

thought leadership

Precision Business Psychology – applying the findings of a scientific revolution to the human dimension of organisational performance

Growth in understanding of human psychology has accelerated over the past decade. Of course, there is much to discover but we often hear statements like:

'We don't know how people learn things. People are different so there's no one way to change behaviour.'

Actually, we do and there is.

Increasingly sophisticated technology – computer modelling and brain scanning, for instance – are driving new findings in areas such as individual cognition, behaviour, perception, and creativity as well as the behaviour of people in social and organisational situations. We increasingly understand how specific mental processes relate to the physical architecture of the brain and how those physical structures are changed by new learning and experiences. Better information about how the brain works underpins our increasingly sophisticated accounts of how people actually behave. We are moving away from **theory-based descriptions** towards **more sophisticated, predictive models of behaviour**.

These very recent findings are published in scientific journals using language meant for specialist, academic peers.

Advances in the human sciences have been matched by profound changes in international society and politics, cultural manifestations and attitudes, legal frameworks, economic theory and business practice. Yet we still use decades-old techniques to manage, lead and develop people at work – team role theory and classic models of performance management and human needs are examples. Recent work challenges the basic assumptions underlying such techniques: there is contradictory evidence about how well these earlier models work, and whether they deliver consistently and sustainably.

As we argue below, we are in a **time lag** where new paradigms have not crystallised into practical tools and approaches that reflect real-world issues.

Precision Business Psychology takes these fundamental insights and applies them practically in organisational settings. It provides a **psychological infrastructure for a knowledge society**, though the idea of a knowledge society or economy is already over half a century old, and must itself be adapted to reflect new imperatives; not least technology-based information flooding and concerns about resource scarcity.

The context: A psychological infrastructure for a Knowledge Economy

Economic and organisational history tends to divide the evolution of commercial activity into a number of stages. There are many versions of this analysis. One such version is:

Stage	Brief Description	Typical support/approach to workers
Command or Theological Economy	Very stratified society. Price set by religious/social prohibitions. Profit is 'a sin'. Worker motivation supplied by social structure and strict social systems (loyalty to lord, veneration of King or priest). Tradition rules what is produced and what is done with it.	Security, ultimate rewards in heaven, the ability to use 'lord's' land to provide subsistence food stuffs. Societal stratification is often a variation on a basic theme (King, aristocracy, fighters, priests, workers): one strata - 'peasants' - does the base work in service to others.
Production Economy/ The Physical Economy	Technological innovation creates more sorts of products. Religious disagreement frees up concepts of profit work for hire and individualism. This reflects and causes breakdowns in traditional society structures. Migration of people to centres of production changes relationship between 'employed' and 'employer' which is now based on payment for labour. Gradual growth of middle, entrepreneur and finance classes with the development of increasingly sophisticated monetary systems and banks.	Moves to better the lot of workers tend to be extra-governmental; charities and movements driven by humanistic, religious or scientific commitments challenge the right of employers to exploit workers. Some employers, driven by humanistic impulses, reform their factories. Movements in working time, work conditions, not to mention public health, improve workers' lot. During this period the 'manager' role and various specific 'paid' functions develop.
Sales Economy	As economies mature and technology progresses, markets begin to take on model of competition (the work of Adam Smith filters through to create capitalist economies with competing markets). Companies initially compete on price, and success comes from sales footprint (hence the creation of mass selling and marketing techniques – the huge catalogue companies in the USA for instance) and cost control – of both production and people. Increasingly manager/worker relations become adversarial. This is the era of the great American 'robber barons': of the famous phrase 'You can have it in any colour as long as it's black'.	Government policy – from the National Health service in the UK to the New Deal in the USA - sought to rebalance work/private life. Growth of middle classes strengthens this movement. At the same time a 'science' of work develops. Psychology is at the base of much of this: ranging from the growth of advertising theory and practice to Taylorite time and motion approaches designed to maximise people spend.

<p>Marketing/ Service Economy</p>	<p>Increasingly competitive and sophisticated markets, allied to the fact that sales focus ends in a downward price spiral, leads to the invention of new ways of selling and new things to sell. Basic management concepts that are still in use today were invented at this stage including the benefits/features distinction and sophisticated advertising techniques.</p>	<p>The gradual move from manufacturing to service economies begins to focus more effort on the whole person rather than the person as unit of production. Growth of leadership theory. Government intervention does not necessarily decline (as in EU legislation) but the business model penetrates more areas of daily life, and government's ability to actually influence large, multinational companies is much reduced.</p>
<p>Post- Modern/ Knowledge Economy</p>	<p>The phrase 'the Knowledge Economy' was coined 50 years ago by Drucker and recognises that most value is created by what goes on in people's heads. Connecting relationships and the ability to learn and adapt rapidly (in both individuals and organisations) are highly valued. Traditional control and command management hierarchies are seen to be redundant and a number of other structures – matrix management for instance - are introduced. Companies increasingly sell intangibles, lifestyle and brands rather than physical properties of goods.</p>	<p>A huge growth in externally delivered people services to business from development and training to mentoring. Government education is seen as inadequate to life-long careers and corporate universities develop reflecting the centrality of learning. Some companies pick up the responsibility for previously centrally provided services such as health. The rhetoric of 'people are our biggest asset' grows, though practice may be said to lag behind it. 'Knowledge' finds its way on to balance sheets. 'Talent' supply and demand becomes a key issue for corporate leaders.</p>
<p><i>This is a simplified analysis and reflects the developed world – in particular the USA and Western Europe. It is not a straightforward temporal sequence since it ignores the different stages different geographical areas are in (while the USA and the UK were pioneering the sales economy the USSR ran an almost pure command economy based on a political ideology; certain parts of the Middle East are still using elements of the theocratic command economy structures; there is some debate about whether these stages are culturally determined and whether all regional economies will pass through them). The 'Production' economy described above takes place over a very long time scale and could be divided into shorter sections, and analysed in much more detail.</i></p>		

Despite the caveats mentioned above, such an analysis of history highlights a number of points:

- Each way of 'doing business' is based on **a model of what a human being is**; what allegiances he or she owes, what motivates them (or whether they need motivation) and what rewards they should get. So, in a Command model a worker receives something – a job for life, physical security, salvation – and in return provides, in some cases, unlimited labour. To attract very talented senior leaders in the Knowledge Economy, it is argued that huge financial rewards – often multiples of a hundred of average earnings – are needed since job security is less important and less common for this elite cadre, while deep financial involvement in the organisations they run is seen as a major spur to superior performance.
- There is a **time lag** between the adoption of a new economic/business model and the understanding that this implies a different view of people's behaviour at work. At its most extreme this can cause war: the European Religious Wars of the 16th century reflected the change from the (Roman Catholic) Theocratic model of work to a Production model arising out of Protestant views of salvation and time (the historian R. H. Tawney popularised this idea and though his theories have been criticised, they still have considerable explanatory power). People began to question the

traditional hierarchy of society which implied divinely-ordained obedience. It took some while before a wage-based economy began to replace it and employers understood the relative mobility of the work force – both geographically and psychologically. The most studied example of this lag is the Industrial Revolution (this overlaps the Production and Sales stages in our model).

Employees moved to centralised, urban workplaces and used alien technologies. Since prices were now not set by theological rules, price competition ensured workers were constantly pressured to work very long hours for minimum wages. This degraded the social and physical environment. In a sense you can see this phase as the 'Physical Economy' in contrast to our Knowledge Economy.

This situation led to huge social unrest, the development of early union structures and, in some cases, revolutions. It took decades for managers to realise that physical fitness and health were essential elements in thriving business. Innovations like sewage systems, health care, reduced working hours and leisure opportunities grew out of this realisation. So did centralised retail organisations, sophisticated logistical supply structures and wholesale networks. Since workers were living in larger urban communities, old styles of decentralised retail (buying food direct from the farm, goods from individual craftsmen) became difficult and used up time that could be spent in useful production. The invention of the huge modern department store in the industrial megalopolis of Chicago during the nineteenth century is one example of this trend. But the time lag saw huge wastage of human lives and, it can be argued, an inefficient use of resources.

- Different groups act at different times to overcome this time lag. Innovations have been made by religious orders, governments, visionary employers, unions and charities. While national governments were major actors in the twentieth century, it's clear that business is too complex, too international and too powerful for national governments (and, it can be argued, transnational organisations like the World Bank and the United Nations) to either control or intervene meaningfully in its practices. And government – in the western world at least – is withdrawing from wider social responsibilities in health and education by inviting in private suppliers. The growth of business-run healthcare systems, universities, and so on, reflects this movement. Innovations in new technology suggest that large organisations will affect workers' lives even more in the future than in the past. Corporate shopping malls within major Silicon Valley software HQs and the introduction of corporate run social networking sites are two examples.
- Thomas Kuhn's seminal book, *'The Structure of Scientific Revolutions'*, describes how human knowledge advances 'jerkily'. For decades or centuries a model or 'paradigm' rules. Advances in understanding are made within the framework of the prevailing paradigm, but this becomes a set of blinkers which defines the direction research can go in and may prohibit certain thoughts. Then understanding jumps forward; in Kuhn's phrase, 'it undergoes a paradigm shift'. The individuals who make this leap at first meet hostility and even persecution.

The most cited examples of this effect are the Copernican revolution – which dethroned the earth from the centre of the universe and established that the earth revolved around the sun – and the replacement of religious creationism with Darwinian selection theory. The Copernican revolution gives a good instance of how a model is retained and adapted rather than ultimately discarded in the face of strong counter-evidence. Observations of the planets did not fit with an earth-centric model of the universe. Rather than changing the model, thinkers retained it by inventing a bizarre and complex series of epicycles within the planets' orbits – making them behave like circus performers or drunk drivers. At all costs, the paradigm had to be saved.

This model fits our view of the state of the human sciences – particularly the way neuroscientific findings are affecting our view of individuals' behaviour and its causes. After a period in which a particular paradigm prevailed – one which, it can be argued, is still strongly influenced by Freud and psychoanalysis – a new paradigm has appeared. Reactions have been mixed, in some cases hostile, because human beings fundamentally resist being treated as natural objects which can serve as the basis for scientific investigation and explanation. More nuanced and sensitive application of these ideas is needed.

- The dangers of clinging onto outmoded paradigms are highlighted by the work of the physiologist and bestselling author Jared Diamond. Two compelling examples he discusses are the Easter Islanders and the Maya, who were unable to understand or respond to new environmental challenges so their civilisations were completely destroyed. The inability to think outside old paradigms destroyed many businesses in the transition from one economic/social model to a new one – and will continue to do so.

To sum up: we are still using models of human beings from earlier business eras. **We still talk about human beings in a way which reflects early and mid twentieth century industrial practices.** We now know more about why individuals and societies behave as they do. New, hard, scientific information exists to create a new support infrastructure but this understanding has not yet filtered down into practical applications. Some elements of this new cognitive science have been popularised, as evidenced by brain training games and televised series on child behaviour, achievement potential and under-performance. However there has not yet been a consistent attempt to build an overarching framework that guides public policy and contributes to the world of work.

Governments are not able to provide all the resources for this step forward.

Precision Business Psychology is our contribution to creating **a psychological infrastructure for a knowledge economy**, to be delivered by employers and experts who understand exactly what is at stake and that, if they don't act now, no-one else will.

Unpacking Precision Business Psychology

Precision Business Psychology is our term for an approach to people at work which reflects these factors. We chose the words carefully.

'Precision'

We use 'precision' because our approach bases practical interventions in real organisations on robust scientific theory. This theory makes specific and precise claims about decision-making, learning and risk taking, for instance, which can be confirmed or refuted. It says 'this is the case' rather than, 'out of a number of competing ideas this is the one we prefer.'

Precision has another meaning. While the underlying theory is common, individual differences ensure fundamental dynamics express themselves in different ways. Precision flows from combining two areas that, in the past, have been separated: research and applied psychology. One searches for general rules, one looks at individual differences. By closing the gap between the two we can create very precise, tailored interventions which do what science does: works successfully on repeated occasions and predicts what outcomes will be.

'Business'

We use the word 'business' for two reasons:

- Psychology grew out of an attempt to understand human mental functioning across the whole population; you can trace aspects of it back to pre-Socratic philosophers. Modern psychology started to study specific groups – children, the 'mad', for instance – and much early modern psychology was about solving problems, overcoming deficits or labelling people with pseudo-scientific descriptors ('feeble-minded', 'moron'). In more recent years, psychology has addressed positive problems: encouraging elite sports performance, identifying and developing gifted children, creating well-being and happiness. It has also escaped the influence of 'clinical' applications which meant that ideas used in health contexts had to be adapted to apply in, for instance, business. Business psychology is now a fully fledged discipline with its own vocabulary, aims, theories and practitioners. It needs to escape the lingering mistaken perceptions that it's an

application of Freudian theory or involves running rats round mazes, and take its place as a core business application.

- Business itself is a repository of psychological understanding. Psychologists were involved in the first advertising agencies. The great mail-order companies of the 30, 40s and 50s were using psychology in all but name to test their products. The 'era' of the European political dictators in the same period focused research on the psychological dimensions of leadership, work which soon transferred into business contexts (though, it should be added, without most of the negative connotations). And, in the last 2-3 years the psychological aspects of economic activity, from individual investment decisions to the social aspects of macro-economic cycles, have started affecting public and media debate. Many managers are gifted natural psychologists.

'Psychologists'

Despite the psychological acumen of many professionals, psychologists study a body of specialist knowledge and use special techniques which are essential to maximising benefits from a new understanding of people.

Commonsense or folk psychology has its place. All of us attribute beliefs, desires, motives, intentions and so on to people, believing that they cause particular actions. But many of these attributions are plain wrong and can lead to mistaken judgements on why somebody does what they do. Equally, established theories have been used widely, and reportedly successfully, in much organisational work: Belbin's team roles and Maslow's hierarchy of needs are examples. But many of these frameworks are notable for their lack of stringent empirical confirmation.

So, by psychologists, we mean practitioners who are dissatisfied with 'business psychology tradition' , who seek to engage with neuropsychology, neurophysiology and other non-psychological disciplines and who tease out what their findings mean in practice: **psychologists who are scientifically-informed practitioners.**

Some underpinning principles – from psychology and business

The fundamental issues of people in business do not change – how to: maximise performance; recruit more effectively; create structures that work efficiently; reflect external and market changes in people skills; lead effectively; retain valued staff. Of course, the way these fundamentals are expressed changes in line with new thinking, external pressures and – it has to be said – fads. Certain issues take centre stage: leadership post Enron and world.com; 'talent' (reflecting the needs of a true knowledge society and suspicions about the adequacy of formal education) and 'engagement' (perhaps reflecting a genuine cultural shift among Generation Y) are just some examples. One could also add a renewed interest in cultural diversity as organisations internationalise; and concern about how people interact in a service-based culture – the emotional intelligence movement, for all its lack of any supporting evidence, reflects this concern.

Two underlying principles inform Precision Business Psychology.

1. Bringing different schools of psychology together – ignoring artificial boundaries

We use findings from scientific and experimental psychology to inform practical approaches derived from behavioural and cognitive approaches to development.

You can see behaviour, model it in numbers and thus describe the situation you want to address. A permanent change in behavior, something crucial in any business initiative, can be brought about as a result of experiences or practice not through logical argument and intellectual agreement.

You can't see thinking directly (though researchers increasingly use instruments to watch its effects on the physical brain). How we think (cognition) and how we feel (emotion) influence how we act.

Specifically, our thoughts determine our feelings and our behaviour. This insight informs increasing numbers of initiatives, ranging from sports coaching to the treatment of mild depression and good executive mentoring. It is central to Precision Business Psychology.

2. Learning from strategy

No self respecting marketing strategist or business leader would think of treating their organisation as an 'island' : merely looking at internal resources and organisation and making plans based on this information. Strategists undertake a variety of analyses to look at trends and relative strength within a system. Putting a number together, we might get a force field analysis such as that seen in figure 1.

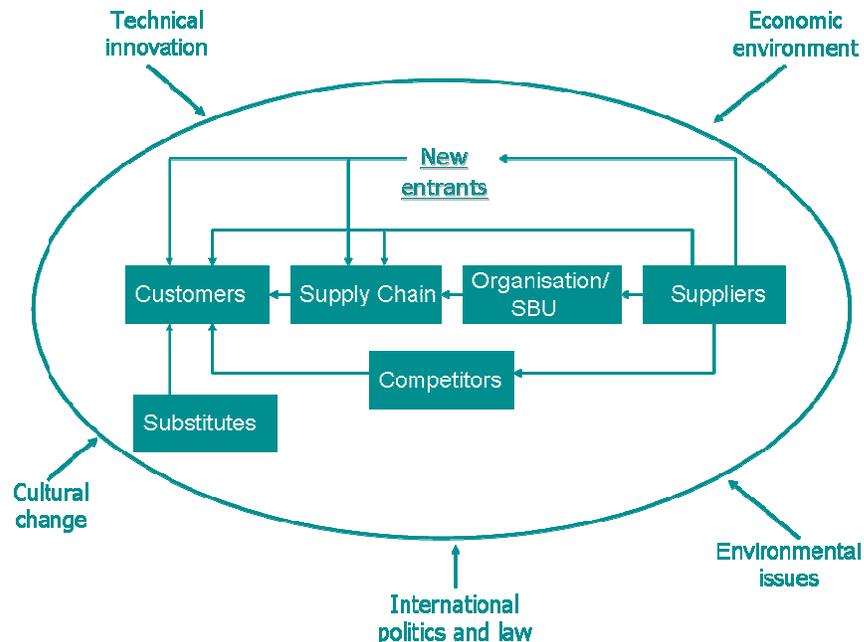


Figure 1. Such a diagram allows a dynamic analysis of a market looking at relative strengths of various parts and modelling future developments.

Approaches to people at work have tended to take an internal perspective: looking at abilities, personality and attributes of individuals and teams. Of course individual differences and attributes are important. The psychometric approach is a robust and well-developed specialty within psychological science and will input into Precision Business Psychology. But we need to factor in external issues that affect an individual, a team, a workforce, a particular talent pool or a generation. In doing so we need to create a more dynamic model of human beings at work, one which more easily gears with the dynamic model of business change and future strategy making within which it operates.

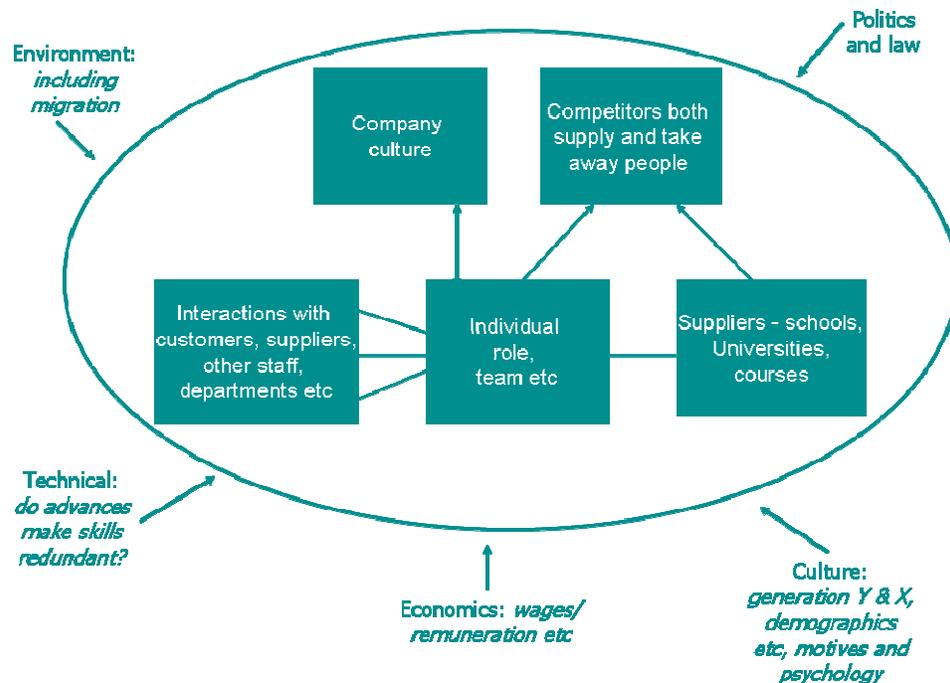


Figure 2. Using market analysis disciplines to view people issues develops a more dynamic model.

Some examples: science to practice

Precision Business Psychology is an evolving discipline as new findings are reported and the **translation of explanation to application** is refined to create ever more effective ways of maximising human performance in organisational settings. So, it is impossible to be comprehensive in describing specific areas of intervention. The following gives a sample of the way Precision Business Psychology informs different kinds of practical work.

Learning

As we hope is obvious from this paper, learning is THE central issue for organisations – and one of the top five issues for global human society.

In a world which changes so quickly, in which knowledge doubles every few months (and is more instantly accessible than ever before), in which technical – if not pure scientific – innovation has measurable cultural impact almost immediately, childhood education which sets an individual up for a life no longer works. In fact, this is a case of **a paradigm shift in a social model from start-life learning to whole-life learning**. Education and training are seen as keys to everything from social inclusion and national economic competitiveness to individual wealth creation and the concept of a fulfilled life.

This has been recognised by governments. The leading UK political parties have consistently put education at the top of their agenda for the last fifteen years: the world's fastest growing economies – China and India –

are investing hugely in educational initiatives and education is seen as the key to lifting the world's poorest countries out of the poverty trap.

Yet initial training is superseded quickly and there is a perceived mismatch between the 'products' of formal education and the skills needs of commercial and NFP organisations. Hence the huge amount – over £1 billion – spent on various forms of training, development, mentoring and coaching in the UK alone. The growth of corporate universities and talent development programmes; vastly increased usage of on-the-job training, coaching and mentoring; the explosion in certification and pre-employment testing as adjuncts to and checks on formal qualifications and the sudden ubiquity of management colleges are all further evidence of both unease about formal education and a shift of power and responsibility in meeting skills and training requirements.

As organisations have taken over more of the burden, other aspects of training and learning have become clear: they can form compelling parts of remuneration packages; they foster engagement particularly for creative and exploratory talent.

But this is not the end of the story. The media has long been featured items questioning whether educational standards are going down; the relative value of qualifications now and twenty years ago; and complaints by employers' organisations about the quality of candidates leaving school, college and university. Equally, most managers have wondered how effective development activities are. Does soft-skill mentoring really change leadership behaviour consistently? After a five day training course, does someone find it easy to apply new-found knowledge? Does learning one thing make it easier to learn another?

In other words, do we really know how people learn? And if we don't, how can we possibly design development programmes which add to, change or build on employees' (and, indeed, children's) existing attributes?

As we pointed out earlier in this paper, recent developments have revealed huge amounts of information about how learning works and therefore how to plan development, training and learning to maximise their effects.

For instance, Dr Jim Flynn's detailed studies of IQ (summarised in his recent book, *What is Intelligence?*), a long misunderstood and vilified measure of individual cognitive power – has identified huge gains in IQ within certain groups, gains that are simply too large to be accounted for by genetic factors. In other words **education does increase individual cognitive capacity**. These gains in IQ reflect the effect of modern scientific-based education and mark a change from an old paradigm of knowledge (a concrete one) to a new one (the ability to solve problems in a scientific way). This is good news. Not only does a certain sort of education increase useful abilities; increased access to scientific education closes the gaps between advantaged groups and those disadvantaged groups by factors such as poverty, ethnicity or gender. This feeds into the creation of a more diverse society and work population, with consequent gains in skills, attributes and creativity.

Work in the neurosciences has illuminated the physical basis of learning. In fact a technical definition of learning is:

"changing the structure of neurons so they hold information in the long term memory in temporal and parietal lobes of the cortex. This involves many changes including the amount of neurotransmitters that neurons produce and changing the connections between the neurons."

From this and other discoveries we can make a number of very specific conclusions about learning and feed them into development design. Motivation to learn survival skills – learning people's faces, speech and motor skills for instance – is innate and is eased by specialised brain modules. But we cannot depend on intrinsic motivation for academic subjects; society conditions our desire to learn these by offering food, teacher and parent approval and peer status.

This seems negative or laughable. Do we motivate training with a good square meal or a pat on the back? Other findings are also cautionary:

- there is no evidence for learning transfer – learning one thing does not make it easier to learn another;
- there is no evidence for multiple intelligences, despite the claims of the EI lobby – the mind is not structured that way;
- remembering something is an act of reconstruction: each memory is new and, like genetic transfer, will be prone to copying errors.

But even negative findings prevent the expenditure of useless effort and allow us to focus on what works.

Neuroscience has identified certain strategies and behaviours that promote long-term learning because they affect the neuronal structure of the brain and the production of neurotransmitters. Two can be – it would seem – easily invested in development and learning programmes:

1. repetition;
2. excitement.

It's obvious that these two features could nullify each other; repetition can dull excitement. That is why design of development activities is a highly skilled and technical job.

There are other promoters of learning which also affect the physical actions of the brain but which are, perhaps, more difficult to control: eating carbohydrates and 8-9 hours sleep.

There is also growing evidence that different people (and different age groups) learn better at different times of the day.

Precision Business Psychology seeks to build on these and other insights to create training and development programmes which can keep pace with the changes in the economic, social and technical environment.

Creativity and Innovation

Our view of creativity is a perfect example of society settling on an old paradigm and adapting it in the face of counter-evidence, rather than leaping forward to create a new and more scientific model. The Romantic view of creativity – drawn from the arts – is unconsciously embedded in much Western thinking. Creativity comes when it will, can't be forced, follows its own rules, is mysterious and impossible to define (or, at least, takes a lot of very long words). Certain people are 'creative', others are not and the creative ones are 'difficult' and unable to follow rules. Creativity is 'individual': those who have it are loners.

This model is used to describe and cope with individuals from Brit Artists (despite their disavowal of it), classical music instrumentalists, rock stars and actors to creative directors in advertising agencies and technical experts in IT and pharmaceutical companies.

Of course individual differences will show how someone approaches creativity. These include openness to new ideas, tolerance to ambiguity as well as intellectual horsepower and problem solving style.

However, hard psychological research suggests this is not the whole story. In particular, a major research effort is going forward to simulate creativity in computer environments (as described in Margaret Boden's book, *The Creative Mind*) and this shows that creativity follows certain well-defined strategies and comes in certain species.

The ubiquitous brain-storming session has been an attempt to harness collective creativity but often the participants were pre-selected using some version of the old creativity paradigm.

To stimulate creativity to its fullest potential, we need to understand it not as an individual phenomenon but one which takes place in a dynamic environment which supports or punishes it. And, rather than being a free-flowing process, dependent on gifts, whim and mood, it can be nurtured by creating a structured controlled framework. In other words it depends on the environment as much as on mysterious 'God-given' gifts. We can control the environment to encourage creativity – and indeed this has been practised many times before: the Medici Academy of Renaissance Florence and the Enigma Project are two examples.

Persuasion

Persuasion is a core activity within organisations: we persuade customers, suppliers, peers, subordinates and managers to do certain things, make certain decisions, change behaviours.

Almost all persuasion is based on a millennia old view of human beings that we are 'logical' animals. Marshal enough facts and a compelling, watertight argument and you'll convince someone to accept your views or do what you want. This all seems unexceptional.

Except that in every area of human activity from peace negotiations and marital relations to selling a strategy we are constantly disappointed that people will not see the obvious and do what is 'commonsense'.

The reason, of course, is that we are not consciously logical beings. The conscious brain can cope with about 11 bits of information a second; the unconscious brain about 11 million. We make decisions almost immediately a problem is posed (see below). To quote from earlier in this paper: *How we think (cognition) and how we feel (emotion) influence how we act.*

The basic model here stems from the philosopher René Descartes: that the mind and body are distinct entities and only seem to affect each other because they are linked by a particular physical structure (which Descartes thought to be the pineal gland – the seat of the soul). While this view still informs our everyday thinking, it is immensely damaging in privileging the mind as a separate logical operator.

Psychoanalysis broke this model by suggesting that our unconscious drives affected our conscious decisions to a far greater extent than we imagined. But psychoanalysis is a poetic account of mental processes rather than a scientific one: it has less explanatory power than was originally thought and its ability to account for and affect real life behavior is severely limited.

Robert B. Cialdini, a professor of psychology at Arizona State University, is one thinker who has addressed this issue, which goes right back to psychology's involvement with persuasion in advertising and propaganda in the first half of the twentieth century. Cialdini looks at this involvement and identifies certain compliance triggers, 'weapons of influence'. These are shortcuts which allow us to act in a very rich complex world without the need to think about the actions. Cialdini identifies a series of specific triggers – ranging from reciprocation to social validation – which can cause this effect.

There are some concerns about this phenomenon. Such triggers can and have been used for highly dubious purposes. But they provide the basis for responsible, more effective persuasion; as a topic to be taught to opinion formers and leaders; as a feature of programmes to cope with organisational change; and as elements in more effective development and training programmes.

Decision Making, Risk Taking and Leadership

In writing a description of a competency framework for good decision-making, it sometimes seems the only phrase that makes any sense is, 'It depends...'

Everyone makes decisions at work although making decisions effectively is seen as a key leadership and managerial competency. Yet decisions are hugely different in terms of their importance, implications, process (some are made individually, some by groups seeking consensus), deadline, the risk involved, the risk that is acceptable and the evidential base on which the decision is made.

At best we tend to use two models of decision-making in business:

- one based on a model similar to the one outlined in the section on persuasion. We gather evidence and testimony, evaluate it, weigh up arguments and come to a considered conclusion.
- one based on instinct, gut feel. The person making the decision uses experience and instinct to make quick decisions when insufficient evidence is available and deadlines demand it. Risk is evaluated on the hoof. This sort of decision making is criticised if made in certain situations but over the past 5-10 years has been embedded in the model of the decisive, charismatic leader who 'cuts the Gordian knot' tied by data flooding to get things moving.

The first model is particularly important since it underlies much economic thinking. Adam Smith's model of the perfect market required actors in the market to have access to all relevant information and evaluate it logically and objectively before taking economic risks and investment decisions. The latter model perhaps reflects the development in which there is just too much data, too readily available, giving rise to the common phrase 'paralysis by analysis'.

Decision-making theory has been a very rich area for some years: the popularity of game theory and the prisoner's dilemma on MBA courses – although it was originally used in military contexts and was later used to illustrate issues of selfishness, competition and altruism – is an example. The rise of computing science as a core business discipline and application has also created a model of dehumanised decision-making: whether we are aware of it or not, Boolean algebra and YES/NO gate thinking has infiltrated the way we think about options and alternatives.

Precision Business Psychology draws particularly on the work of Nobel prize winning psychologist Daniel Kahneman in which he investigated why experts in a subject could still make fundamental, simple and obvious errors in their specialist subject. This led him to develop prospect theory which looked at whether classical accounts of risk and reward reflected real life behaviour: in so doing, he uncovered how and over what time scale people calculated the implications of their decisions.

His work provides a solid framework for helping leaders understand the implications and methodologies of their decision-making – which, at the highest level, can lead to disaster or huge success.

Taking the thinking forward

Precision Business Psychology is an evolving proposal. It will change as new thinking and new findings become available. We are keen to foster debates about these ideas from people who are, like us, keen to apply psychology positively in organisational environments.

We'd welcome contributions, comments and criticisms: especially the later since, in a real sense, we are creating a paradigm which, while it is designed to replace an older, less explanatory one, embodies certain preconceptions which might prevent certain sorts of thinking. In that context, challenges as well as contributions will take this thinking forward.

Please contact us at info@crelos.com to join the debate.