



Paper

The impact of artificial intelligence on the HR function

Peter Reilly

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Throughout its 50 year history, the Institute for Employment Studies (IES) has seen many predictions on the impact of new technology on people's work and jobs, from wholesale job extinction through to a delightfully-leisured existence.

PwC's latest July 2018 UK Economic Outlook (PwC, 2018a) repeated past predictions that substantial numbers of jobs would be lost through AI and related technologies, though the proportion of jobs predicted to be cut by 2037 has fallen to 20 per cent, rather than the previous 30 per cent. Still, it is roles in manufacturing, public administration, and transport and storage that are most under threat. More noteworthy is the claim that an equal number of jobs will be created as will be lost. Previous references to compensating 'opportunities' (PwC, 2017) have helpfully been changed to more specific forecasts. Job growth, PwC suggests, will be in health (+22%), professional, scientific and technical services (+16%), and education (+6%).

The thrust of the argument is that AI, robotics, drones and driverless vehicles will push up productivity and generate income which can be spent on the public good and research and development (which will further boost the economy).

Similarly, the World Economic Forum (2018) believes that double the number of jobs could be created as lost through the application of new technologies, but, again, this requires concerted efforts by governments and employers for this new work to materialise. The new jobs are likely to require very different skills (typically people-centred ones) and there will probably be a time lag between the new jobs being created and the old jobs being lost (Gratton, 2018). McKinsey believes, therefore, that re-skilling and upskilling workers should become a top chief executive and government priority (Illanes et al, 2018).

Words of caution

At IES, our experience and research over the years would suggest that a word of caution might be in order, with regards to the speed and depth of such change.

In 1988, I won an International Publishing Corporation (IPC) award with Riley Advertising (no relation) for a recruitment advert for AI technologists. At Shell Research, where I worked, effort was going into developing expert systems trying to find ways of replicating how experts (like doctors) made decisions. Of course, much progress has been made since then, but has change been evolutionary rather than transformative? To what extent has this kind of technology merely added useful tools to the HR armoury, rather than allowed HR to make a radically-different or massively-enhanced organisational contribution?

Take another area, more relevant to HR and the subject of this essay. In 2003, IES published *eHR: An Introduction* (Kettley and Reilly, 2003). The report aimed to introduce a 'rapidly evolving field' which was said to include 'an electronic network of HR-related data, information, services, databases, tools, applications and transactions'. The topics covered in the research encompassed portals and intranets, manager and employee self-service, human resource information and enterprise systems, whilst offering an examination of the e-enablement of processes like remuneration, performance management, recruitment,

and learning. As the report explained, for some organisations, the application of technology was merely a way of becoming more efficient, whilst for others it was a key component of functional transformation. So, what has been achieved in the fifteen years since the report was published?

Certainly, costs in HR administration have indeed been taken out, though it is sobering that a quarter of organisations are still using paper in their payroll processes according to a survey of HR executives and managers conducted by Bain & Company (Heric, 2018). An earlier report for the NHS demonstrated the role e-technology was having in HR departments across the economy (NHS Confederation, 2010), but noted that its impact was relatively modest and more was being achieved through the standardisation and simplification of HR processes and structural change caused by the introduction of shared services.

Processes related to performance management and reward are examples of those where technology has made tasks easier to complete, but one doubts whether the full benefits have been realised: how many HR departments conduct proper analysis of their performance or reward review outcomes in such a way as to drive policy initiatives? Gender and equal pay analysis might become an exception, here. Nonetheless, which employers are fully using crowd-sourced feedback even though the technology exists to gather these opinions? Technology also provides hard data on employee performance, but 'not nearly enough attention has been paid to [...] the effectiveness of machine feedback in changing behaviour and performance' (Ledford, Benson and Lawler, 2016).

E-HR has had more impact in other areas, such as in learning and, particularly, in recruitment. Besides the straight replacement of face-to-face learning by e-learning, 'digital learning' allows the inclusion of e-enabled communities of practice; e-books; web-delivered materials; the use of gaming and virtual reality; the exploitation of social media; and much more. However, according to the CIPD's 2015 Learning and Development survey, 'on-the-job training, in-house development programmes and coaching by line managers or peers remain the most commonly-used and the most effective development methods' (CIPD, 2015). Only 29 per cent of organisations reported e-learning as the most used and just 12 per cent found it to be their most effective method (Ibid). Again, despite its evident cost-efficiency, we have seen a rowing back from e-learning being viewed as the principal training vehicle, towards a recognition that electronic, blended and face-to-face learning all have a useful role to play, with e-learning often found to be more effective for rule-based and mandatory, testable training, such as safety or risk management, but less suited to developing softer and higher-level skills.

Areas likely to be effected

Recruitment is perhaps the area which has been most transformed by technology. From changing and widening the sourcing of applicants, to online applicant systems and the selection of candidates for interview, the process has become faster and more efficient, and the relationship between applicant and employer revolutionised.

Nonetheless, this IT revolution has not lived up to its promises. The Bain survey (Heric, 2018) reported that three-quarters of respondents say that 'their current technologies

have not yet achieved optimal performance'. Problems persist with regards to operating a plethora of unlinked digital tools and dispersed and unconnected data.

What about an AI-dominated world?

We should perhaps first make a point about terminology as there are lots of concepts that touch upon artificial intelligence (AI) which might strictly be limited to 'intelligent agents' that mimic 'cognitive' behaviour. In this article, we are taking a broad approach to include expert decision-making systems, simulation and modelling, robotics, natural language processing (NLP), use of technologically-driven algorithms etc. So, we are including assisted, augmented and autonomous intelligence (McKinsey, 2017) in the various ways that humans are supported, or replaced, by AI. Many technologies that were once seen as 'cutting edge' (and part of AI) have become routinised and therefore no longer noticed as part of the change process. The chatboxes (where a computer programme or an AI converses with a customer via speech or text) and cobots (robots collaborating with humans) we discuss here will, at some point, be mainstreamed.

If we now look 10-15 years forward, will change in HR driven by AI be similar to that which we have seen in the past 10-15 years: significant in some areas, under-developed in other areas? How much of this change will simply be improvement of existing features, the introduction of new functionality within the same system, or wholly fresh offerings (Mewald, 2018)?

AI development in relation to job clusters within HR

- Administrative roles to be found in payroll and records undertaking transactional tasks, such as data processing.
- Posts where there is operational HR support to managers (and sometimes employees) handling casework, recruitment, training etc.
- Policymaking and advice as executed in centres of expertise.
- Activities performed by business partners to strategically influence and shape the business from a people perspective.

Transactional work

AI will have its biggest impact in transactional work which is repetitive, rules-based and where high accuracy is demanded. Here, techniques such as robotic process automation (RPA) can speed up activities, reduce costs and be error free (so long as the input data are correct).

Technology can already e-enable a number of HR processes, say from manager/employee self-service, to records/payroll administration. In the more-advanced organisations, there is no HR intervention because managers and employees are trusted to make decisions or update records (within limits). In other organisations, HR teams still try to control the data updates, perhaps for good verification reasons or perhaps for residual control. In time, more and more of these transactions will be automated. CEOs

will expect this to happen and there will be no acceptable technological excuses. Culturally, there will be a 'service now' climate. Thus, the challenge for some HR teams will be a mindset shift, more than any technological adoption challenge.

Moreover, processing carried out by robots 'is more advanced than earlier business-process automation tools' (Davenport and Ronanki, 2018) precisely because they mimic human behaviour by 'inputting and consuming information from multiple IT systems'. This means that they can glean, process and record data from multiple sources but with an ease that people can only envy.

On the positive side (for HR employment), data will become the lifeblood of the organisation, making for better-informed decision-making. Those who are the guardians of data will have an important role to play, even if they are low down the organisational hierarchy. They will be ensuring that data are clean, up-to-date and in line with the standard protocols. IT systems can enhance the checking process, making it more efficient and accurate, but human oversight might be required to investigate errors and gaps.

Operational HR

This type of work includes the bread and butter support to the organisation such as recruitment, training, case work, remuneration and performance management. It relies on HR administrative processes but engages especially with management customers in ensuring that these are effective in delivering business results.

There are a number of ways in which operational HR can be enhanced or developed. One is to exploit these ubiquitous data. This can have a number of applications. For example, just as higher education institutions use data to test whether students are at-risk of drop-out, companies can use AI to detect those at-risk of resigning.

Recruit Holdings (a Japanese staff servicing group) uses employee data, including personality assessments, working hours and performance evaluation, to compare employees to the data of those who have previously resigned. Those at-risk of resignation are interviewed by managers to identify any issues with their employment. (Nikkei, 2018)

Analytical processing will be enhanced too by the greater ease in handling qualitative data. Feedback will become more timely and continuous using phone apps delivering both free text and structured data. So, there will be customer inputs on HR services on a just-in-time basis, but also in reaction to HR policy or organisational announcements. Communication will become more interactive and dynamic; not one way or passive.

Another improvement will be to streamline recruitment. For example, at Unilever the time to hire has been cut by 75 per cent (Heric, 2018). Front-end recruiting activities in candidate processing are likely to be automated; first because the benefits of speed and accuracy will outweigh the benefits of human involvement. HR is likely to remain involved in some aspects of candidate selection even if the line manager has become the prime decision-maker. This might mean leading negotiations over the terms of an employment offer, settling start dates or queries about contracts.

At a more-significant level, AI proponents believe that systems can improve selection; using techniques such as ‘vocal analysis’ and reading ‘microexpressions’ can identify traits which match those of existing high-performing employees (Buranyi, 2018).

Other processes such as in reward and performance management (handling the bonus round, dealing with appraisals or managing job evaluation) can be sharpened up using AI tools, but perhaps more importantly, the technology can be used for easier analysis – looking for key training needs in personal development plans; spotting gender bias in performance assessment; challenging the accuracy of the job description to job evaluation scoring etc.; not only tracking compliance but also surfacing issues.

Employee interaction with HR may be radically changed by AI. Chatboxes can successfully replace humans in call centres, assuming they are not simple word-recognition programmes and have learning capacity such that they can handle progressively more-complex tasks as they ‘learn’ more, but also to know when to hand over to a human when the question is beyond their capability to answer. Cognitive insight may help uncover the patterns of calls and callers and improve the ubiquitous FAQ page into something useful. This may lead to better anticipation of what employees and managers want to know. Machine learning can also ‘identify probabilistic matches – data that is likely to be associated with the same person [...] but that appears in slightly different formats across databases’ (Davenport and Ravenki, 2018). This could reveal, even at the individual level, both a positive thirst for information or a worrisome set of concerns (if the employee is searching in multiple places for facts about, say, sexual harassment and whistleblowing).

Voice may again become prime in communication (instead of screen) making call-centre interactions even more important to optimise where effort (whether it be robotic or human) is spent on the right content.

Currently, cobots are being used largely to do mundane jobs but over the next few years one can envisage them taking over more sophisticated tasks. Looking humanoid, and with analytical and allegedly interpersonal skills, cobots could replace HR assistants and advisers in giving support to managers and staff.

One specific advantage of using AI is the consistency of delivery with repetitious tasks. ‘If you present an algorithm the same problem twice, you’ll get the same output. That’s just not true of people’ says Kahneman (Kahneman and Brynjolfsson, 2018).

The Marriott hotel chain uses a chatbot for initial interactions with job candidates by responding to standard questions, matching candidates’ interests with vacancies and providing information on the company’s culture and values (Heric, 2018).

The limit to their use could be any inhibition from humans of interacting with robots on anything other than straightforward matters (which could be handled via chatbots or more-developed, online tools) and the cobot’s inability to learn fast enough to react to non-standard conversations.

Policymaking

One advantage already seen in the application of IT to HR policymaking, is its increasing ability to search data sources and inform the user. In policy terms, this might mean establishing the need for change and modelling its effects, or garnering benchmarking information on what other organisations are doing and what the research tells us about 'what works'. Of course, this happens now, but the speed and accuracy of finding patterns in the data will, in effect, be more profound. It might support a helpful mindset shift to respond to the evidence, rather than manager gut feeling.

Perhaps more fundamentally, there is AI's ability to provide 'a novel cognitive perspective' (Tata, 2018). This might be used:

- to challenge as much to inform;
- to offer a different perspective to ones offered by work colleagues (in the way the computer made a novel move in the game 'Go', to stump its human opponent);
- to disrupt groupthink (as a kind of Devil's Advocate, according to Tata (Ibid)); or
- to manage stakeholder participation and process their views (making consultative exercises so much faster, as well as richer in content).

This sort of approach lends itself to scenario planning and might encourage the wider and deeper use of this technique in workforce planning.

Strategic contribution of HR

Today's mainstream view is that neither robots nor computers will be able to undertake the strategic and complex tasks done by HR business partners or experts, suggesting that HR's contribution in this area will be unaffected and could even be improved by some of the new information, analysis and tools available. This is because machines are good for analytical tasks but not 'elastic thinking'. 'If you want to create a general problem-solving brain [...] the best way is still to find a mate and create a new human being' (Poole, 2018).

The argument could be made – as it was with the HR transformation of the early part of this century, combining standardisation, automation and consolidation – that time and resources will be saved by eliminating the 'grunge' work, thereby releasing HR to concentrate on high value-added work. This may not have happened to the extent expected because not only has the IT revolution been piecemeal, as noted above, but there has also been managerial resistance to HR 'devolving' people management tasks to them and a lack of skills within the HR function to take up the strategic baton (see Reilly and Williams, 2006).

Nonetheless, it could be argued, and is being argued by some HR leaders (eg Wood, 2017), that AI offers a real opportunity for HR to make its mark.

One vital strategic task that HR should undertake is to prepare the organisation for the AI revolution. This will mean ensuring that the workforce is 'change-ready' and prepared to

embrace new technology. It means thinking through organisational structures and the role of managers so that knowledge is effectively dispersed around the business: there will be no place for silos and turf wars.

Leadership will be distributed. Power will flow in different ways to the company organigram. The 'learning organisation' may be a nearly 40-year-old term, but it could do with being reinvented as the requirement to create a community of open minds becomes a necessity. A culture of enquiry and innovation will be developed. In this context, and in a changed environment of customer demand and service delivery, who is to be hired, and how they will be developed, will have to be adjusted. Talent management may become even more important but executed in a different way. How to keep the employees who do not sit in IT development engaged will be a challenge in itself (Schwab, 2016).

HR can also contribute to working out where AI might replace humans. The function can compare the cost of a human with the price of, say, a robot with all the ancillary training of both employees still employed, and of the robot – not to mention the costs of displacing human effort. At a more abstract level, HR can provide insight on what sort of relationship there might be between humans and AI; how best to exploit highly-intelligent machines but in ways that benefit, rather than hinder, human progress. The need for such moral oversight is explained below.

HR should also be at the forefront of handling the consequences of organisational reskilling. Will it simply be a matter of redundancy for those with outmoded skills and the hiring of new people? This seems to be too simplistic, but as in previous restructuring questions, will need to be asked not just about whether new skills can be learned by existing employees, but also whether employees will be prepared to learn, attitudinally. Ironically, AI tools may be available to identify those that will fit best in the newly-created roles.

Risks for HR in the development of AI

The increasing use of AI is not without risks and not only has HR been mindful of them, but these concerns may limit the speed of adoption. As John Hawksworth, PwC's chief economist, pointed out 'legal and regulatory hurdles, organisational inertia and legacy systems will slow down the shift towards AI and robotics even where this becomes technically and economically feasible' (PwC, 2018b). Indeed, 'the appetite of HR leaders for more digital tools may outpace their ability to absorb the tools' (Heric, 2018). Furthermore, one of the impediments to this 'absorption' does, of course, lie in HR's domain: the shortage of AI skills and the difficulty of hiring sufficient talent.

Ethical design

'Robots are not humans' is stating the obvious. Borrowing and adapting a serious joke from Rowan Williams (2018); 'how can you tell the difference between speaking to some form of artificial intelligence and an actual human being'? 'Ask them how they feel about

dying'. They do not have feelings (unless programmed to show them) and they have 'no moral code' (O'Shea, 2018).

So, it is up to us to design systems which reflect our proclaimed principles such as around equality, transparency, and confidentiality. Otherwise, the risk is that algorithms may be racist/sexist because their construction reflects the reality of the employment experience as opposed to the ideal. Systems can introduce unconscious bias. Companies like Amazon and Google have found that, for example, racial bias has crept into its processes when search programmes learn for themselves (Ibid). Organisations are full of prejudices and if the system is programmed or learns based on these prejudices, then you will get a flawed result: this is not the fault of the technology, but of system design/management. Thus, organisations need to be careful in the 'training data' that they give machines to use in case they see ethically flawed patterns, and act upon them.

More profoundly, as Henry Kissinger points out in his essay on the threats that AI offers, machines can go off and learn beyond human control and potentially communicate with other machines outside our knowledge. We have no idea where that might take us, especially if they have no end date or moral compass to guide them.

'AI, by mastering certain competencies more rapidly and definitively than humans, could, over time, diminish human competence and the human condition itself as it turns it into data.'

Kissinger, 2018

This leads the RSA to ask apropos to the distribution of the gains from AI: 'who owns the machines' (Dellot, 2017).

Having an audit trail

One challenge here with machine learning is divining what the machine has learned and on what basis it has come to its conclusions. Whereas previously in 'Classic' AI you set down rules by which AI operated, where the machine learns through doing, it becomes less clear on what basis the machine is moving forward. There may be decisions the outcome of which is hard to probe: 'you don't always know what is going on under the bonnet', as programmers say. This may be important when you need to generate an audit trail of how a system made a decision. If you use decision-making tools to augment or replace human input, a challenge might be raised on why someone is selected for recruitment or development; why a bonus is offered to a given person; why an individual is made redundant; etc. What's more, if there is a 'mistake', who will be liable: the programmer, system owner, or the HR person in charge?

This sort of complaint may happen under the General Data Protection Regulations (GDPR), since they specifically allow applicants to discover whether automated decision-making will be used and to challenge a recruitment outcome if the process did not involve human participation. For example, if software screens-out applicants, this may be contested.

Yet, again, Kissinger asks the more fundamental question:

'Will AI be able to explain, in a way that humans can understand, why its actions are optimal? Or will AI's decision-making surpass the explanatory powers of human language and reason?'

Kissinger, 2018

Individual ownership and control of data

GDPR is the latest, and may well not be the last, personal data protection regulation. This may well constrain HR analytics and limit the impact of AI on the work of the HR function. We are only now beginning to realise the privacy risks inherent in harvesting data from multiple sources, especially including that from social media. As is being pointed out (Devlin, 2018), so-called anonymized data is not so anonymous after all. Tests by data scientists have shown how relatively easy it is to identify people from 'metadata' and, as our virtual footprint gets bigger, this will become all the truer. This may lead to further legislative data control, but is also likely to mean internal organisational constraints on data usage. This may well impact on recruitment processes (preventing some of the more inventive sourcing approaches), employee engagement initiatives (we may know too much about individual preferences) and learning methods (innovative analysis of training needs).

Misled by the system

Design might not be ethically flawed but it can still be ineffective. Many of us have been sent in the wrong direction by satellite navigation systems. Algorithms have similarly, and more seriously, mis-led people – miscalculating benefits payments, denying people credit, misunderstanding their sleep needs, etc.

In the recruitment arena, that might mean selecting the wrong candidates for interview. The recruitment selection algorithm may either be insufficiently sensitive to marginal but important factors (eg A level exam results) or give unimportant factors too much weight (eg a pattern of adolescent illness). This risk is especially great where systems use 'kill' questions that exclude candidates on the basis of a single data item (eg criminal conviction) (Brown, 2018). Of course, this is all resolved by good programming, but will the system capture all the relevant variables and their combination? Perhaps yes, in simple systems, but in more complex interactions, not yet at least.

Doctors complain that their response to the mixture of psychological, visual and verbal clues is hard to replicate in AI form, not least because these clues may be patient-specific (where there is continuity of patient care). This is seen in the 111 phone support system and in the new apps endorsed by the Health Secretary (Kenber and Lay, 2018). The same may be true of complex casework, say handling accusations of sexual harassment or bullying. If one problem is the risk of machine learning repeating our prejudices, another is that AI fails to replicate human intuition since we don't understand how human consciousness operates (Harkaway, 2018).

Similarly, algorithm-based systems may not capture the subtle connections between people which often drive business behaviour. AI is better at our conscious brain activity than our unconscious. Systems may be over-rational with deleterious effects as the University of Cambridge research (2018) points out:

'The way telecoms salespeople work is through personal and frequent contact with clients, using the benefit of experience to assess a situation and reach a decision. However, the company had started using a data analytics algorithm that defined when account managers should contact certain customers about which kinds of campaigns and what to offer them.'

Pachidi in University of Cambridge, 2018

Underestimating humans (and machines)

This leads to the possibility that we exaggerate the competence of machines and belittle human capability. This was the conclusion at Tesla where Elon Musk recognised that the firm had over-automated in its desire to be more productive and had not realised that humans are especially resourceful in spotting and solving problems – in using their own initiative. As Soumyasanto Sen put it:

'Human beings are really good at the least routine, most complex, most collaborative, most creative work. And we're much better than computers at this stuff.'

Sen, 2018

But there are converse problems when people think they know better than technology.

'In general, if you allow people to override algorithms, you lose validity because they override it too often. Also, they override on the basis of their impressions, which are biased, inaccurate, and noisy.'

Kahneman and Brynjolfsson, 2018

Overestimating systems

There is certainly a risk of gung-ho executives trying to use AI in inappropriate circumstances either in the search for efficiency and cost savings ('we can cut out these expensive and troublesome employees') or in reaching out for the holy grail of the perfect decision. Stella Pachidi from Cambridge Judge Business School has already warned of the attraction of 'perfect information' (University of Cambridge, 2018), but there is the concomitant mistake of believing that only if we can take the human self-interest out of the equation can we get the right answer.

We have seen this 'false scientism' before in processes like job evaluation where 'objective' decisions are made. We must remember that machines still deliver judgements based on what they are programmed to understand is the intended goal. Learning machines may be harder to manipulate once set up but, as we have already said, that

does not rule out flawed or manipulated design. Moreover, whilst AI systems may improve the accuracy of predictions or understanding, these may not be 100 per cent correct: there still remains a (smaller) risk of error.

At the current stage of development we may not even be at this level of risk. Research has found firms reluctant to use chatboxes in external customer-facing situations because of their 'immaturity' (Davenport, 2018). For example, Facebook's chatbots needed human help to answer 70% of customer requests (Ibid).

Also, executives need to recognise that AI can see and recognise patterns but lacks understanding of meaning, especially in language, but also pictorial inputs. So, care has to be exercised in deciding what AI systems can do and where their limitations lie.

Will business bet on technology?

There has to be an incentive for companies to invest in new technology otherwise they will not do it. This means owners of capital need to see that the machines will be cheaper than humans and deliver better results. The recession of the last eight to ten years has demonstrated, in the UK at least, a reluctance to spend money on new machinery given business uncertainty, favouring the use of cheap and disposable labour. Or instead, the new digitally-based firms (like Uber and Deliveroo) have harnessed relatively simple technology and linked it to the gig economy; maximising workforce flexibility and minimising cost.

There is, furthermore, an assumption behind many AI predictions that the new technology will be warmly embraced and lead to early, positive productivity gains. History tells us that often the road to 'improvement' is rockier than that. Take, for example, the introduction of new technology in the coal industry. This initially lowered productivity as it disrupted the social structures of the miners and their strong teamworking ethos (Trist and Bamforth, 1951). Could you imagine the same disruption to workplace cultures if the move to an AI-dominated world happens too quickly with insufficient thought given to how it will be received by existing staff?

Employee and consumer objections

There is also the question of how acceptable to applicants, employees, contractors and so on, the use of AI will be. Managers and their staff will welcome faster and more accurate HR processes. They might value better-quality data on which to make decisions. They might get used to robotics systems making suggestions. This is especially true where it is made clear that AI augments, rather than replaces, human intelligence. This is how an AI tool is positioned at Klick (a company which has taken the use of AI further than most and where there is no HR function).

'We haven't taken any of the decision-making powers away from our people and given them to the computer. The computer is just there to help.'

Jay Goldman in Moulds, 2018

However, 61 per cent of job applicants would prefer face-to-face interviews to digital recruitment methods, according to a survey by ManpowerGroup Solutions (Brown, 2018). According to the survey authors, people prefer to make personal connections and feel the culture themselves as this can be a selection differentiator. Hays' *What Workers Want* report came to similar conclusions. People are happy to use technology, including social media and smartphone apps, in their job search, but want the personal link once they have narrowed down their choice (Hays, 2018).

As has been pointed out, the burden of responding to a myriad of online tests and assessments has been placed on the applicant (Buranyi, 2018). They have to adjust to the specific methods employed by the hirer. Not only is this time consuming, without the human element they may not get any feedback on how they fared. This antipathy also drives some people to game the system by including false data to fool the computer.

With AI-led call centres we should understand the limits of what such communication tools can do. This is well put by Harkaway:

'Algorithms can knit together plausible conversation by sampling enormous numbers of exchanges between humans, but they have no greater understanding of those exchanges than would an enormous set of punch cards speaking a bellows and a brass trumpet.'

Harkaway, 2018

Employees who complained about the impersonality of dealing with remote call centres when they replaced the HR adviser down the corridor will be even more disgruntled. Dealing with delicate or distressing situations is even harder if the emotional reaction down the other end of the phone/on the computer screen is self-evidently fake.

Employers have tended to shrug their shoulders against both internal employee and external applicant objections to the de-personalisation of HR processes and services. However, this reaction can only be sustained whilst employees have no choice. The especially talented, who are always in demand, will be able to lobby for a more human experience if that is what they want, and employers will oblige. Will this be one more example of a two-speed workforce – personalised for some, processed for the majority? As the IMF says: 'Our main results are surprisingly robust: automation is good for growth and bad for equality' (Berg, Buffie and Zanna, 2018).

Stifling learning

The transformation of the HR structure using the 'three-legged stool' model (shared services, centres of expertise, and business partners) already generated concerns over staff development and how colleagues would acquire the skills to progress or move between the organisational legs. Outsourcing and offshoring compounded the problem as it tended to remove the lower legs of the structure (Reilly and Williams, 2006). Now AI has the potential to damage development still further.

Despite the fact that recent research has shown that augmented workplaces score a third higher in prioritising learning and development (Hargrave, 2018), Stella Pachidi from

Cambridge Judge Business School has warned: 'If routine cognitive tasks are taken over by AI, how do professions develop their future experts?' (University of Cambridge, 2018) She is concerned that sitting with Nellie (watching an experienced colleague do a task which you then copy) as a means of learning will be lost, unless of course a robot is charged with explaining what it is up to.

This is, again, a requirement to make implicit processes transparent and subject to scrutiny, in this case to aid learning. Moreover, thinking must not be dulled by replicating AI's logical and linear thinking. There must be space for human intuition and flair. Again, this is an example of not misunderstanding AI's strengths or underestimating human capabilities.

Threats and damage

As the recent worries about Russian interference in the US presidential elections has shown, hacking into IT systems, using mis-information and fake news can have serious implications. In the organisational context, the risk is that malicious or disgruntled individuals or unethical competitors could hack into systems, steal data and/or make alterations to decision-making algorithms. This might seem far-fetched and has not been a serious problem to date, though the recent Morrisons case points to the cost of malicious use of personal data (Faragher, 2018). However, if we become more dependent on AI, then our exposure grows. Blatant intervention may be spotted, but insidious change may not be.

In a rather different way, 'well-designed' processes may be corrupted in operation as users manipulate systems to suit their needs, especially if they find that it does not deliver the answers it wants. So, without being a luddite and destroying the technology, people can ignore or undermine it. This could happen where managers ignore the recommendation of the AI recruitment system and use their intuition instead, despite the evidence that AI is a better predictor of candidate success than humans (Agrawal, 2018). Relatedly, users might enter false data in the knowledge that it will deliver the wanted answer.

Tips for HR professionals

Growing computer power, ever-increasing amounts of data and greater theoretical understanding is meaning that AI technologies are developing at pace. Organisations must grasp the implications of this change. But as we have seen, the interaction between people and technology at work is highly situation-specific, and adapting to the situation is critical to enhancing the positive potential and minimising the harmful side-effects of AI.

Based on a number of sources identified in this paper, and 50 years of IES work with organisations, here are some tips for HR professionals on how to get the best from AI.

- Be clear on your **objectives** and what you want to achieve. For example, is AI simply a cost reduction or value add/service enhancement exercise?

- In doing this, be driven by **business needs**, not technology (though explore how technology could change the business). If the aim of the business strategy is to improve consistency and get predictable answers, then invest in technology. If the aim is to innovate through creativity, flair and emotional engagement, continue to encourage humans.
- Understand exactly where your **digital strengths and gaps** lie, and your opportunities to make progress, eg to unblock bottlenecks, handling high data volumes or shortening the time to analyse data.
- Develop a '**data-savvy**' **HR function** and, if you are an HR leader, develop those skills yourself, and develop them quickly.
- Develop good personal and professional **links with the IT function**, both to help HR take advantage of new opportunities and to see what the wider organisational implications will be of IT change.
- Build a **change and learning attitude** into your HR team.
- Ensure systems **learn** from humans and vice versa.
- Determine the **optimal point in AI rollout** where human intervention is necessary and where it is not counterproductive.
- **Test** systems in a variety of circumstances before rolling out to ensure that the results generated are acceptable not just in efficiency, but also in cultural fit.
- Learn how to **think about errors in a more structured way**. Humans make errors and so will machines.
- **Maximise transparency** and ensure that how AI operates is widely understood.
- Look for lots of **small improvements** rather than chasing after a big bang change, and learn and evolve as you progress.

Perhaps we should leave the last word to Stephen Hawking:

'Our future is a race between the growing power of our technology and the wisdom with which we use it. Let's make sure that wisdom wins.'

(Hawking, 2018)

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The author

Peter Reilly is a principal associate at the Institute for Employment Studies. Peter leads consultancy and research work on the HR function and contributes to projects on workforce planning, reward and performance management. Clients come from all sectors and his involvement ranges from facilitation, through expert advice to policy design and evaluation.

For more information on IES' work on the HR function, artificial intelligence, and any other topics raised in this paper, please email: iesconsult@employment-studies.co.uk.

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Whatever your professional and HR needs, get in touch:

T: 01273 763400

E: iesconsult@employment-studies.co.uk