

THE FUTURE OF WORK >>

>> THE  
FUTURE OF  
RECRUITMENT

Using the New Science  
of Talent Analytics to Get  
Your Hiring Right

Franziska Leutner  
Reece Akhtar  
Tomas Chamorro-Premuzic

# THE FUTURE OF RECRUITMENT

These leading experts in assessment and technology generously share their insights on the new frontier of talent management tools driven by AI (e.g., video interviews, resume screening, game-based assessments). Authors also raise critically important attendant issues regarding privacy, algorithmic bias, and other legal and ethical concerns. The book stands to contribute to fruitful multidisciplinary collaborations, challenging conversations, and productive disagreements essential to meaningful advances in this domain.

*–Dr Fred Oswald, Professor and Herbert S. Autrey  
Chair in Social Sciences, Department of Psychological  
Sciences and Management, Rice University*

This book not only describes recruitment technology in a way that is both easy to understand and rich in scientific detail, it also captures the ethical and societal consequences of recruitment. One of the most important books on recruitment to read.

*–Frida Polli, CEO and Cofounder of Pymetrics*

Everything that's important to know about the future of recruitment is put together in this engaging book which will impact the way we think about recruitment for years to come. New and emerging recruitment technology is expertly captured, if you want to understand the science underlying today's and tomorrow's recruitment tech, look no further.

*–Michal Kosinski, Associate Professor of  
Organizational Behavior,  
Stanford Graduate School of Business*

# The Future of Work

The future of work is a vital contemporary area of debate both in business and management research, and in wider social, political, and economic discourse. Globally relevant issues, including the aging workforce, rise of the gig economy, workplace automation, and changing forms of business ownership, are all regularly the subject of discussion in both academic research and the mainstream media, having wider professional and public policy implications.

*The Future of Work* series features books examining key issues or challenges in the modern workplace, synthesizing prior developments in critical thinking, alongside current practical challenges in order to interrogate possible future developments in the world of work.

Offering future research agendas and suggesting practical outcomes for today's and tomorrow's businesses and workforce, the books in this series present powerful, challenging, and polemical analysis of a diverse range of subjects in their potential to address future challenges and possible new trajectories.

The series highlights what changes still need to be made to core areas of business practice and theory in order for them to be forward-facing, more representative, and able to fulfill the industrial challenges of the future.

## OTHER TITLES IN THE SERIES

Careers: Thinking, Strategising and Prototyping

*Ann M. Brewer*

Algorithms, Blockchain and Cryptocurrency: Implications for  
the Future of the Workplace

*Gavin Brown and Richard Whittle*

HR without People? Industrial Evolution in the Age of  
Automation, AI, and Machine Learning

*Anthony R. Wheeler and Ronald M. Buckley*

The Healthy Workforce: Enhancing Wellbeing and Produc-  
tivity in the Workers of the Future

*Stephen Bevan and Cary L. Cooper*

#### FORTHCOMING TITLES

Spending Without Thinking: The Future of Consumption

*Richard Whittle*

Cooperatives at Work

*George Cheney, Matt Noyes and Emi Do*

# THE FUTURE OF RECRUITMENT

Using the New Science of  
Talent Analytics to Get Your  
Hiring Right

BY

**FRANZISKA LEUTNER**

*Goldsmiths, University of London, UK*

**REECE AKHTAR**

*Deeper Signals, USA*

And

**TOMAS CHAMORRO-PREMUZIC**

*University College London, UK*



United Kingdom – North America – Japan – India  
Malaysia – China

Emerald Publishing Limited  
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2022

Copyright © 2022 by Emerald Publishing Limited

**Reprints and permissions service**

Contact: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. Any opinions expressed in the chapters are those of the authors. Whilst Emerald makes every effort to ensure the quality and accuracy of its content, Emerald makes no representation implied or otherwise, as to the chapters' suitability and application and disclaims any warranties, express or implied, to their use.

**British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-83867-562-2 (Print)

ISBN: 978-1-83867-559-2 (Online)

ISBN: 978-1-83867-561-5 (Epub)



**ISOQAR**

REGISTERED

Certificate Number 1985  
ISO 14001

ISOQAR certified  
Management System,  
awarded to Emerald  
for adherence to  
Environmental  
standard  
ISO 14001:2004.



INVESTOR IN PEOPLE

*To my granny Doris and my mother Susanne. May the future  
continue to afford more opportunities to women*

– Franziska Leutner

*To my mother Hayley, for her endless support and  
encouragement*

– Reece Akhtar

*For those who are trying to make work better*

– Tomas Chamorro Premuzic

This page intentionally left blank

# CONTENTS

<i>About the Authors</i>	<i>xi</i>
1. The Past, Present, and Future of Recruitment	1
2. Talent and the Data Science Revolution	17
3. Digital Interviews	51
4. Mining Digital Talent Signals	89
5. Gamification and Game-Based Assessments	119
6. Future of Recruitment	147
7. The Far Future (Possibilities beyond Tomorrow)	171
 <i>Index</i>	 <i>197</i>

This page intentionally left blank

## ABOUT THE AUTHORS

**Dr Franziska Leutner** is a Lecturer in Occupational Psychology at Goldsmiths College, University of London. She is an organizational psychologist and data scientist and publishes scientific articles on computational psychometrics, game-based assessments, personality, and entrepreneurship. As a product innovator, she has worked with tech companies and startups to develop the next generation of assessment and selection tools, including at HireVue where she is currently Director of Assessment Innovation. She holds a PhD from University College London, where she was a lecturer for several years.

**Dr Reece Akhtar** is a Cofounder and CEO of Deeper Signals. He is an organizational psychologist and data scientist specializing in applied personality assessment and computational psychometrics. As a lecturer at NYU and researcher at UCL, he has published scientific articles on personality, talent management, leadership, entrepreneurship, and machine learning. Previously he led product innovation at RHR International and Hogan Assessments Systems.

**Dr Tomas Chamorro-Premuzic** is an international authority in psychological profiling, talent management, leadership development, and people analytics. His commercial work focuses on the creation of science-based tools that improve

organizations' ability to predict performance and people's ability to understand themselves. He is currently the Chief Talent Scientist at ManpowerGroup, Co-founder of Deeper Signals and Metaprofiling, and Professor of Business Psychology at University College London and Columbia University. He has previously held academic positions at New York University and the London School of Economics, and frequently lectures at Harvard Business School, Stanford Business School, London Business School, and IMD, as well as being the former CEO at Hogan Assessment Systems. Find out more here: [www.drthomas.com](http://www.drthomas.com).

# THE PAST, PRESENT, AND FUTURE OF RECRUITMENT

The three of us have been fascinated by the study of recruitment for some time now. The reason is simple: humans spend a big proportion of their adult life at work, and the difference between picking the right or the wrong career has significant financial, emotional, and health consequences (Laspita, Breugst, Heblich, & Patzelt, 2012). When we make good career choices we thrive, find meaning, and not only apply our natural talents and skills, but also develop our full potential (Lu, Wang, Lu, Du, & Bakker, 2014). In contrast, when we make poor career decisions, we end up bored, alienated, and stressed, and our talents will simply go to waste (Maslach, Schaufeli, & Leiter, 2001). J.K. Rowling was on unemployment benefits after a lackluster career as a teacher when she finally found her niche as a children's author – to become the most successful author of all time. Brad Pitt was a limo driver, Pope Francis a nightclub bouncer, and Whoopi Goldberg a funeral make-up artist. These are just famous examples of people who started their lives in the wrong careers, but were at least lucky, courageous, and persistent enough to change. In

contrast, many people end up stuck in unfulfilling or meaningless jobs, highlighting the importance of picking the right career to begin with. Unsurprisingly, there are obvious parallels between a happy career and a happy relationship, just like there are clear parallels between an unhappy career and an unhappy relationship (Ahmetoglu, Swami, & Chamorro-Premuzic, 2010), but it is likely that people are more likely to put up with a bad career than a bad relationship, and not for lack of choices.

An even bigger reason we are passionate about recruitment is that we are psychologists, and as our own research and careers have taught us, there's a robust body of psychological knowledge and science to significantly increase the probability that every individual ends up in the right career, maximizing the fit between their unique dispositions, interests, and talents, and the particular requirements of the job or career they pick (Chamorro-Premuzic & Furnham, 2010). This specific area of psychology has resulted in a prolific field of research within Industrial-Organizational Psychology for over a century, and its results is the equivalent of a Cupid or [Match.com](#) for careers (Kanfer, Ackerman, Murtha, & Goff, 1995). Imagine a proven science that is able to help us understand and predict what each person is good at, how they differ from others, and what they are able to do better than their peers, combined with the ability to find a perfect home for their strengths and talents so that they end up fulfilled and happy in their careers. Confucius allegedly noted that if you pick a job you love you will never work a day in your life – he was right, but in today's complex world, this requires a fair bit of expertise and science, not to mention reliable tools and a rigorous methodology.

In a nutshell, that's what we do for a living: we are like a Cupid for careers, and our methods are grounded in a century of psychological research that explains why you like certain jobs but dislike others, why you are good at some things but

not great at others, and what that implies for your career and professional choices (Chamorro-Premuzic, 2017). Recruitment is the broad industry that brings it all together, because recruiters search and match with the objective of helping organizations find the right person for the right job, as well as help humans find the right job – and ideally career – for their own unique skills, personalities, and interests. When we don't intervene you get what usually happens: people making random career choices based on what their aunt or uncle suggested, or what their parents prescribe: “why don't you go be a doctor like your godfather”, or “why don't you study IT, so you can make good money?” In the realm of relationships this equates to marrying someone after a drunken encounter at a bar, or on the basis of a prearranged marriage, but with lower probability of success. Yes, prearranged marriages often outlasts “free” or self-determined marriages, not least because divorce rates in the rich world hover around 50%, so the bar is quite low, but there is still a much better way to get matched, both in the realm of love and work: namely, understand who you really are, and where your talents and potential are best deployed (Chamorro-Premuzic, 2016).

In that sense, there's a clear evolution in the world of careers, which explains why recruitment has become very data-driven and psychological in the past few decades. For most of our evolutionary history, including modern civilizations, our career success and professional fates were determined mostly by our *social capital*, a politically correct or oxymoronic way to talk about contacts and nepotism: *who you know* has usually explained where you end up, and how far in life you can go (Dillon, 2014). Alas, this is not quite obsolete in the twenty-first century, as privilege and status are more often inherited than acquired. But a big transformation began to occur with the advent of mainstream college education, and the rise of the creative classes: indeed, around 100

years ago or so what started to matter more than who you know or social capital was intellectual capital or *what you know* (Rindermann & Thompson, 2011). Enter the age of credentials and hard skills, which explains the rise of qualifications, and the advent of the knowledge economy. This is still the reason why a college degree is the main differentiator between lower and higher paid jobs, and why so many people in the world decide to take loans and debts in order to upgrade their professional choices – unless they are elite athletes, self-made entrepreneurs, or aristocrats, though university credentials are far from unusual in any of these groups.

And yet, there is clear consensus today on the idea that college credentials, including Ivy League qualifications, are a poor indicator of what people can do, not to mention the realization that what you have learned in school and college is far less important than what you can learn. Welcome to the age of *psychological capital* (Luthans & Youssef-Morgan, 2017), where what matters most is not who you know or what you know, but who you are. It is in this context that organizations and employers everywhere have the urge to understand people's values, abilities, and personalities. This urge is an attempt to make the world of work more talent-centric and meritocratic, aligning people's potential and talents with their jobs and careers, and coincides with an unprecedented attempt to look for talent beyond the obvious places, a major tenet underpinning the desire to build and harness a diverse workforce.

Diversity and inclusion have never mattered as much as now, and they will continue to raise in importance (Roberge & van Dick, 2010). The implication of this is obvious: organizations, and particularly the top employers in the world, are fighting a very specific battle in the war for talent – to identify the *rare find*, and be able to source top talent from unusual and unconventional places. Gone is the quest to hire for “culture

fit”, which results in going to the same schools, tribes, and geographies, and a homogeneous talent pool that defaults to one dimensional beliefs and attitudes to create groupthink and kill creativity. If you really want to hire on culture fit, you may end up not with a culture, but with a cult. Today’s top employers want *culture-add*, which means leveraging the distributed wisdom of the knowledge economy and harnessing the cognitive and psychological diversity that a wide range of individuals can produce when they have different backgrounds and perspectives (Wille, De Fruyt, Dingemans, & Vergauwe, 2015). Within this context the future of recruitment will need to address a significant psychological challenge underpinning the science of people at work, namely understanding how to unlock and harness human potential.

Today, however, this is still the exception rather than the norm. In fact, we live in a world where most people are still misunderstood, especially by their employers, and even by themselves. How can you pick a rewarding and fulfilling career if you don’t really know what you are good at? And how can employers hire you for the right job, if they don’t really understand what you are good at? This is the challenge that excites us, and keeps us up at night. It is the problem we have dedicated our own professional lives to solving, and we are privileged and lucky for having made this choice: because we love what we do, and do what we love. Our dream is that every person in the world has the ability to make equivalent choices, and go into a field or job that they deeply care about and love. In order to achieve this, we need to bring the science of recruitment to life, ensuring it touches every single employer and organization in the world, and also do our bit to inform and perhaps even “nudge” the wide range of job applicants who could improve their choices if they understood themselves and their potential career options

better. To be sure, we can't offer definitive answers to ensure a perfect match, but we can still improve both employers' and employees' decisions by sharing the insights of a well-established science on how to select the right person for the right job, and help people pick the right jobs for their own talents and passions.

Our focus with this book is on the future – because there is lots of room for improvement, and because we are living at an exciting moment in time. A time in which we can witness a promising convergence between a mature science of organizational psychology and scalable technologies for bringing this science to life, and making it a reality. This convergence is the result of ubiquitous individual and organizational data (Winsborough & Chamorro-Premuzic, 2013), and the ability to interpret these data in psychological terms to ensure that both organizations and employees can systematically bolster their understanding of talent and potential (Atkinson, Bench-Capon, & Bollegala, 2020). The better you know yourself, and the better potential employers know you, the more likely it is that you end up in the right career. Conversely, if you misunderstand your talents and live in a world in which organizations don't understand your talents and potential, you will only end up in the right career by accident. So, our job is to look to existing and emerging technologies in conjunction with the established science to improve the state of affairs for both employers and employees. In that sense, this book is an attempt to answer one major question: in what ways will organizations be able to select the best possible people for each job in the near future? To this end, we will try to distil the wide range of available innovations in this area – and assess what methods and tools may emerge in the next years – to depict the possibilities, opportunities, and risks for the future of recruitment.

The goal of this book is not so much to predict what *will* happen, but to prescribe – or at minimum recommend – what *should* or *ought to*. Our starting point is a fairly firm conviction that many of the common habits underpinning current practices are far from accurate, useful, or fair, and in many instances biased and corrupt (Chamorro-Premuzic, 2017). Indeed, we see the future as moving us from a relatively serendipitous and obsolete state of mainstream recruitment practices to a much more advanced point in the evolution of this industry where scientific and evidence-based decisions are relatively common, and where technology will play a big part: capturing the data that provides the raw materials for the science-based insights. To be sure, this will only happen if we can ensure that technologies, particularly AI and machine learning algorithms, are deployed in an ethical and moral way, such that they have a benevolent and beneficial impact for both workers and their employers (Fleming, 2021). We know this is certainly not a given, but we also know it is the only way in which organizations will gain a competitive advantage in the war for talent. Anywhere in the world, in-demand workers and sought-after talent will prefer to join organizations in which they are appreciated for what they contribute, understood and valued for whom they are, where politics and nepotism play a marginal role compared to meritocracy, and where the culture rewards moral and pro-social behaviors while sanctioning toxic acts. These principles ought to apply not just to humans but the technologies they deploy to make decisions. And while we cannot expect machines to have the moral conscience that propels them to act in ethical ways, we must hold humans accountable for unethical uses of technology, including AI.

In the next chapter, we shall highlight some of the specific ways in which this revolution may be achieved. While recent years have seen a great deal of innovation and activity in the

space of HR technologies (Stone, Deadrick, Lukaszewski, & Johnson, 2015), which includes a wide range of efforts to disrupt and improve the recruitment industry, we identify some major themes and areas of innovation that have already reached a certain level of maturity and had significant and salient impact on either practices, science, or both. More specifically, the next chapters comprise:

*Chapter 2: The data science revolution:* An overview of how the digital age, combined with advances in AI and machine learning algorithms, have turbocharged the old science of personnel selection (Yarkoni & Westfall, 2017). This is where I-O psychology meets AI to offer a new range of talent “signals” to understand and predict people’s potential and talent for different careers, and even help us infer whether someone is a good candidate for a job they have never done before, such as management and leadership roles. This field has advanced so quickly that it is hard to predict where it will end up – but we will highlight some of the more promising areas for development and application.

*Chapter 3: Digital interviews:* An overview of how technology platforms are replacing the most common historical method for vetting and selecting talent, namely the job interview (Suen, Chen, & Lu, 2019). While we have known for decades that typical interviews suffer from poor reliability and validity, and that the most accurate and reliable selection interviews are highly standardized and structured, to the point of resembling a controlled experiment or psychometric assessment, it was highly cumbersome and expensive for organizations to follow such rigorous processes. But, as we show in this chapter, the advent of the digital age, with ubiquitous video interviewing platforms and the vast corresponding data they capture – including voice, speech,