

When economics fails: the growth of behavioural economics and its implication for coaches

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OVERVIEW

My article in the last issue on the application of economic thought to strength and conditioning outlined how economic theories can provide a potentially useful addition to the cognitive toolkits of strength and conditioning (S&C) coaches. However, as the financial crash of 2008 clearly showed, modern economics has been fraught with issues of prediction, and the difficulties of coping in uniquely challenging times. Classic theory is not always able to predict outcomes, and in many instances actual outcomes simply do not comply with classic economic thought. Therefore, new methods of thought needed to be investigated if these deviations from the expected norm were to be fully understood and not simply seen as anomalies. So – rather ironically – after initially outlining how economic thought processes add valuable tools to our cognitive toolkit, this article will now focus on some of the failures of classic economics to predict outcomes; it will place specific emphasis on those failures which involve human behaviour, and how these have led to the growth in a whole new field of study: that of behavioural economics. This behavioural focus can provide even more useful tools in understanding our own and our athletes' behavioural patterns, as well as assisting in effective decision-making.

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The growth of behavioural approaches

In order to fully understand the development of behavioural economics, it is important to look at some historical concepts and the underlying premise upon which economic analysis is based. The core premise of economic theory is that people choose by optimising, and that this underpins decision-making. Consequently, economics assumes that decisions are the result of a careful analysis of potential costs and benefits and that humans always make optimal decisions:

the basis of rational choice theory. The basic assumption is that humans have stable preferences and subsequently engage in behaviours to maximise utility. This model of rational choices uses a fictional entity called 'homo economicus' – often shortened to 'econs' – who is the theoretical human characterised by the infinite ability to make rational decisions.

Furthermore, the beliefs upon which 'econs' make choices are assumed to be unbiased and therefore unaffected by social and



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behavioural factors. The assumption is, therefore, that choice is always based on what economists’ call ‘rational expectations’.⁹ However, behaviour is not constant and varies over time and space, being subject to many influences – not all of them rational. Similarly, decisions are not always the result of logical and deliberative processes and consequently are not always optimal. What was obvious was that many behavioural and decision-making findings simply could not be explained by classic economic theory. However, rather than give any credence to these differences, traditional economists simply discarded many of these suboptimal decisions as outliers, and made no attempt to develop theories to explain them.

Importantly, these findings, rather than simply being modern manifestations, are not new; even in the 18th and 19th century, scholars were starting to look at these outliers and the failure of economic theories to explain them. To gain an insight into behaviour they started to look at the psychological underpinnings of economic life and not simply at classic economic theory.

This psychologically informed economics

was slow to develop, but ultimately developed into the concept of bounded rationality.⁷ This is based around the idea that total knowledge on which to base a decision is highly unlikely; instead there will typically be limited knowledge and consequently, decisions can only be fully understood relative to the information available and the environment in which they emerge.

This type of economic thinking reached a critical moment with the publication of several papers which ultimately resulted in the development of prospect theory.⁴ This theory asserts that decisions are not always optimal, and are influenced, not only by the environment and information available, but also by the way choices are framed. This was a major step forward in trying to explain economic behaviour and importantly started to give an insight into the outlier behaviours that had previously been unexplained and largely ignored. Building on the work of Kahneman and Twersky,⁴ Richard Thaler founded the field of behavioural economics. This aimed to apply psychological insights into human behaviour in an attempt to explain economic decision-making. According to Thaler, what was needed was



‘an enriched approach to doing economic research, one that acknowledges the existence and relevance of Humans’.¹⁰ This work has led to many insights which provide a more varied template around which to explain human behaviour.

Given that many of the above issues regard decision-making and behaviour, areas which could equally be applied to the world of S&C, behavioural economics may provide useful insights into some of the challenges we face.

We need multiple approaches to understanding

A key tenet of behavioural approaches to understanding human behaviour is that human decision-making is often multifactorial, and therefore understanding it is often impossible from a single disciplinary perspective. Critically, from its outset, behavioural economics has always been multidisciplinary, comfortable in using theories and information from a range of fields as long as they provided insights into economic decision-making. As with any new field of study, the whole concept

initially met with a great deal of resistance, and even contempt, from the mainstream economic community, but due to the perseverance of key practitioners, and the emergence of a field of research to support their concepts, behavioural economics is today a mainstream activity which is helping to explain many of the previously unexplainable economic behaviours.

However, and importantly, the field is not a replacement for traditional economic analysis but rather a supplement. As Thaler¹⁰ points out: ‘Theories based on the assumption that everyone is an ‘econ’ should not be discarded; they remain useful as starting points for more realistic models’. Critically, the reality is that in the decision-making stakes we are far from being the deliberative and logical person that we would like to believe we are, and behavioural economics is a field that tries to help explain what ‘actually happens’ when we make decisions. Although – as with most emerging theoretical domains – it is unlikely that behavioural economics can by itself capture all the complexities of human decision-making, it does provide useful insights. Importantly, this multi-disciplinary approach to problem-solving has much to

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teach strength and conditioning and we also could benefit from looking outside our traditional fields of enquiry in order to fully understand human performance and coaching behaviour.

Strength and conditioning is also behavioural in nature

Although as S&C coaches we traditionally focus on what we do, the reality is that the ultimate success of any S&C programme relies on diverse factors, and significantly on elements relating to behaviour. Without appropriate behaviours, no programme, no matter how sophisticated, can ever be optimally successful. For a programme to be successful it is critical that athletes engage with the programme, believe in the programme and carry out instructions with the required accuracy and dedication. Subsequently, a programme that is inherently well designed may fail catastrophically, whereas one that is less sophisticated and even inherently flawed may have greater success due to its behavioural aspects. There is a significant gap between planning a programme and its execution; coaches will often have more issues establishing appropriate behavioural factors than with aspects of the programme design itself. Consequently, experienced coaches often complain that the biggest challenges they faced were often behavioural in nature rather than programme-based.

However, just as economic theory is often built around homo-economicus, it could be argued that our own theories are often built around ‘homo-athleticus’ – a fictional athlete who always makes rational decisions and brings equal effort and vigour to each and every session, regardless of his or her mood, feelings, physical state, and the content of the session and the delivery. Indeed, so prevalent is this type of thinking that few, if any, research papers even mention the type of coaching received or any behavioural-based issues affecting the programme; instead, they simply focus on the input and output – and thus homo-athleticus is alive and thriving in these environments. Coaches instinctively know this is not the case, and that multiple factors interact to determine the ultimate effect of any intervention – yet our traditional academic programmes continue their focus on theoretical programming-based issues and a diet of anatomy, physiology and biomechanics, leaving out any issues related to topics such as behavioural change.

With an understanding of behaviour and decision-making, it may be possible to make better informed decisions when faced with a range of behavioural challenges, and use this insight to ‘nudge’ behaviour in the chosen direction. Additionally, understanding our own decision-making processes, and our own biases and assumptions, may open new approaches to problem-solving and even to programming itself. Consequently, understanding the decision-making processes of ourselves, our athletes and other significant players in the ecosystem can provide critical tools for the S&C coach. It would seem logical that a field dedicated to the study of behaviour and choices can lend insight into how we can become more effective coaches.

Learning from the roots of behavioural economics

Behavioural economics has its roots in observation, and an openness of mind to admit things aren’t working. Consistently, economists were finding that decisions made in practice did not always conform to classic theory. Whereas some economists simply dismissed these contrary findings as anomalies, others viewed them as opportunities to garner a deeper understanding of the decision-making process. In the words of Thomas Kuhn: ‘Discovery commences with the awareness of anomaly, ie, with the recognition that nature has somehow violated the paradigm-induced expectations that govern normal science’.¹

‘By the mid-1990s, behavioural economists had two primary goals. The first was empirical: finding and documenting anomalies, both in individual and firm behaviour and in market prices. The second was developing theory’.¹⁰ Fundamental to the finding and documenting of anomalies was the field experiment. Behavioural economics moved the study of decision-making out of the university lab and into real world settings. This brings a natural ecological validity, as real-world interventions do not occur in isolation, and effects are typically the result of the interaction of many factors. Field experiments can directly study the effects of training interventions and their interactions in the real environment, with observations made on a range of factors, taking note of both the intended and unintended consequences. Thaler asserts that the key to effective evidence-based practice in social studies is to start with facts and then move to

theory,¹⁰ and the collection of real world data and observation can give valuable insights which simply cannot be obtained from lab studies. This can be an important lesson for S&C, with field-based experiments occurring in natural training environments, offering a crucial methodology, and enabling better practice to emerge one intervention at a time.

Choice architecture

Ultimately, our aim is to ensure that we, our athletes and everyone who has some impact on our ecosystem make the best choices to ensure the overall success of the programme. What has emerged from behavioural economics is that our choices, unlike the theories of classical economics, are not stable and can be influenced by a wide range of factors. Indeed, marketing companies have known this for a long time and consistently use behavioural tools to nudge our choices in their preferred direction. Consequently, understanding the key influences on choice is critical and structuring choices in the best way to achieve the desired effect can be a very effective tool for the S&C coach's cognitive toolkit. This structuring of choice to achieve the desired result can be thought of as 'choice architecture', and requires a basic understanding of the factors that affect choice.

We are all biased

A useful starting point for the discussion of factors that influence choice is the recognition that – no matter how rational and impartial we feel we may be – we are all inherently biased. Behind the shroud of our consciousness, a myriad processes race to work out what is going on in the world around us, and how we should respond.² These processes are themselves based on multiple factors including our upbringing, our education, our personal preferences, our environment and our past experiences. To help us deal with the complexity of our decision-making, our brains ceaselessly infer, overlay and interpret new information and memories, all of which give us a unique personal perception of any problem.²

In this way, the 'rational' but often unrealistic models of classical economics, with their assumptions of perfect information and single-dimension comparisons, the economic concept of the Econ, are flawed and human nature must be factored into decision-making processes. Similarly, we

must be comfortable that any choice we make is likely to have been influenced by these multiple factors both consciously and subconsciously and so we perhaps need to lose the concept of being 'right' and instead focus on the pragmatic outcomes of our choices.

Our two systems of decision making

Given the focus on decision-making in behavioural economics, it is useful at this point to outline how we make decisions. Daniel Kahneman, in his book *Thinking fast and slow*,⁵ suggests that we have two decision-making systems. System 1 is, in essence, our autopilot, allowing multiple decisions to be made in any given day in a fast and efficient manner; whereas system 2 is a slower more considered process whereby information is assessed and decisions made in a more logical manner.

Although the latter system would appear to be the superior one, our need for these two systems is dictated by the balance between efficiency and effectiveness. Every day, we have to make innumerable decisions. Given the amount of information potentially available for all of these, it is inefficient for all decisions to be considered in detail and logically thought through. The study of human behaviour reveals that many of our abilities as human beings rest on developing mental shortcuts or heuristics to deal with the multiple decisions we must make daily. These are important, as they are an efficient way of dealing with the complex information that we are faced with at any given time. However, they are highly subject to our natural biases, and often we will make decisions totally unaware of these underlying biases and influences. Thus, our decisions via system 1 are subject to influence – an influence that can be positive, neutral or negative.

System 2 on the other hand involves a more drawn-out thought process, whereby a greater range of information is considered before a decision is made. This typically allows for a more balanced approach to any decision – as demonstrated by our need at times to think a decision over, allowing us the deliberative time to consider various options. However, it is important to note that decisions made depend upon the quality of information utilised and the quality of analysis. Critically, although system 2 is more logical and deliberative in its nature, this too is subject to bias, even though we may be unaware of it.

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The expansion of behavioural approaches

Given the role of decision-making in multiple disciplines, the potential influence of behavioural approaches has grown and today, behavioural approaches are being increasingly used in government, in business, in retail – indeed anywhere where influencing human behaviour can be beneficial. This application of behavioural influences is expanding the conceptual toolkit of a wide range of practitioners from a wide range of disciplines. Importantly, it is also fostering a more applied research environment and a test and learn culture among many businesses and governments, where the results of small trials in the target environment are often used as the basis of analysis. Given the myriad decisions we make daily, it seems logical that an understanding of behavioural approaches could be a useful addition to the S&C coach's cognitive toolkit.

The human need for consistency

As we move into a more detailed examination of some of the factors that affect human decision-making, an important concept to understand is the human need for consistency. Essentially, humans attempt to live up (or down) to their self-image: in other words to act consistently with this image. Thus, their decision-making is always influenced by their self-image or the self-image they wish to present in any situation. Humans who consider themselves as fair, for example, will always try to make decisions that appear fair; similarly, those who consider themselves generous will typically make decisions that live up to this image. Indeed, so strong is this effect that where people act inconsistently with their attitudes this has been shown to lead to a change in those attitudes.

This also has important implications when we think in terms of absolutes, which happens quite frequently in strength and conditioning. Phrases such as 'I use block periodisation in the off season', or 'my athletes always squat full depth', are both examples of absolute thinking. Absolute thinking leaves no room for variation and insights from behavioural economics demonstrate that we will adjust our behaviour to meet these absolutes, even if it may not be the appropriate plan of action in a given situation. Indeed, our absolute language may in itself become a straightjacket from which we find it increasingly difficult to break free.

This also stresses the importance of self-image and beliefs in influencing behaviour and it helps to explain the influence of high expectation on educational attainment.³ In this way, understanding our own and our athletes' self-image is an important aspect of any behaviourally-based intervention.

Heuristics and biases

Essentially, behavioural economics believes that human decision-making revolves around two key influencers: heuristics and biases. Simply, heuristics are rule of thumb decision-making processes. We use heuristic tools whenever information is incomplete, which is often in both economics and strength and conditioning. Heuristics are especially pertinent in system 1 decision-making processes. Similarly, through psychological experiment, behavioural economics has identified several biases which affect the decision-making process. Taken together, these have a profound, if often subliminal, effect on people's decision-making processes. Importantly, knowledge of these biases can assist in making more effective decisions, in understanding decisions and also with behaviour-changing protocols. The aim of this short article is not to provide coverage of all the potential heuristics and biases that affect human behaviour. Instead, the aim is to highlight the potential of the field to assist our decision-making and to outline a few of the heuristics and biases by which behaviour is affected. Readers wishing for more detailed coverage and analysis are encouraged to read the key sources listed in the reference section.

Heuristic decision-making: framing is everything

One of the key premises arising from behavioural economics is that decisions cannot be fully understood in and of themselves. Any decision is the result of multiple processes, some of which reside within the individual, and others which are dependent upon the external environment. This complexity in the decision-making process is essentially 'inefficient' and 'uncertain' and in an attempt to solve this, humans typically develop heuristics, rules of thumb around which they typically base decisions.

Importantly, decisions are not always consistent and research into behavioural economics has consistently shown that

the same question can have significantly different answers for the same individual, depending upon how the question is framed. Understanding these framing effects is therefore important in understanding any decision-making process.

Three important framing effects identified in the field of behavioural economics include:

1. The availability heuristic: This is linked to salience. Information that comes readily to mind, that stands out, is novel or is deemed relevant appears to affect our thinking to a greater degree than information that is the opposite of these. Advertisers and marketing executives consistently utilise this effect to make their products stand out – with distinctive packaging, tag lines, catchy jingles etc, anything that increases the salience of the product. Although we are not advertisers, it is important that we understand the effects of salience on our own behaviour and on that of our athletes. So when we present information to athletes, increasing its salience is critical if the information is to be successful in changing their behaviour. Similarly, we need to be aware of the potential effect of salience on our own decision-making processes, as often information that appears current and novel will have an disproportionate effect on our decisions and can in part explain the pendulum effect of training methods in S&C.



2. Loss aversion: Behavioural studies have consistently proven that humans are motivated to avoid losses much more than by potential gains. Findings suggest that losses are roughly twice as painful as gains are pleasurable, a finding that has been replicated numerous times over the years.¹⁰ In this way, framing potential effects as a loss are more likely to achieve changes in behaviour than if framed as a potential gain. Thaler suggests that this has become the single most powerful tool in the behavioural economist's arsenal.¹⁰ Understanding this can help us understand the reasons behind many decisions and also help us to frame decisions in a way that is more likely to lead to a successful outcome.

3. The endowment effect: Humans seem to value something they possess to a much greater degree than its nominal value. Thus, people are more likely to keep what they start with, than to trade it.¹⁰ So, for example, in terms of rewards, behavioural studies have consistently shown that giving someone a reward for a certain behaviour up front and then removing it on each behaviour lapse is more effective than subsequently rewarding behaviour. Thus, the removal of a reward or privilege, no matter how small, can be a more powerful motivating tool than the provision of a reward or privilege of similar value.

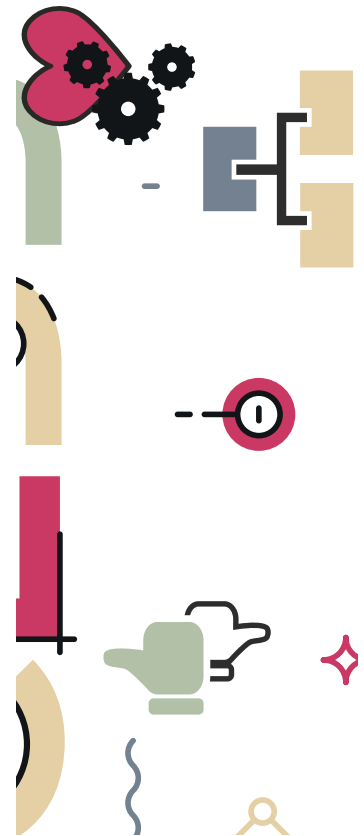
Our biased behaviour

As the field of behavioural economics has developed, it has become clear that the idea of rational unbiased decisions is fraught with challenges and that our behaviour is typically tinged with bias, whether we acknowledge it or not. Understanding these biases can help develop a deeper understanding of why athletes behave in a given way, and why we ourselves behave as we do. Importantly, this understanding also provides potential strategies to successfully deal with behavioural challenges we may face. Biases highlighted in the literature include:

1. status quo bias
2. confirmation bias
3. present bias
4. hindsight bias
5. herd behaviour

THE DEFAULT OR STATUS QUO BIAS

This can be thought of as the behavioural version of inertia. People typically prefer to continue to act as they have always done, even when circumstances change. Humans have a clear preference for the current state of affairs, and so tend to prefer things to stay the same. Subsequently, they typically choose not to switch from their normal behaviour unless there is a compelling incentive to change. This has been coined the default or status quo bias.⁶ Evidence of this is abundant in the economic world: not changing energy suppliers, rolling over insurance policies year to year, taking out and continuing gym memberships etc. An examination of our own lives probably emphasises how many of our actions are simply habits, and how changing these can be quite challenging. These behaviours often become automatic as our default choices don't involve a great deal of cognitive effort.



In sport, we see this regularly where teams will often do what they've always done, with no clear rationale behind the decision. Subsequently, changing behaviour needs to understand the status quo bias and utilise this knowledge in order to make decisions that facilitate a change in behaviour. In overcoming this bias, three key factors seem to play an important role:

1. There needs to be a compelling argument to change. Importantly this must be framed in a way that provides an emotional resonance with the athlete (salience), rather than a series of facts. Footballers for example are more likely to be influenced by an intervention that helps them make more headers than one that enhances their elastic utilisation ratio.
2. The change needs to be easy to instigate. Even when there is overwhelming evidence to support a change, many people maintain the status quo simply because it is easier. As an example, uptake of donor cards has been much greater when the default is to be enrolled and have to opt out if they don't wish to participate, than when the default is to be unenrolled and have to opt in to participate. Consequently, when planning any intervention, it is important to consider the ease with which it can be implemented.
3. The first step in getting people to change their behaviour is to 'unfreeze' the limiting factors. One way to unfreeze people is to remove barriers that are preventing them from changing. Critically, this requires an identification of the barriers as a first step, and this is not always easy. Similarly, it then requires actions which progressively remove the barriers to the desired behaviour.

CONFIRMATION BIAS

Confirmation bias occurs when we look for, or evaluate, information in a way that fits with our existing thinking and preconceptions. People have a natural tendency to search for confirming rather than disconfirming evidence.¹⁰ Humans are pattern-seeking animals, and so we naturally attempt to seek patterns, even when they don't exist, and to justify any actions that we take. As outlined earlier, humans have a need for a consistent self-image and confirmation bias is one element of trying to achieve this consistency. Subsequently, when evaluating any action, we will actively search for evidence that supports our action, and critically often ignore evidence that suggests our actions were ill advised.

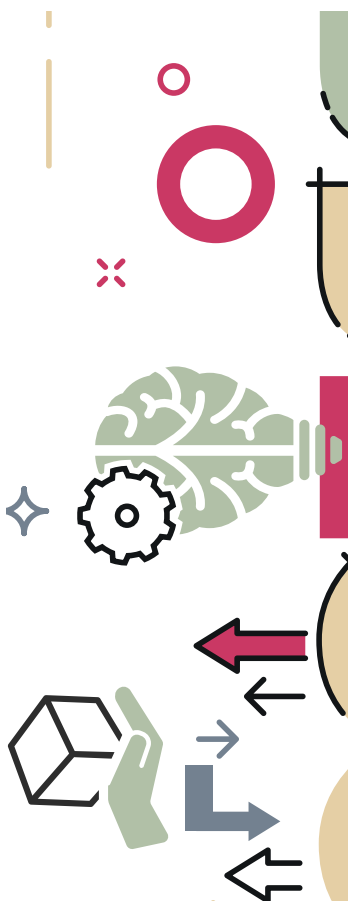
This happens frequently, and we need to be aware of this when evaluating our work. Are we truly objective, or is our confirmation bias consciously or even sub-consciously affecting our decisions? Similarly, when influencing others, it is important to be aware that they too will have a confirmation bias and will often bring up examples to support their cause. Knowing this in advance can assist us in dealing with this situation when it occurs

PRESENT BIAS

The concept of present bias is summed up succinctly by Scottish economist and author Adam Smith: *'The pleasure which we are to enjoy ten years hence, interests us so little in comparison with that which we may enjoy today.'* This preference for immediate over longer term benefits influences so many of our decision-making processes. Such preferences are 'present-biased' since they put so much weight on now versus later, and they lead to time-inconsistent choices.

Present bias can be exacerbated by situations where there is scarcity. Scarcity of money, for example, may result in the pressure to pay current bills ahead of the need for retirement saving. Similarly, in a training environment, short-term needs of performance will typically be put ahead of the long-term needs for development, especially when training time is scarce or the pressure to perform in the short-term high. Indeed, present bias may lie at the heart of many of our issues with developing athletes. Dealing with this type of issue requires an awareness of this bias and the development of strategies to deal with these. Indeed, it could be argued that one of our biggest challenges in initiating long-term athlete development is the title itself, as the word long-term naturally encourages a process of future discounting, where the potential long-term benefits are sacrificed for present day goals - 'athletic development' may actually be a better title in the context of present bias as it is suggestive of a process that can bring short-term as well as long-term benefits.

Present bias also has an effect on our attribution. Whenever we see characteristics today we will typically associate them with incidents or changes that have occurred recently. In this way, an athlete with an outstanding performance on Saturday will typically try to explain this in relation to something that happened in the days shortly before that performance, and tend to discount factors that happened in the more distant past. However, in reality, the impact of the more recent events may be negligible, and



the impact of the more distance events much more significant. Unfortunately, present bias will often prevent these key associations being made. This tendency is again also a great challenge for athletic development as the actions of the development process aren't always noticed in the glare of current performance. Being aware of this can help offset this tendency.

HINDSIGHT BIAS

We naturally presume that when we recall events in our life we do this accurately. However, research consistently proves that this is not the case, and just as our present has a bias, our recalling of the past is also biased. The finding is that, after the event, we think that we always knew the outcome was likely, if not a foregone conclusion. Hindsight bias distorts reality, over-estimating the effects of our actions and often viewing them through rose-tinted glasses. Subsequently, we may often identify trends that do not exist or allocate undue importance to factors that had little effect. Accurate recording of all inputs and outcomes is of the utmost importance in the light of this bias.

HERD BEHAVIOUR

Whenever there is uncertainty about decisions, the more likely it is that the default option will be taken. This reflects the earlier status quo bias, but also reflects another key factor in human decision-making, which is herd behaviour. Any decision we make is often influenced by the fact that we are implicitly or explicitly influenced by social norms. Social norms signal the 'appropriate behaviour' taken by the majority of people or a distinct group of people. In this way, the default option is typically thought of as that which the majority has taken – in other words, the safe option.

These influences are particularly powerful, especially when considering the human need for consistency, and can limit decisions people make that lie outside these norms. It takes a brave person to go against social norms, and it could be that with the surge in social media use, this effect is becoming ever more powerful. It is always important to ask whether our decisions are solely based on our analysis of the situation or whether they are influenced by whatever norms we consider important.

Marketing in our industry uses this bias continually, with any equipment for sale typically accompanied by an 'as used by' tag, normally of a high-profile user, outlining how the product is the social norm for that calibre of client. We have all probably been influenced at some stage by this 'fear of losing out' mentality and not using what others are using.

These effects influence individual decision-making, but also significantly affect social decision-making. This influence is one of the key factors affecting groupthink, where people will often come to a conclusion that what they believe is the social norm, rather than what they believe individually, which in some scenarios can lead to the false consensus effect. Norms are influenced, not only by numbers, but also by powerful groups or even influential individuals within a group. The 'dressing room' is often a parlance for the social norm of a sports team, and influencing behaviour in these scenarios can be more about influencing the behaviour of the social norm and the key players that affect that norm, than providing evidence as to the effectiveness of a training programme.

Integrated not isolated effects

The above information has highlighted how human behaviour is complex and multi-layered. Consequently, seldom does one heuristic and bias act alone, and often when explaining behaviour it is not possible to pin down the specific behavioural cause.¹⁰ Just as with multiple training effects acting holistically, behavioural influences should not be seen in isolation but instead as multiple influences acting on the decision-making process. Indeed, our scientific obsession with isolating single variables can often be at odds with the real-world experiences. Instead, we need to look at opportunities to integrate these effects, rather than to view them in isolation.

Summary

Given the number of decisions we make each and every day, and how these can have a significant impact on our practice, it seems logical that a discipline dedicated to understanding

the decision-making process can provide useful insights. This article has hopefully outlined some potential areas in which an understanding of the processes that are influencing our decision-making on a conscious and subconscious basis can assist us in making better decisions. Additionally, it gives us a useful tool with which to understand the factors that are influencing our athletes' decisions and also the decisions of anybody who has the potential impact on the programme.

It is important to remember that behavioural economics is still in its infancy, and as with any study of human behaviour, will evolve as more information comes to light. Additionally, the majority of current research has been in western societies, so it is not yet clear whether all of these influences affect other cultures equally. Consequently, we still have a significant way to go before we can fully understand behaviour and decision-making. However, hopefully the information in the article can assist with the decision-making process and in understanding the factors that are consciously and subconsciously shaping behaviour in any given situation.

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