEP factor') will have a different form at each of the different levels, so the choice of a scanning line (factor) implies an evolving *sequence* of development along that line. Scanning a STEEP factor then requires us to ask the further question 'what *level* of this line of development am I scanning?' In the 'technology line' of development, for example, Beige-level technology includes simple hand-made and -held implements, such as stone

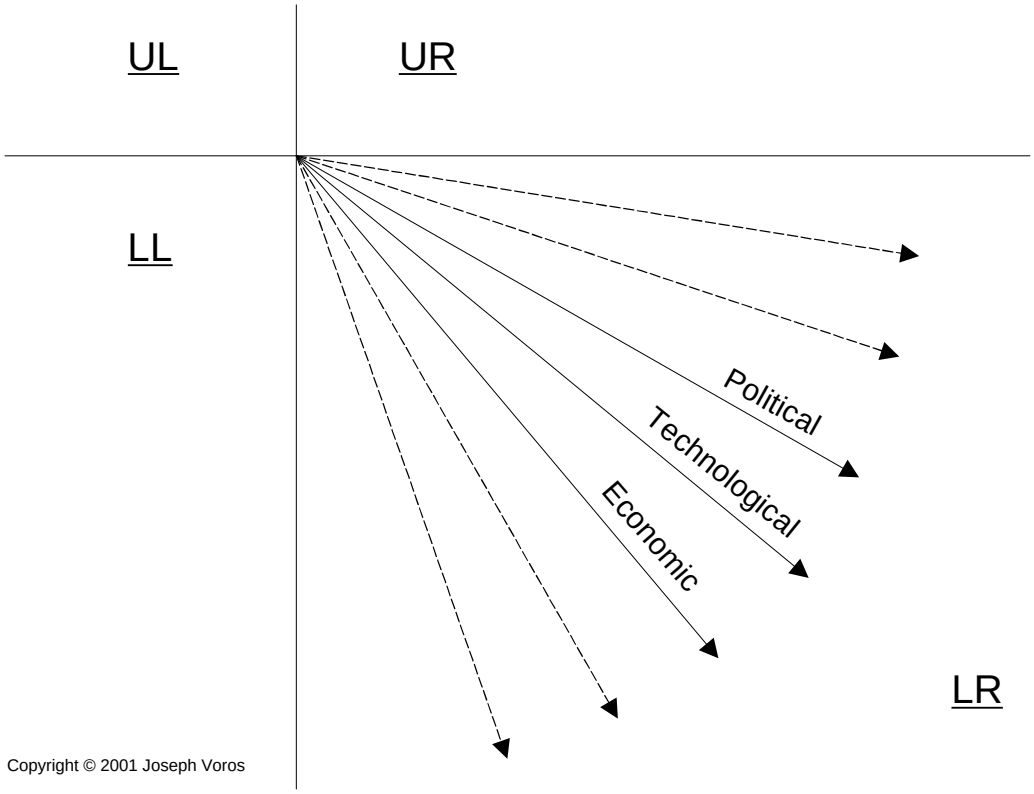


Figure 5: Schematic view of multiple ‘lines’ of development in the Lower Right quadrant.

axes, flint knives, arrowheads, etc, while Orange-level technology includes the computer on which I am writing this paper. Thus, when I meta-scan my technology scanning sources to see how broadly and deeply I am scanning, I might discover that I am actually *only* scanning sources dealing with Orange-level technology. This discovery would reveal that there are gaps in my scanning of technology sources, such as would be filled by sources focusing on levels other than the Orange level. I might then decide to use primary, secondary, tertiary or higher-type sources to fill these gaps. Naturally, the ideas in this discussion could be extended into other and different ‘lines’ of development in the inter-objective domain of the lower-right quadrant beyond the five familiar STEEP factors, as is implied in Figure 5.

Once we recognise that each of the STEEP factors in the lower right can be conceived of as a *type* of development line (or perhaps as a *cluster* of closely-related lines), it is but a small step to considering the extension of this idea into other factors, not only in the lower-right quadrant, but in *all* other quadrants. In other words, in the remaining quadrants, different lines of development could be used to explicitly create more breadth in the scanning frame.

In the lower-left, for example, aspects of culture such as ethics, values, morals, philosophy, lifestyle choices, academia and learning, religion, language, etc might form a basis for breadth. In the upper right, lines might include body, medicine, health (physical and mental, the latter from the perspective of the structural health of the brain), and so on. In the upper left, lines might include spirituality (as an individual experience as opposed to organised LL religion), mind/consciousness, self-identity, mental health (from the perspective of a ‘felt sense’ of a ‘healthy mind’), and so on.

I am not suggesting that this list of factors is by any means definitive. What I am suggesting is that the familiar notion of STEEP factors in the lower-right quadrant (for breadth), has an analogous extension to each of the other quadrants, and that there will be appropriate 'lines' of development (or factors) in each of them. What futurists currently do in the lower right with STEEP needs to be extended in number in the LR, as well as to other quadrants, with other factors or lines appropriate to those quadrants.

The cross-level analysis notation can also be extended to incorporate these different lines or factors, and adapted into the chosen scanning framework. For example, suppose that one of the factors is technology, designated by, say, 'Tech'. Then, the Rocky Mountain Institute's well-known focus on cleaner and more efficient technology[26] might be rendered as

$$\text{RMI} \mid \text{Yellow} \rightarrow \text{LR(Tech[Green+])}$$

which shows both the line (Tech) and the level(s) of the line being scanned. In this example this is technology which is Green-level or higher, because Tech[Orange] (ie 'orange-level technology') tends to be 'industrial'-level and usually polluting, while RMI are focused on looking beyond the wasteful and polluting technology of late Industrialism to newer forms.

## Concluding remarks

The essential point underpinning this paper is the observation that, when you boil it all down, all of our scanning is undertaken through perceptual filters. It's *all* about filters, mindsets and worldviews. Work on the psychology of intelligence analysis has revealed that these filters are not conscious; rather they act as pre-conscious conditioners of not only what we do see, but also what we *can* see.[27] We tend to see what we expect to see, so any framework which helps to expand our perceptions will help us to become more attuned to more of the world out there. Environmental scanners and intelligence analysts are involved in basically the same work — trying to generate knowledge and intelligence out of incomplete or ambiguous information. Scanners are at an advantage because there is (probably) no counter-intelligence activity trying to obfuscate the information stream.

The expansion of a scanning framework from its current confinement in the lower-right quadrant to encompass the other three quadrants is a first step to opening out the mindspace which scanners need to inhabit if they are to see the weak signals coming from the future. But it is also necessary for scanners to become aware of how they perceive the world, and of what types of filtering are likely in their own minds. That was one aim of this paper — to open out an understanding of how human minds filter and perceive the world — that is, to become aware more explicitly of different ways of knowing.

Another aim was to produce a scanning framework which contains explicit levels within the four quadrants. Spiral Dynamics, situated inside the broader mind level of the Great Nest of Being, provides both the finer structure of this broad level of the Great Nest as well as itself being an analytical tool to understand how human minds filter their perceptions. The whole of the Great Nest needs to be included in any framework which purports to be comprehensive in covering the world, which is, after all, the purpose of environmental scanning. While the broader levels may be expanded or shrunk to suit individual scanning preferences, none should be excluded *a priori* from the frame.

Finally, the framework presents an analytical tool (cross-level analysis) for examining world-views in terms of both the subject doing the viewing and the level of reality (object) being viewed, as well as a notational system to describe it. This tool can also be used to analyse how other scanners do their scanning. This meta-scanning allows scanners to fill in the whole of the scanning frame by using sources explicitly chosen for their focus on distinct areas of the overall framework. This might also include scanning done by other scanners, in those instances when our own scanning resources are limited.

# Notes

[1] Slaughter (1997), (1998), (1999), (2000).

[2] Slaughter (1999).

[3] For discussions on the use of 'depth' in futures thinking, see Slaughter (2002) and Inayatullah (1998*a*).

[4] The term 'meta-scanning' has been used in discussions within the Australian Foresight Institute since 1999 (Slaughter 2000).

[5] See, for example Wilber (1997), and numerous references therein.

[6] (Wilber 2000*a*).

[7] (Wilber 2000*b*).

[8] The UR quadrant structures which correlate with the UL structures of 'concrete operational thinking' (conop), 'formal operational thinking' (formop) and vision-logic are, respectively called SF1, SF2, and SF3 on the diagram. These are labels for higher-order 'structure-functions' which are assumed to exist within the brain system.

[9] See, for example, Wilber (2000*a*) for numerous references to these transpersonal structures.

[10] See Note 1.

[11] See the Charts in *Integral Psychology* (Wilber 2000*a*) for a comprehensive map of the basic structures in the integral model, as well as comparisons with other maps of consciousness.

[12] See the section commencing on page 11 of *Integral Psychology* for a discussion of this view of basic structures as enfolded potentials.

[13] For a discussion of macrohistory and its utility in futures work see, for example, Inayatullah (1998*b*), and Galtung & Inayatullah (1997).

[14] The rationale for this is that, while the Wilber model is very complete, it is also very complex. In addition to the four quadrants and multiple levels within the quadrants, the full Wilber integral model of consciousness contains over two dozen different *lines* of development (cognition, morals, affect, needs, self-identity, etc). Each of these evolve largely independently through the various levels. There is also a compound model of 'the self' as the navigator and integrator of this multi-faceted development, as well as different states and types of consciousness, organic brain states, cultural and social forms, etc. The model therefore takes some time to fully appreciate and apply. For reasons of simplicity and, more importantly, *immediate practical applicability*, I would like to focus on a particular expression of the levels of mind (and the self-system) by using a related model for minds which has had quite some degree of success as a practical tool in this regard.

[15] (Graves 1974).

[16] (Beck & Cowan 1996).

[17] See the Spiral Dynamics web site: www.spiraldynamics.com, where a great deal of information about the model may be found. Also, see the individual web sites of Beck (www.spiraldynamics.net) and Cowan (www.spiraldynamics.org) for their differing approaches and emphases.

[18] A form of this statement introduces a lengthy discussion of the SD structures, beginning on page 40 of *Spiral Dynamics* (Beck & Cowan 1996), where detailed descriptions are given of the structures.

[19] Much of the material on the SD structures in this section has been loosely adapted or taken almost directly from the book *Spiral Dynamics* and from some of Wilber's writings on SD, in both *Integral Psychology* and *A Theory of Everything*.

[20] For a precise explanation of what is meant by 'first tier' and 'second tier', see Beck & Cowan (1996) or the SD web sites mentioned in Note 17. In essence, second-tier thinking is qualitatively different from first-tier thinking, as was hinted at in the description of the Yellow structure, in that second-tier thinking fully integrates preceding perspectives whereas first-tier does not.

[21] See the earlier discussion on the relationship between Figure 1 and Figure 2, and the correspondences between levels in each diagram.

[22] At one stage, I briefly used 'Coral' as a generic descriptor of the transpersonal realms, but the lack of clarity around Coral's precise structure has led to my dropping it from that role.

[23] (Wilber 2000*b*, p132).

[24] (Voros 1995).

[25] Wilber (1997), (2000*a*) and (2000*b*).

[26] See the Rocky Mountain Institute web site at http://www.rmi.org

[27] See, for example, the on-line book by Heuer (1999) which details many of the issues around perception which intelligence analysts (and, of course, environmental scanners) need to be aware of.

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