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Research report

August 2015

A *head* for *hiring:*
The behavioural science of
recruitment and selection

The CIPD is the professional body for HR and people development. The not-for-profit organisation champions better work and working lives and has been setting the benchmark for excellence in people and organisation development for more than 100 years. It has 140,000 members across the world, provides thought leadership through independent research on the world of work, and offers professional training and accreditation for those working in HR and learning and development.

A head for hiring: The behavioural science of recruitment and selection

Research report

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About the Behavioural Insights Team
The Behavioural Insights Team was set up in 2010 as the world's first government institution dedicated to the application of behavioural sciences and is now a social purpose company, part owned by its employees, the Cabinet Office and Nesta, the UK innovation charity.

About Mark Parkinson
Dr Mark Parkinson is an occupational psychologist experienced in developing psychometric tests and profiling teams and individuals. He has designed or advised on assessment and development processes for many organisations, including Amnesty International, Gocompare, Waitrose and the United Nations.

THE
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Foreword

Bringing talented individuals into the organisation is one of the most important roles of managers and HR professionals. So it is not surprising that the recruitment process has developed into a sizeable industry, with marketing and search firms and occupational psychologists at the forefront of this. At the leading edge, techniques in attracting employees into the organisation and assessing candidates have become impressively sophisticated. This can be seen in particular with highly engaging graduate recruitment campaigns and in the use of assessment centres.

But regardless of the level of resources and techniques one has to work with, the recruitment process relies on human decisions, of candidates as well as recruiters. And, as behavioural science has continually highlighted, our decision-making is much more prone to sloppy thinking and bias than we would like to believe.

Behavioural science gives us a unique and valuable perspective for people management. As we have noted before, understanding human behaviour lies at the heart of HR and we need to make sure that policies are designed and executed in sync with how people's minds work.

Previously, the CIPD has published research on applications of behavioural science to learning and development, HR in general and, more recently, pay and reward. All this research can be found at **cipd.co.uk/behaviouralscience**

This report builds on this important work stream by drawing key insights from behavioural economics and cognitive and occupational psychology for the hiring process. It takes a broad look at recruitment, from outreach activity and the creation of job adverts, through to making final hiring decisions. In doing so, it brings several key debates up to date, discussing the best available evidence in this crucial and continually evolving field.

It is easy to neglect best practice in recruitment, not only because it is tempting to think we don't have sufficient time, but also because we like to make decisions based on what feels intuitively right. This report sets out to challenge assumptions that underlie this and help those involved in directing or executing recruitment strategies to take a more robust, evidence-based approach. Doing so will help ensure you really are hiring the best.

Jonny Gifford, Research Adviser, CIPD

Executive summary

We all agree that recruiting and selecting the right people is fundamental to any organisation's success. How best to do it, however, remains a challenging area. That's no surprise: the employer and potential new hire enter the process with limited information on what to expect and have few opportunities to learn from their behaviour. In addition, the process is inherently high stakes, so stress levels may be high. Ultimately, any recruitment and selection process demands complex and speedy decision-making from both sides.

Behavioural science has a lot to say about the way in which people make decisions in these types of settings. Our behaviour does not always fit a rational actor model but it is still systematic and predictable. This report outlines ways in which harnessing knowledge about how we actually behave can help recruiters – including external agents, recruiting managers and HR professionals – to improve outcomes for the organisations they represent.

This is an area that benefits from multidisciplinary research – occupational psychologists, economists, neuroscientists and organisational behaviour experts have all shed light on parts of the recruitment and selection process over the past decades. The goal of this report is to whittle down the existing evidence using a behavioural lens to practical, actionable insights, clarify where the evidence is strongest and suggest areas for future research.

We start by looking at ways to attract candidates best suited to the job and the organisation's broader needs. While it is particularly difficult to determine who the 'right' applicant might be, there is growing evidence that how you conduct outreach efforts and how you utilise existing networks will determine who finds themselves in your applicant pool. Recent evidence from behavioural science also shows that even small changes to how you frame a job advert can have a disproportionate effect on who applies and, subsequently, how they perform on the job.

In the second section we consider the evidence behind the use of key selection and assessment tools as well as the biases and judgement errors that may occur on the assessor's side when using these tools. There are simple tweaks that can be made to use the tools in a more effective way. For example, anonymising or jointly comparing CVs helps assessors to concentrate on the information that matters. Structured interviews are shown to be more effective than unstructured ones overall, although the difference may not be as stark for certain types of interviewers. The evidence on tests and questionnaires shows they can be powerful predictors of performance, but the content of those tests will determine their predictive validity, so they must be carefully matched with job requirements.

The third section focuses on the candidate's experience during the recruitment process. Not only does the candidate experience affect our ability to decipher who is best, it also can have knock-on effects on an employer's brand and their ability to attract talent in the future. The impact of stress and anxiety during interviews is well documented. Since the situation is likely to be inherently stressful for an employee, much of the literature suggests that additional stress should be avoided. Candidates from disadvantaged or minority groups may be particularly prone to experiencing pressure, due to negative stereotypes and the sense of being an outsider. The research here is clear: when someone's identity as being from a disadvantaged or minority group is highlighted to them, this may negatively impact their performance in the assessment process. There are simple ways to relieve individuals from these pressures.

We end the report with a call for more research. This need not come from academia alone. Shifting away from a model based on intuition and vague notions of 'fit', recruiters can build a strong evidence base by building rigorous evaluation into their own practices. By constantly and consistently testing their own practices, organisations will not only learn what works best, they will make better hiring decisions.

18 tips for better recruitment practice

Attracting candidates

1 Take a fresh look at person–organisation fit, considering both current and aspirational organisational culture.

2 Test the wording of your job adverts to see how it affects who applies.

3 Personalise your outreach efforts to encourage applicants.

4 Make it easy for people who show interest to apply directly.

5 Vary where and how you do outreach.

6 Push for transparency in outreach even when using networks for recruitment and selection.

7 Systematise your use of social media in recruitment.

Assessment

8 Group and anonymise CVs when reviewing them.

9 Pre-commit to a set of interview questions that are directly related to performance on the job.

10 Focus interviews on collecting information, not making the decision.

11 Make sure tests are relevant to the job and fit for purpose.

Decision-making

12 Include people in hiring decisions who have not been involved in assessing candidates.

13 Stick to what the scores tell you for final decisions.

Recruitment strategy

14 Spread assessments and decisions across days, but keep all other conditions similar.

15 If discussing unconscious bias, emphasise the desired behaviour of assessors, rather than the problem.

16 Evaluate your assessment practices.

Candidate experience

17 Avoid creating stereotype threat in the assessment process.

18 Ask for feedback from rejected and accepted candidates.

Introduction

'Steve Jobs described the process of hiring top talent as "the most important job". Yet, how to find the right employee remains a contested question.'

'Our employees are everything.' A quick web search shows that thousands of companies include this sentence, or a variation to it, in their mission statements. One top-notch engineer is worth *'300 times or more than the average,'* claims Alan Eustace, a Google vice president of engineering (Tam and Delaney 2005). Steve Jobs described the process of hiring top talent as *'the most important job'* (Jager and Ortiz 1998). Yet, *how* to find the right employee remains a contested question. Compared with other areas in organisational management, relatively little academic work has focused on how different firms approach and should approach hiring decisions (Oyer and Schaefer 2011).

Many see recruiting and selecting the right employees more as an art than a science. Yet a scientific approach has a lot to say about how both assessors and candidates think and make decisions. Ultimately, this can mark a major change in our ability to systematically predict good performance and how to measure what works in a rigorous and quantifiable manner.

Behavioural science, which lies at the intersection of psychology and economics, focuses on how we actually behave, as opposed to how a purely rational actor would. We will argue in this report that by acknowledging and understanding the systematic biases in decision-making of both candidates and recruiters, we can design better systems of recruitment and selection. This report will ask three broad questions:

- How do we attract the right kinds of people?
- How do we design the best tools for selection and prepare assessors to use them?
- How can we improve the candidate experience?

In each area, we focus on what we know works from existing evidence in behavioural science, occupational psychology, cognitive psychology and organisational behaviour and also what behavioural science has to say about future areas of research. The evidence we present is not meant to be a comprehensive literature review. Rather, we focus on the evidence that has clear practical implications for recruiters – including external agents, line managers and HR personnel – and can be used to improve aspects of the recruitment and selection process in as straightforward a way as possible.

1 Attracting the people you need

Who are the 'right types' of people?

Person–organisation fit and person–job fit (see Box 1) are established predictors of performance (Goodman and Svyantek 1999), turnover (see Verquer et al 2003 for a meta-analysis of 21 studies) and other employee outcomes (Boon et al 2011). Indeed, much of the theory predicts that individuals should be attracted to specific organisations based on fit (Schneider et al 1995, Sekiguchi 2007). Yet there is some evidence that, for various reasons, this might not play out in practice (Billsberry 2007).

When deciding where to apply, individuals may not be able to accurately assess how well they will fit. There are large informational asymmetries on both sides, and candidates may be influenced by a range of factors, including the perceived value of a job to their career, predictions of how successful they would be in getting a job, cultural norms, previous experiences, and other personal beliefs and interests (Eccles 2005).

Insights from behavioural science show a number of ways that these judgements can be biased. For example, people may be overconfident in how successful they will be (**optimism bias**), short-sighted when considering how much they will value a particular job or an aspect of a job (**myopic bias** or **temporal discounting**), stick to the sectors or job roles that they are currently in (**status quo bias**), consider their own characteristics more heavily than the characteristics of other people who may be applying for the job (**egocentric bias**), or overestimate how many people work in an industry in total when estimating their probability of getting the job (**base rate neglect**). The **sunk cost fallacy** may lead them to choose certain career paths because of foregone costs, such as college fees. Therefore, if companies want to attract people who will fit, they need to leverage what really attracts people to a given job and organisation.

However, another complication arises in how employers define or make assumptions about who will fit. As we'll explore at various points in this report, there is a danger that a focus on person–organisation fit undermines diversity. Employers selecting only for people who seem similar to themselves or their colleagues can put people of a different race, gender, ethnicity or socioeconomic status at a disadvantage. This has implications not only for fairness but also for long-term business needs such as innovation and organisational responsiveness to market changes (Herring 2009).

Such bias need not be conscious. **Affinity bias** leads people to like those who are similar to them or someone they know; the **mere exposure effect** causes individuals to like things they have been exposed to; and **status quo bias** may cause employers to feel more comfortable to look for candidates who are similar to candidates they have hired before. Equally, the **endowment effect** may lead managers to value skills and characteristics of current staff disproportionately: possibly blinding them to the benefits of other characteristics.

Further, while it may be easy to select for short-term fit, it may be more difficult to predict what characteristics a workforce needs to have in a few years' time. The solution is not to ignore fit, but define it in a way that is meaningful and beneficial to the organisation longer term. There are subtle ways to avoid misdefining fit, as we will explore throughout this report. Clarifying explicitly what characteristics are most critical for your organisation's culture is the first step. This could include

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Box 1: Who fits the job?

Person–organisation fit is usually described in terms of how well a person's perceptions of the values held by a company map on to the values that the person holds themselves (Cable and Judge 1996).

Person–job fit typically refers to the match between a person's abilities and personality, and a job's demands and what it offers (Edwards 1991).

See glossary page 24 for further definitions of behavioural concepts.

aspirational values and behaviours that are largely *out of sync* with the organisation's existing culture. Thus, a second step could be to determine whether there are positions where anti-fit is actually desirable. Some organisations approach the topic even more boldly: for example, Google challenges its own selection criteria by occasionally hiring someone who 'doesn't fit' (that is, someone who didn't meet some of the recruitment criteria) and measuring the impact (Bock 2015).

Practitioner tip
1 – Take a fresh look at person–organisation fit
Write down a definition of organisation fit as well as person–job fit, explicitly listing employee characteristics that the organisation needs, and commit to only evaluating candidates on these

characteristics when it comes to 'fit'. Take on board the future vision of the organisation's culture and consider 'anti-fit': someone who might meet all the requirements needed to perform the job well but may not fit with some aspects of the existing culture. Consider that for some job roles, your organisation may even need this 'anti-fit', and be willing to challenge the status quo by looking for people with unique skills or traits.

Improving job adverts
The journey to attract the right candidates starts with job adverts. It is easy to see job adverts as a secondary and uninteresting component of the process, but evidence suggests that getting the job advert right is a key element of attracting the right kind of people. Although an employer's brand and

reputation will be one of the most important predictors of whether someone applies for a job, variations in job adverts attract different types of candidates who go on to perform differently on the job.

For example, one study found that specific types of words are more likely to attract female or male candidates (see Box 2). Evidence also shows that, on average, women apply for positions when they meet 100% of the required qualifications on a job advert while men are likely to apply when they meet only 60% of those qualifications, so the list of what counts as 'essential' will dramatically affect who applies (Mohr 2014). Even simply including more information about how many other people have applied for a job can influence application rates (see Box 3).

Box 2: Gendered words in job adverts

In a study by Gaucher et al (2011), when a job advert included stereotypically masculine words, women were less attracted to these jobs compared with when the same job advert was constructed to include stereotypically feminine words. Moreover, both men and women assumed there would be more males in this job role when the job advert included masculine words. To illustrate, when an advert for a retail sales manager position was constructed to sound masculine, it included sentences such as, *'We will challenge our employees to be proud of their chosen career'* and *'You'll develop leadership skills and learn business principles.'* The feminine worded version of the same job advert included sentences such as, *'We nurture and support our employees, expecting that they will become committed to their chosen career'* and *'You will develop interpersonal skills and understanding of business.'*

Box 3: How many people have applied for this post?

A recent large field experiment demonstrated that showing the true number of people who have started an online application in a LinkedIn job advert increased the total number of applications by 3 percentage points, which could lead to thousands of additional applications per day (Gee 2015). In the study, underneath the 'apply' button, half of the LinkedIn users would see '162 people have clicked', where the number is always the true number of applicants, while the other half of users would not see this. Interestingly, the effect was mainly driven by higher numbers of female applicants: there was no significant impact on the number of male applicants. This could be explained by women's tendency to be more risk- and ambiguity-averse than men (Croson and Gneezy 2009), being more interested in a job when there is a signal that other people have applied. It is also interesting to note that, when the true number of applicants was displayed, female applicants were particularly more likely to apply to *male-dominated* jobs.

One dilemma that often emerges when deciding how to attract the right people is the perceived trade-off between **intrinsic motivation** and **extrinsic motivation**. Here, the evidence is mixed at best. Some studies have found that attracting higher-ability or more career-ambitious people does not stand in the way of hiring **pro-socially motivated** people – that is, people who are highly motivated by the opportunity to make a social impact – but other studies show that it can (see Box 4).

To understand this contrasting evidence, we need to look at the specific context of jobs and job adverts. For jobs that are associated with highly able people who have particular technical skills, a job advert that highlights values and mission may be particularly appealing, differentiating it from adverts for similar jobs that do not do this. For jobs that are already seen as highly pro-social, however, an advert that re-emphasises the pro-social elements of the job may not be as impactful.

Practitioner tip
2 – Test your job adverts
Even small changes to wording on a job advert can make a difference.

So it's worthwhile testing which job advert wording is right for the positions you are advertising by designing two or more variations and measuring which one leads to more interest (for example, webpage views, click-through rates or applications) or applications from certain groups. Remember to record what your top applicants actually saw when they applied and, if possible, link to future performance or retention metrics.

Outreach activity
In order to reach the most appropriate candidates, employers need to find creative ways to grab the attention of applicants, especially considering that, on average, the most capable candidates are in work. Indeed, using unusual outreach methods, such as attention-grabbing postcards, has been shown to increase the total candidate pool and the quality of the candidates in that pool (Cromheecke et al 2013).

Digital innovation has revolutionised the way employers can reach out to potential applicants. Adverts put up on job vacancy websites can easily reach thousands of people. Social networks such as LinkedIn allow

'Digital innovation has revolutionised the way employers can reach out to potential applicants.'

Box 4: Career tigers on a pro-social mission?

In a large recruitment round for health workers by the Government of Zambia, a randomised control trial was used to vary the message on job adverts in different communities (Ashraf et al 2015). Making the career development opportunities more salient attracted higher-ability people without crowding out pro-social motivation, compared with adverts that highlighted the pro-social nature of the task. This has knock-on effects on performance. The health workers recruited with the career-focused message visited 29% more households to do inspections and provide counselling, a key indicator of performance. They also organised more community meetings and they stayed in the job just as long as the health workers recruited with the pro-social messages.

In a similar vein, a study by Dal Bó et al (2013) found that including higher wages in job adverts not only attracted more able applicants but also applicants with stronger pro-social motivation. However, another study (Deserranno 2014) showed that advertising higher expected earnings *discouraged* people with strong pro-social motivation from applying for a health-worker position in Uganda. Here, the more pro-social people attracted by a version of the job advert that signalled lower potential earnings were found to perform better and continue working for longer, so the change in the advert had major implications.

Box 5: Personalising messages for potential candidates

The Behavioural Insights Team (BIT) ran a trial with Jobcentres in the UK that aimed to increase the rate that unemployed people show up to recruitment events with large employers. Jobcentres were already sending text messages to jobseekers informing them of the opportunity, but only about 10% of people showed up. In the study, personalising the message with the names of the jobseeker and the job coach, and mentioning that a job coach had pre-booked the jobseeker a place at the event, almost tripled the likelihood that a person showed up to the event (to 27%) (Sanders and Kirkman 2014). In another setting BIT has found that personalised emails from real employees can significantly increase the number of applications for a position. This suggests that even small tweaks to outreach programmes that increase personalisation may significantly improve the success rate of a recruitment drive.

employers to also contact potential candidates, even those who are not actively looking for work. Though many companies report using social media for hiring purposes, few have systematic processes in place for reaching out to candidates (CIPD 2013). As a result, there is limited rigorous evidence on the impact of using these channels for recruitment.

Some top companies regularly search and reach out to individual candidates they think are suitable, for example, through an in-house search team whose job it is to actively approach the best people. About half of Google's hires each year are found through such a channel (Bock 2015).

One might worry that an in-house search function is limited in the same way that employee referral programmes are, the scope of existing networks largely defining who is approached. But the incentives of an in-house search firm are likely to be more aligned with the organisation's long-term goals than the incentives of an individual employee who is referring someone. Whereas the value of an individual employee's referral may simply be assessed on whether the contact secures a job, an in-house search team is

more likely to also be set objectives linked to ensuring the organisation as a whole is hitting key targets. This should encourage a more strategic and concerted effort to increase outreach to diverse populations and increase the pool of talent being approached.

It is also worth considering how outreach activity can be made more effective. If one goal is to increase applications from specific groups, behavioural science can tell us a lot about how to get people to show up to outreach initiatives and to then apply to jobs (see Box 5).

Unfortunately, there is limited rigorous evidence that directly compares different types of outreach efforts, but concepts from behavioural science might be particularly relevant here. For example:

- Encouraging someone to apply because they will lose an opportunity if they don't, rather than gain one if they do, may work well because of **loss aversion** – the fact that we weigh losses about twice as much as we weigh equivalent gains. One way to do that is to frame recruitment opportunities with a sense of urgency – clarifying, for example, that this

will be the only open application period this year.

- Behavioural science tells us that it is difficult to recall the length or the details of an interaction. Rather, your experience is shaped by the most intense moment and the end of the interaction or the **peak-end effect** (Kahneman 2000, Kahneman et al 1997). Recruiters may want to tailor their pitch accordingly.
- There is widespread evidence that people respond to **social norms** – if they think others are behaving in a certain way, especially their peers, they are more likely to do it themselves (Tajfel 1979). This suggests that one way of encouraging potential recruits to take the next step and apply is to emphasise that others like them have already done so.

Practitioner tips
3 – Personalise your outreach efforts
Don't underestimate the power of personalisation. If someone has been contacted in the past or if you can find their contact information through social media, a personalised email or text message encouraging them to apply can be highly valued, especially when it comes from an identifiable person, instead of a generic company contact address.

4 – Make it easy for people who show interest to apply directly

Small changes in how easy it is to apply can have large effects on people's willingness to make the initial effort. On a website, for example, one or two clicks from the home page should get people to the actual application. Arduous forms can discourage even the most motivated applicants.

5 – Vary where and how you do outreach

With the explicit aim of attracting a more diverse group, don't just focus on the outreach efforts that get you the highest number of applicants. Diversify your outreach channels and track where you find the people who end up being successful, both during the assessment process and on the job.

Using networks

In addition to organised outreach activity, information about a vacancy or potential recruit spreads via networks. Classic research on the 'strength of weak ties' (Granovetter 1973) suggests that information about new jobs is typically shared with individuals with whom you have weak ties – acquaintances – rather than close friends. More recent research confirms this relationship: weak ties matter for employment outcomes while strong ties do not (Brady 2013, Marmaros and Sacerdote 2002).

This has significant implications for whether a recruiter can get top candidates and whether the tools for recruitment create an unequal playing field. For example, if employees' networks are ethnically homogeneous, an outreach programme that depends on those networks may be systematically missing out on candidates from certain ethnic groups. More broadly, if job referral practices are different in different groups, the process might work really well for attracting a certain type of candidate, but does not necessarily widen the applicant pool to top candidates from a more diverse background. Indeed, up to 38% of the difference in employment between black and white youth can be attributed to differences in the effectiveness of job referrals from social networks (Holzer 1986).

Aside from issues of diversity, we may still want to know how job referral programmes work for the bottom line. Here, the evidence is mostly positive (see Shinnar et al 2004, Breaugh and Starke 2000). Some studies find positive economic returns for firms that invest in their employees' social capital (Fernandez et al 2000) and cost–benefit estimates suggest that employee referral programmes are cost-effective (Morehart 2001). When studying the effect of job referral programmes on employee turnover, some studies find no difference in turnover of referrals versus non-referrals (Neckerman and Fernandez 2003). Others find improved tenure for referrals (Kirnan et al 1989) and higher job satisfaction (Breaugh 1981).

Some of the most recent research suggests that although referred applicants have similar skills to non-referred applicants, they are more likely to be hired and subsequently be more productive while working, earn higher wages and be less likely to quit (Burks et al 2013). Yet, it is important to consider exactly how a candidate is referred. For internal recruitment processes, when candidates are hired through an ad hoc reference by a line manager, their on-the-job performance is lower on average than when candidates are nominated via an open job posting for all internal candidates (Keller 2015).

Social networking sites are starting to be used as a source of predictive hiring information. More than a simple outreach vehicle, understanding how applicants and employees are interconnected allows recruiters to better utilise existing networks to predict performance and likelihood of applying for a job. Some research is starting to look at how social networking sites (for example Facebook) can be used as a hiring tool. There is some evidence that you can accurately rate high- and low-performers based on their social networking profiles (Kluemper and Rosen 2009). However, as with unstructured interviews, recruiters can fall prone to **confirmation bias** (Nickerson 1998) when doing online searching: looking mostly for information that confirms initial impressions of a candidate and which may be irrelevant to their on-the-job performance. Similarly, the **halo effect** may lead recruiters to base their judgements too heavily on a salient piece of information on an online profile.

Practitioner tips
6 – Push for transparency even when using networks for recruitment and selection

When hiring staff internally, make sure the message about the vacancy is publicly visible and transparent to all employees.

7 – Systematise your use of social media in recruitment

In order to not get side-tracked when using social media, commit to an online search strategy up front, as recommended by the CIPD (2015). Outline which searches you will do and follow the same process for all candidates. Log your findings systematically.

2 Designing selection processes and preparing assessors

'There is a multitude of evidence that shows that we hire people like ourselves.'

Once suitable candidates have been attracted to a position, it is the role of recruiters, including external agents, line managers and HR staff, to select the best ones. Behavioural science tells us that people have hardwired systematic biases in how they evaluate candidates. As mentioned in Section 1, all too often, the emphasis on 'fit' from managers slips into an emphasis on people who are similar in non-relevant ways to existing employees or the decision-makers. Concerns about dissimilarity are often more salient to employers than concerns about productivity or skill. This has obvious consequences for the ability of a selection committee to improve diversity in recruitment.

There is a multitude of evidence that shows that we hire people like ourselves: employers seek candidates who are similar to themselves in terms of leisure activities, experiences and self-presentation styles (Rivera 2012). Most recently, the UK Government's Social Mobility and Child Poverty Commission has highlighted the deleterious effects of 'poshness tests' (for example, looking at accent and school attended) in recruitment to elite firms on social mobility and diversity (Ashley et al 2015).

Evidence on gender bias is also clear. Managers – both male and female – continue to favour men over equally qualified women in hiring, compensation, performance evaluation and promotion decisions (Koch et al 2015). In field experiments, students evaluating teachers viewed females as less competent than males after receiving negative evaluations

from them but not after receiving positive evaluations (Sinclair and Kunda 2000). In a similar way, science professors evaluated female student applicants as less competent and less hireable than male students with identical application materials (Moss-Racusin et al 2012).

Given our propensity for bias, the question then becomes: what are the best selection tools – or combination of tools – to help to help overcome biases and get the best outcome? While selection tools can be used for a multitude of different purposes, the main goal of any assessment process should be to tease out key predictors of performance in an appropriate and cost-effective manner.

Below, we outline strengths and weaknesses of some of the most frequently used tools, considering the potential behavioural pitfalls they may exemplify. More importantly, we outline the growing literature on what to do to de-bias these tools and draw together the different bundles of data and insight to make final hiring decisions.

Reviewing CVs and application forms

There is a lot of evidence that bias may creep into assessments of CVs, on the part of the assessor. Research from the US shows that identical CVs get more call-backs when the name on the CV is traditionally white (for example Emily or Greg) compared with traditionally black (for example Lakisha or Jamal) (Bertrand and Mullainathan 2003). This

phenomenon has been replicated in a host of different contexts and audit studies, with bias against immigrant applicants (Oreopoulos 2009) and even men in entry-level jobs that are female-dominated (Booth and Leigh 2010).

What to do about it

While there is no silver bullet for eliminating all bias, certain experiments have shown promise. In a lab study, joint evaluation of candidates – seeing more than one CV at a time, side by side – decreased gender biases and increased the likelihood that participants assessed individuals based on their performance and potential, rather than gender stereotypes (Bohnet et al 2012).

Anonymous CVs show mixed evidence: in one field experiment in France, sending anonymous CVs increased the call-back rate for women but not for immigrants (Behaghel et al 2011). This research is still at its infancy, but it seems at least plausible that managers shouldn't ask for information on the CV that can bias the assessor but provide no predictive value on performance, such as a person's photograph.

In other contexts where blind selection is possible, it seems to always work best. For example, when a screen was used to conceal candidates from the panel during preliminary auditions for orchestras, female musicians were more likely to advance to the next round by 11 percentage points (Goldin and Rouse 1997). During the final round, 'blind' auditions increased the likelihood of female musicians being selected by 30%.

Practitioner tip
8 – Group and anonymise CVs

Rather than scoring each CV you receive individually, compare CVs and application forms in groups. When possible, take out names and any identifiable information (including address) before scoring CVs or application forms.

Interviews

Common views on the value and utility of interviews seem to change periodically. Job interviews have been criticised as having very low predictive power because they easily sway assessors based on irrelevant information (Pingitore et al 1994), have low incremental validity beyond cognitive tests (Campion et al 1988) and they allow assessors to feel confident

'Job interviews have been criticised as having very low predictive power.'

Box 6: Sense-making in unstructured interviews

In a set of three studies (Dana et al 2013), researchers tried to understand why people might value unstructured interviews, despite evidence that they tend to have low predictive validity. They ran studies with students to predict the future GPA (grade point average) of other students, using both relevant information (previous GPA and performance, for example) and an unstructured interview. In one group, interviewees answered questions based on a random response system – essentially providing nonsensical answers or 'random noise'. One might have expected that this extra irrelevant information would have been discarded or ignored in comparison with the relevant information. However, the relevant information was weighted less heavily in the assessment process once this random noise was introduced, leading to worse predictions of performance overall. Interestingly, even when they received these nonsensical answers, assessors were just as confident about their evaluation of the interviewee's performance as they were when interviewees answered normally. This can be seen as evidence of **sense-making** – our tendency to identify patterns or detect trends even when they are non-existent.

about their decision, even if what is said during the interview doesn't all make sense (see Box 6). However, research also suggests that much of the weakness of interviews can be accounted for by the *type* of interview being used – for example, a structured versus an unstructured interview – rather than the broader category of interviews (see Judge et al 2000).

Irrespective of debates on the evidence, the interview remains popular as a selection tool and it is hard to see it being otherwise. It is a very convenient way to select candidates and can be used in particular to gauge skills that may be pertinent to the job, such as being able to explain clearly, and listen well. If we accept that it is here to stay, the question then becomes: how can we mitigate these weaknesses to make the employment interview as robust and useful as possible?

From a behavioural perspective, problems associated with interviews are perhaps unsurprising. One factor at play is the high **cognitive load** (that is, the 'strain' put on our brain) involved in making good judgements in such settings. As a result, interviewers may make decisions hastily, not taking the full range of data available to them into account.

Indeed, some studies even suggest that the real decision has been made in the first four minutes of an interview (Ambady and Rosenthal 1992, Barrick et al 2012). More recent studies show that the time it takes to make a decision in an interview depends on contextual factors such as whether the interview is structured (decisions take longer), or which applicant an interviewer is considering. Decision time increases for the first few candidates an assessor is interviewing, but begins to

drop as early as the fourth candidate (Frieder et al 2015). In the remainder of the interview assessors may fall prone to **confirmation bias**. Colloquial examples of this include 'selective hearing' or 'selective memory', whereby people profess to only hear or remember the information which confirms their prior beliefs or opinions on a subject. This suggests that the order of applicants can have a significant impact on whether they are hired.

Another particular complication for interviews is that candidates differ in their *expressed* attitudes and behaviours. **Social desirability bias** describes a tendency to respond in a way that is perceived to be socially desirable, instead of giving a response that accurately reflects an individual's true feelings (Snyder 1987). For example, when faced with a high-stakes decision, it's natural for people to follow established social norms and adopt the decision strategies used by others (Sunstein 1996). Thus, how job candidates differ is heavily influenced by how acutely they perceive social norms, or what they feel the 'right' answer is.

Such tactics can be effective. A large meta-analysis shows that candidates who use tactics to present themselves in a better light get scored more highly during the interview, particularly when the interview is unstructured (Barrick et al 2009). These tactics correlated more strongly with interview ratings than with actual (later) job performance.

Because of this, robust design, even within interviews, is essential when trying to identify the right types of people for a job.

What to do about it
If an interview is to be an important part of the process, recruiters

can increase their value by taking on board some of this evidence. The majority of studies suggest that structured interviews predict job performance better than unstructured interviews (Macan 2009). A key reason for this is that interviewers open themselves up to various forms of bias when they ask questions that come to mind in the interview. This may include asking different questions to different participants in order to unconsciously re-affirm initial impressions (**confirmation bias**), or remembering only the most salient part of the interview and the very end of the interview (**peak-end effects**). In contrast, there is some evidence that bias is reduced when interviews are more structured. For example, lab participants who watched a videotaped interview displayed a reduction in bias against pregnant women when interview questions were structured (Bragger et al 2002).

There are two potential challenges. First, managers still do not use structured interviews as much, citing reasons ranging from time required to design, to a need for flexibility to explain their reluctance (Lievens and De Paepe 2004). There may be some truth to this criticism for a subset of interviewers – a recent meta analysis suggests that the difference between structured and unstructured interviews may not be as large as previously thought for those interviewers who are highly skilled and experienced (Oh et al 2013). Second, even structured interviews may be behaviourally biased: there is a strong correlation between initial impressions on a job interview (based on demographic or other general characteristics) and how structured questions are marked afterwards (Barrick et al 2012).

A further dilemma is what to ask in an interview. A controversial point is brain-teasers – questions that

are typically unrelated to the job and require on-the-spot problem-solving, such as *'How would you weigh a jet plane without using scales?'* There is a lack of evidence on how well brain-teasers predict how candidates will perform in a job (Bock 2015). What's more, they may leave negative impressions on candidates. For example, candidates in interviews have been shown to react much more negatively to brain-teasers than to questions on their behaviour. In a study by Wright et al (2012), brain-teasers were perceived as less fair by candidates and found to be less predictive of on-the-job performance.

Far more promising are questions that are directly related to the job at hand. There are, of course, different ways of phrasing questions that directly relate to the job. Here, the evidence is mixed. While some studies show stronger predictive power of experience-based questions (*'tell me about a time when you...'*) (for example Pulakos and Schmitt 1995), other studies show strong validity of situational questions (*'what would you do if...'*) (for example McDaniel et al 2001).

Practitioner tips
9 – Pre-commit to a set of interview questions that are directly related to performance on the job
Structure the interview with a suite of questions that are clearly focused on the specifics of the job in hand. This could be done through a combination of questions that ask about what people have done in previous positions and questions on how they would handle specific situations, but must be kept relevant to the job.

10 – Focus on collecting information, not making the decision
To help avoid instinctive or hasty judgements, begin to re-frame the job interview as a data-gathering exercise, rather than a decision-making session. Insights from the interview should be fed into the decision along with data from other selection methods (see *Final hiring decisions* below).

Using tests
The use of tests has become an important part of selection processes. Evidence suggests that standardised tests or tests of cognitive ability are often the most promising in terms of predicting job performance (Schmidt and Hunter 1998). A meta-analysis by Bertua et al (2005) suggests that this is especially so for occupations that require complex thinking.

Evidence on how well personality questionnaires predict job performance is more mixed (Murphy and Dzieweczynski 2005, Martin 2014). Some studies, for example, are highly critical of the use of personality tests in recruitment and selection processes (Thompson and

'Perhaps the most promising growth of "tests" lies in work sample tests: actually asking people to try out the real work.'

Box 7: The Big Five personality traits

Many psychologists agree the core dimensions of personality can be summarised by the Big Five personality traits, which are:

extraversion   **agreeableness**   **openness**

conscientiousness   **neuroticism**

McHugh 2009), arguing that they are used to create a false sense of systematic decision-making. Meta-analyses of 'Big Five' measures (see Box 7), on the other hand, show validity on specific job criteria (Hogan and Holland 2003), and other studies have shown that they are stable over time (Cobb-Clark and Schurer 2012). Another meta-analysis finds that these personality traits are predictive of job performance (Ones et al 2007). There is even some evidence that the Big Five can be reduced to just two key meta-traits: broad stability and plasticity (DeYoung 2006). More evaluation in workplace contexts is needed to understand how personality tests can be used to improve recruitment outcomes, but as with all aspects of assessment, they should not constitute a fishing exercise, but should be used in direct relation to the person specification.

Perhaps the most promising growth of 'tests' lies in work sample tests: actually asking people to try out the real work. The most commonly cited meta-analysis here shows strong predictive validity of work sample tests (Schmidt and Hunter 1998), although recent updates to those figures by Frank Schmidt (n.d.) suggest that work samples are less predictive than previously thought. Taking this one step further, some companies swear by 'tryouts' or using real work day 'auditions' as a better predictor than interviews (Mullenweg 2014). This type of test will surely need further study before we can determine its utility.

Practitioner tip
11 – Make sure tests are relevant to the job
Since the evidence in this area is mixed, employers should ensure the tests, personality questionnaires, work samples or tryouts they use in their assessment process are fit for

purpose. This can be verified over time by linking applicants' assessment performance to their actual on-the-job performance. This will help employers fine-tune their understanding of what's needed for different roles.

Final hiring decisions: synthesising the data
Ultimately, the final decision comes down to an individual or group synthesising bundles of data from a variety of sources. Bias at this point can entirely undermine an otherwise rigorous process. There is little point collecting robust data to predict individuals' performance if the actual hiring decision does not give due weight to the insight gathered.

Final decision-makers are susceptible to a host of biases:

- **Status quo bias:** It feels less risky to hire someone that is similar to the people you've hired before. You feel you know what you get.
- **Self-serving bias:** Once you've chosen someone, you justify that choice, as the new hire will look better that way. This can lead to post-hoc rationalisation, for example explaining away or ignoring test findings that don't fit with your view.
- **Groupthink:** Pressure to conform to a group decision influences your decision.
- **Out-group homogeneity:** This is a tendency to overlook the differences between people with whom they do not share a common identity.
- **Representativeness heuristic:** It's inevitable that decision-makers infer competence of a candidate by looking at a limited amount of information.
- **Availability heuristic:** The representativeness heuristic becomes particularly problematic if recruiters also make decisions based on information that comes

to mind most easily. For example, they may be able to call to mind more recent events more easily, and therefore overweight the performance of a candidate on the last of a series of tests, or may undervalue the performance of the first candidate in a series of interviews.

What to do about it
Here, the academic community has found a consensus. One of the fathers of behavioural science suggests using up to six metrics and – most importantly – not letting intuition override what the metrics say: *'Firmly resolve that you will hire the candidate whose final score is the highest, even if there is another one whom you like better – try to resist your wish to invent broken legs to change the ranking'* (Kahneman 2011). Indeed, in a lab study, commitment to hiring criteria prior to disclosure of the applicant's gender eliminated discrimination, suggesting that bias in the construction of hiring criteria plays a causal role in discrimination (Uhlmann and Cohen 2005).

Conversely, a recent study suggests that using job-testing technologies – such as an online test used to predict performance in a low-skilled service sector – is beneficial but only when managers are not able to overrule the test outcome (Hoffman et al 2015). In this study, the job-testing technology was an online test designed to predict performance for a job in the low-skilled service sector. Using the technology and then overriding its suggestions led to worse outcomes than not having the technology at all – put simply, job-testing technology is a good way to reduce hiring discretion.

Practitioner tips
12 – Include people in hiring decisions who have not been involved in assessing candidates
Including neutral colleagues who

have not tested or interviewed candidates in final hiring decisions will help you be more objective, as they will be less swayed by particular aspects of the selection process. This will mean you are better placed to take a balanced overview of the different sources of assessment data.

13 – Stick to what the scores tell you

It is important not to reduce the predictive power of tests and other scored assessments by introducing partial opinions or post-hoc rationalisation. As far as possible, base decisions on the scores from all the types of assessment used, not giving those involved in interviewing the opportunity to override these scores.

Preparing your assessors

Selection tools, of course, do not operate in a vacuum. Tools are only as good as the people who are called to use them. Preparing assessors appropriately, therefore, is just as important in reducing behavioural biases in recruitment and selection as selecting the right tools themselves.

For example, the time of day in which decisions are made matters. Studies of judges suggest that even highly trained individuals make systematically different decisions at different times in the day (Danziger et al 2011) because of **decision fatigue**. Ratings of applicants by assessors can also be influenced by whether an applicant's pitch is read out or only seen in writing

(Schroeder and Epley 2015). Even the weight of a clipboard on which a CV is presented may influence ratings (see Box 8). Similarly, an experiment by Williams and Bargh (2008) showed that interviewers experiencing physical warmth (in this study, by holding a warm drink) prior to assessing someone were more likely to judge them to be generous and caring.

What to do about it

The evidence on how to reduce bias by preparing assessors for de-biased assessment processes is mixed. Certainly, exposure to individuals who break stereotypical moulds seems to improve outcomes. Women who were exposed to female leaders in social contexts were less likely to express automatic stereotypical beliefs about women (Dasgupta and Asgari 2004).

Yet the most commonly used tool – anti-bias training – seems weaker than its prevalence would imply. Some randomised control trials do show positive outcomes for gender-related anti-bias training, although many of the outcomes measured are self-reported (Carnes et al 2015), which means the results may be subject to **social desirability bias**. Other studies find positive results only when the training phase was disassociated from the task or when the participants' cognitive capacity was limited (Kawakami et al 2005), suggesting there may be unconscious resistance to anti-bias training.

' … the time of day in which decisions are made matters.'

Box 9: Ensuring that talking about bias doesn't backfire

In this study, working professionals were asked to evaluate a candidate by reading a job interview transcript. In the transcript, the professionals could read how the candidate negotiated for more compensation, a behaviour that could be seen as stereotypical of males. If the candidate was a woman, the professionals rated her as slightly less warm and were less willing to work with her, compared with when the candidate was a man. Talking about bias backfired: the effect became stronger when the professionals were told that stereotypical judgements were common and that they should try to avoid them, compared with the professionals who didn't receive a message on stereotypical judgements. However, the good news is that this negative effect could be reversed by simply telling the professionals that the *'vast majority of people try to overcome their stereotypical preconceptions'.*

More importantly, talking about bias can backfire: working professionals who were told that stereotyping is prevalent were less willing to work with someone who didn't fit with stereotypical norms (Duguid and Thomas-Hunt 2015). However, there are ways to reverse the negative stereotyping. In one study, simply clarifying that the norm was a bad one and that most people try to overcome it was shown to reduce people's bias (Box 9). Given that the evidence on training more broadly suggests that as little as 10–20% transfers to the job anyway, the use of anti-bias training as a key component of assessor preparation requires deeper thinking.

So where does this leave us? We need more evidence on what actually works in improving outcomes, but current evidence suggests that small tweaks to the process should mitigate some of the risks associated with bias in the assessment process. For example, many organisations will anonymise CVs before the assessor sees them. Others may consider limiting the time spent on assessment in a given day to avoid decision fatigue. Others may streamline as much of the process as possible to avoid cognitive overload.

Each of these tweaks addresses one type of known bias, but ultimately,

rethinking how assessors interact with selection tools may be a more bold approach. For example, if interviews are used as a data-gathering exercise, where the decision-maker or manager is *not* the same person as the interviewer, the tendency of the interviewer to remember parts of the interview that confirm a pre-existing hunch (**confirmation bias**) may be lessened. It is possible to do something about this. For example, Google has made a rule that managers cannot interview for their own team (Bock 2015). This loss of control is not popular with many managers but signifies a commitment to reducing bias and hiring the best possible talent across the firm.

Practitioner tips
14 – Spread assessments and decisions across days, but keep all other conditions similar (time of day, how you see CVs, the room, and so on)
The risk of making poor decisions because of decision fatigue and high cognitive load is particularly relevant when selection of candidates happens in a condensed timeframe. However, ideally, it would be fairer if recruiters limit the number of hours in a day that they spend assessing candidates. All other conditions that might affect decisions should be kept constant – if some people are interviewed over the phone or by video call, others shouldn't

be brought in for face-to-face interviews. If some CVs are printed, they should all be printed. Taking time to deliberately standardise the conditions in which candidates are assessed is key to fair judgement.

15 – If discussing unconscious bias, emphasise the desired behaviour of assessors, rather than the problem
As the study above shows, discussing bias can often backfire by creating a negative **social norm**. If unconscious bias becomes a part of the official training of assessors, clarifying which behaviour is expected and that it will be monitored is key to improving outcomes.

16 – Evaluate your assessment practices
To ensure your organisation's overall recruitment and selection procedure is the best it can be, evaluate what the impact of small tweaks is. For example, do you hire people who end up working with you for longer when you exclude one selection criterion? For those who want to go one step further: consider testing what happens when you hire someone who didn't meet the assessment threshold so that you can learn what the usefulness of that threshold is.

3 Improving the candidate experience

There are multiple reasons why organisations should worry about the candidate experience when it comes to recruitment and selection. First, candidate experience may influence the ability of the selection committee to decipher who the top candidates are. For example, if certain types of candidates respond differently to stressful recruitment environments, but are equally likely to perform well on the job, creating this type of environment will systematically weed out potentially great applicants.

Second, the candidate experience is the first impression that a potential hire has of their colleagues and the organisation's culture. This will set expectations about how colleagues interact and is an important opportunity to share key company values early (see Box 10).

Third, people not only talk, but there are budding online platforms that allow candidates to share their experiences. Thus, a poor candidate experience can have a negative knock-on effect on the strength of an employer's brand, something that is inextricably linked to future recruitment prospects.

One important question to consider is how stressful environments affect performance. Most studies find an inverted U-shaped relationship between stress and performance, such as performance on memory tasks (Lupien et al 2005). Others argue that applying for a new job is stressful enough and that any additional deliberately created stress is bound to lead to negative outcomes (Hills 2014).

One might argue that, if stress reduced everyone's performance in a similar way, a stressful selection process might still elicit the top candidates effectively. However, there is evidence that this is not the case. Members of stereotyped groups often perform worse on tests (a naturally stressful situation) when their identity as part of that group is highlighted or they are primed to think about it; a phenomenon that psychologists call **stereotype threat**.

Classic studies by Steele and Aronson (1995) show the relevance of stereotype threat to test performance of African-Americans. Research building on

' ... a poor candidate experience can have a negative knock-on effect on the strength of an employer's brand.'

Box 10: Interviewers as ambassadors for the organisation

A study by Carless and Imber (2007) demonstrated that, as well as influencing candidates' levels of anxiety (with implications for interview performance), the personal characteristics of job interviewers – such as friendliness, job knowledge, general competence and humour – had significant impacts on how attracted candidates were to the organisation and their job choice intentions. This is explained in part by **signalling theory**, which states that, due to a lack of more robust information, people make judgements about an organisation based on the behaviour of those they meet. As a potential hire decides whether an organisation is a good fit for them, it is important that they have an accurate sense of what working there would feel like.

Box 11: Influencing performance through priming

An example of the power of candidate experience comes from a study on Asian-American women's performance in a maths test (Shih et al 1999). In the study, subjects who were asked a gender question before the maths questions performed worse, and those who were instead asked an ethnicity question performed better. This suggests that test scores were affected by whether subjects were primed to the stereotype of Asian people (usually considered good at maths) or women (usually considered worse at maths).

this has shown that stereotypes can enhance as well as impair performance (see Box 11).'

The same applies to performance tests used in assessment of job candidates, although recent evidence suggests that such biases can be overcome or at least reduced.

Understanding that feelings of stress and anxiety can be a symptom of stereotype threat can help reduce the gap in performance between men and women (Johns et al 2005). Further, exercises that ask applicants to think about the value that they might get for themselves, and their community, by joining a specific workforce reduce the performance gap between whites and non-whites (BIT n.d.).

More broadly, a recent study showed that striking a 'power pose' before a social evaluation that was meant to simulate a job interview process may enhance performance (Cuddy et al 2012). Similarly, priming someone to feel powerful before walking into an interview has significant positive effects on performance during both written and verbal components of an interview (Lammers et al 2013). Also, changing how someone views stress from a sign of weakness to something that fuels their motivation to perform well has a long-lasting, positive impact on performance (Jamieson et al 2010, Schmader et al 2008).

This evidence confirms that those involved in selection should not purposefully create stressful environments to test how people will perform under duress, as it is neither a useful nor fair way of seeing how people will perform on the job. Resilience, grit or 'hardiness' may be tested through specifically designed exercises without creating generally stressful environments (Kobasa 1979). Moreover, organisations need to consider if they are inadvertently contributing to stereotype threat, for example by asking people to fill in their demographic information at the top of an application form or test.

Practitioner tips
17 – Avoid creating stereotype threat in the assessment process
Avoid situations or forms that highlight people's identity of a stereotyped group (gender, ethnic identity, and so on). Only ask people demographic information at the very end of the full recruitment and selection process, to ensure that it doesn't negatively affect applicants.

18 – Ask for feedback from rejected and accepted candidates
Just as it is important to provide feedback to accepted and rejected candidates on their performance, it is also very useful to receive feedback from both accepted and rejected candidates about the process. Good topics to consider are: their impression of the company throughout the process, their expectations versus the reality of what was assessed, as well as their perspective on fairness and utility of each task.

Conclusions

Making robust hiring decisions

Much of this report has focused on how recruiters (and all of us) are open to bias and liable to influence hiring decisions in ways that may not predict the performance of recruits as well as they could. Because these biases are often subconscious, it is extremely difficult for us to control them by dint of effort. In most cases, being an expert also doesn't solve the problem – we are all hardwired to behave in ways that don't fit with a standard rational actor model, even when we are trained to recognise behavioural biases. This message is challenging, and very tempting to ignore, because it calls into question our natural ability to judge character or spot talent. But this makes it no less important.

Some may argue that making a rapid-fire decision need not necessarily be a problem. If people's intuition is often correct, does it matter if the decision is made quickly? There is evidence that in some contexts, intuitive decisions work just as well as analytical ones when people are drawing on deep-seated expertise (Dane et al 2012). Indeed, the theory of 'recognition primed

decision-making' (Klein 2011) suggests that certain types of professions – for example, firefighters or ICU nurses – may particularly benefit from quick intuitive responses. **System 1** thinking, as it is often referred to in the behavioural literature, may be useful in situations where you need to quickly evaluate whether you are safe (see Box 12).

The problem is that System 1 thinking is susceptible to irrelevant factors, such as how warm one feels (see Section 2), over-relying on one bit of information ('we have the same hobby!') or being influenced by the candidate you interviewed earlier. In these situations, a small contextual detail can have a disproportionate and unjustified effect on your overall judgement of the candidate.

Further, it is difficult for recruiters to make predictions based on previous experience. Unlike situations where there is one key assessed variable (for example, 'is this a safe situation?'), selection decisions may need to balance a host of different variables, including: trustworthiness, motivation, skills, sociability and so on. Recruitment is also an

' ... recognising the ways in which our opinions and thinking systematically bias results is the first step to improving hiring decisions.'

Box 12: Thinking, fast and slow (Kahneman 2011)

System 1 is a mode of thinking that is fast, intuitive and emotional and includes heuristics or mental short-cuts. For example, it's what happens when we try to solve: 2 + 2.

System 2 is a mode of thinking that is more slow, conscious and effortful. It is triggered when making infrequent or important decisions. For example, it's what happens when we try to solve: 371 x 13.

'When it comes to making final decisions, the more data-driven recruiting managers can be, the better.'

environment where, typically, it is hard to measure the counterfactual – what would have happened had you hired someone who your intuition would have rejected?

Intuition can be incredibly valuable in some situations, and cannot be stripped out of the recruitment process entirely. Nonetheless, recognising the ways in which our opinions and thinking systematically bias results is the first step to improving hiring decisions.

The overall approach to incorporating behavioural insights in recruitment and selection processes is twofold. Firstly, recruiters and hiring managers should clarify in advance the type of applicant that is right for them, and explicitly test their outreach efforts and job advert material to ensure that they are capturing a wide net of candidates and the right types of motivation in their applicants.

Secondly, all forms of assessment should follow structured processes and hiring decisions should be based firmly on the aggregated scores or data, rather than gut feeling. The current weight of evidence suggests that, in general, structured interviews are preferable to unstructured interviews. Assessors of CVs and tests should be as blind as possible to the characteristics of the applicant (gender, age, name, and so on) and should read through tests and CVs in identical circumstances, such as the same time of day, or in the same format (for example paper versus online).

Certainly when it comes to making final decisions, the more data-driven recruiting managers can be, the better. For this reason, we recommend making a conscious effort not to make a decision within

a job interview, and involving colleagues who have not assessed candidates in taking a balanced overview of all the relevant data to make the final decision. This will help ensure that hunches based on personal interactions do not override the predictive power of well-designed assessments.

Ultimately, however, recruitment is a two-way process. Assessors and hiring managers need to tease out which candidate is best for them. But candidates also need to consider whether the job and the company is right for them. The recruitment process can go a long way in determining whether the candidate experience is a positive one, and whether it will lead to a high calibre of recruits in the future. The evidence suggests moving away from high-stress environments – not only do they disproportionately disadvantage minorities and other vulnerable groups, they also may signal a negative work environment.

The need for more research
The literature cited above shows promise: every year, the approach to recruitment and selection becomes more evidence-based and more in line with what we know about individual behaviour and decision-making. Yet, we are still at the beginning of applying behavioural insights to recruitment and selection.

For example, we still need a better understanding of how to attract individuals with specific motivations, as well as more data on which intrinsic and extrinsic sources of motivation predict long-term performance and retention. There is also limited evidence about who, in an organisation, should be involved in recruiting, what their involvement should be, and how recruiter characteristics affect selection processes. More

Box 13: HR analytics

HR analytics (also known as HR metrics or people analytics) is a practice whereby people-related datasets are analysed thoroughly to generate new insights. This usually involves merging different datasets (such as staffing, benefits, staff survey responses and performance metrics) to tease out what may encourage, for example, retention in different groups of employees or what may help some employees perform better. Although the number of organisations with dedicated HR analytics teams is rapidly growing, a key challenge remains to use high-quality data such as accurate performance metrics (CIPD 2011).

research should help clarify what the appropriate balance of decision-making is between staff (junior and senior), external agents and specialised HR teams.

What we do know is that context matters immensely: the type of industry matters, the perceptions and expectations that both candidates and assessors bring to the process may impact results, and the broader environment may alter opportunity costs on both sides.

As such, there is no substitute for consistently and rigorously evaluating what works for the organisation. For example, truly knowing the implications of different approaches in advertising jobs requires evaluation on a case-by-case basis, linking different approaches to later outcomes, such as employee performance, satisfaction and retention. With robust data, this can serve as a feedback loop that allows organisations to improve the validity of recruitment methods.

This may sound like a tall order, but the past decade has shown that even the most rigorous of evaluation methodologies – randomised control trials – can be implemented at a low cost in recruitment and selection. Leading employers are constantly tweaking their processes based on what the data tells them about their people over time (a practice known as HR analytics, see Box 13). This need not

be a separate or even burdensome additional task for HR managers – it is arguably central to the very purpose of the HR function.

Ultimately, while the focus of this report ends on the day of selection, the journey to improve an organisation through its employees only starts at recruitment. For all the rhetoric on a 'war for talent', evidence shows that talent is not fixed (Pfeffer and Sutton 2006). Performance on the job, and thus organisational performance, depends not only on selecting the best candidates, but on the systems that an organisation puts in place to support and develop its staff.

Thus, while recruitment is a complex area, potentially riddled with bias and with few opportunities to quickly see the impact of poor decisions, it is one component of a much broader puzzle. A closer engagement with the behavioural science literature can not only help organisations hire the people they really need, but can also guide other areas of decision-making, taking us towards a more behaviourally astute HR.

Glossary of terms/behavioural biases

Affinity bias – the tendency to like people who are similar to us or remind us of someone we like.

Attribute substitution – occurs when someone has to make a complex judgement and uses an easy-to-interpret attribute to make the decision. This may, for example, lead someone to believe that people behave in situations such as interviews in the same way they do in 'real life' – causing them to misinterpret signs of anxiety.

Availability heuristic – when trying to decide how likely certain events are, they are heavily influenced by the ease with which these events come to mind (Tversky and Kahneman 1973).

Base rate neglect – people are more influenced by individual examples than general information, so tend to ignore statistical information that describes the set from which a specific case is drawn.

Cognitive load – the 'strain' put on someone's brain: for example by trying to remember a long sequence of random numbers.

Confirmation bias – the tendency to search for, or interpret, information that confirms one's preconceptions (Nickerson 1998).

Decision fatigue – decision-making depletes cognitive resources (that is, 'mental energy') so after each decision we have a little less left for the next decision.

Egocentric bias – the tendency to consider one's own characteristics more heavily than the characteristics of other people.

Endowment effect – people tend to value objects they own more than equivalent objects they do not own.

Groupthink – occurs among groups of people where dissent and deliberation is side-lined in favour of harmony and conformity; where individuals suppress their own opinions to not upset the perceived group consensus.

Halo effect – describes how judgements about some aspects of an object may influence how other aspects of an object are judged (Nisbett and Wilson 1977).

Loss aversion – people demand far more to give up an object they already possess than they would pay to acquire it. More generally, it shows how we are psychologically wired to prefer avoiding losses rather than acquiring similar gains (Kahneman and Tversky 1979).

Myopic bias – individuals tend to be focused on the present and immediate future rather than the near or far future.

Optimism bias – the belief that 'good things will happen to me, bad things to others'.

Out-group homogeneity – the perception that everyone from a different group than our own (for example, in their ethnicity or social class) is similar.

Peak-end effect – a classic finding from behavioural economics is that judgements of experiences are disproportionately influenced by the peak moment and ending of that experience (Kahneman 2000).

Self-serving bias – the tendency to believe that success is linked to people's own characteristics but failure is linked to external factors.

Signalling theory – examines communication between individuals, focusing especially on the way communication influences judgements: communicating or withholding a piece of information can convey a signal to the receiver of that information.

Social desirability bias – the tendency to give a perceived socially desirable response to a question, instead of a response that accurately reflects an individual's true feelings.

Social norms – the common values, behaviours and expectations of a particular group.

Status quo bias – the tendency to stick to the status quo course of action or avoid making a decision entirely (Samuelson and Zeckhauser 1988). Diverting from the status quo seems riskier than sticking to the current situation.

Stereotype threat – a phenomenon where members of a stereotyped group often perform worse on tests (a naturally stressful situation) when their identity as part of that group is highlighted or they are primed to think about it.

Sunk cost fallacy – people stick with projects they should not because they have already invested non-recoverable costs. This is a form of commitment bias, where individuals make bad decisions in the present to justify decisions they have made in the past (Staw 1976).

System 1 – a mode of thinking that is fast, intuitive and emotional. For example, it's what happens when we try to solve: 2 + 2.

System 2 – a mode of thinking that is more slow, conscious and effortful. It is triggered when making infrequent or important decisions. For example, it's what happens when we try to solve: 371 x 13.

Temporal discounting – our tendency to prioritise the short term over the long term.

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