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Preface [The ultimate guide to visual lectures]

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https://www.amazon.co.uk/Ultimate-Guide-Visual-Lectures-ebook/dp/B07G9F51H6/ref=sr_1_1?ie=UTF8&qid=1534424076&sr=8-1&keywords=The+Ultimate+Guide+to+Visual+Lectures

PUBLISHER

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VERSION

VoR (Version of Record)

PUBLISHER STATEMENT

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REPOSITORY RECORD

Roberts, David. 2019. "Preface [the Ultimate Guide to Visual Lectures]". figshare. <https://hdl.handle.net/2134/34557>.

PREFACE



This book is about a major opportunity – a paradigm shift – in how we convey complex data, knowledge, messages and learning to our students. We have an opportunity in the visual era to deploy imagery so we can better match how we teach to how our students engage and learn at the cognitive level. The human brain can process visually and textually; we mainly rely on textual processing. We mostly use words – when our brains are equipped to process information visually, and when we inhabit the most visual era of human evolution. Crucially, this message is not about particular academic content or whether we believe we are visual learners or otherwise. It is about cognition, not content, context or culture. Anyone who sees, is a visual learner. Everyone who sees processes information visually. Any

subject we teach, can be conveyed visually to one degree or another. All sighted people possess the capacity to absorb, learn, understand, engage and remember through visual stimuli. That truth is a global, everyday reality. It applies outside the lecture theatre as a norm. This book shows that it can equally happen inside the lecture theatre, and in the process, improve student engagement with academic content and stimulate active learning practices.

The digital revolution and the world wide web's capacity to disseminate visual resources instantaneously has led to a 'pictorial turn' (Felten, 2008: 60). Social commentators like Louis Tietje and Steven Cresap declare visual media as 'the main means of communication

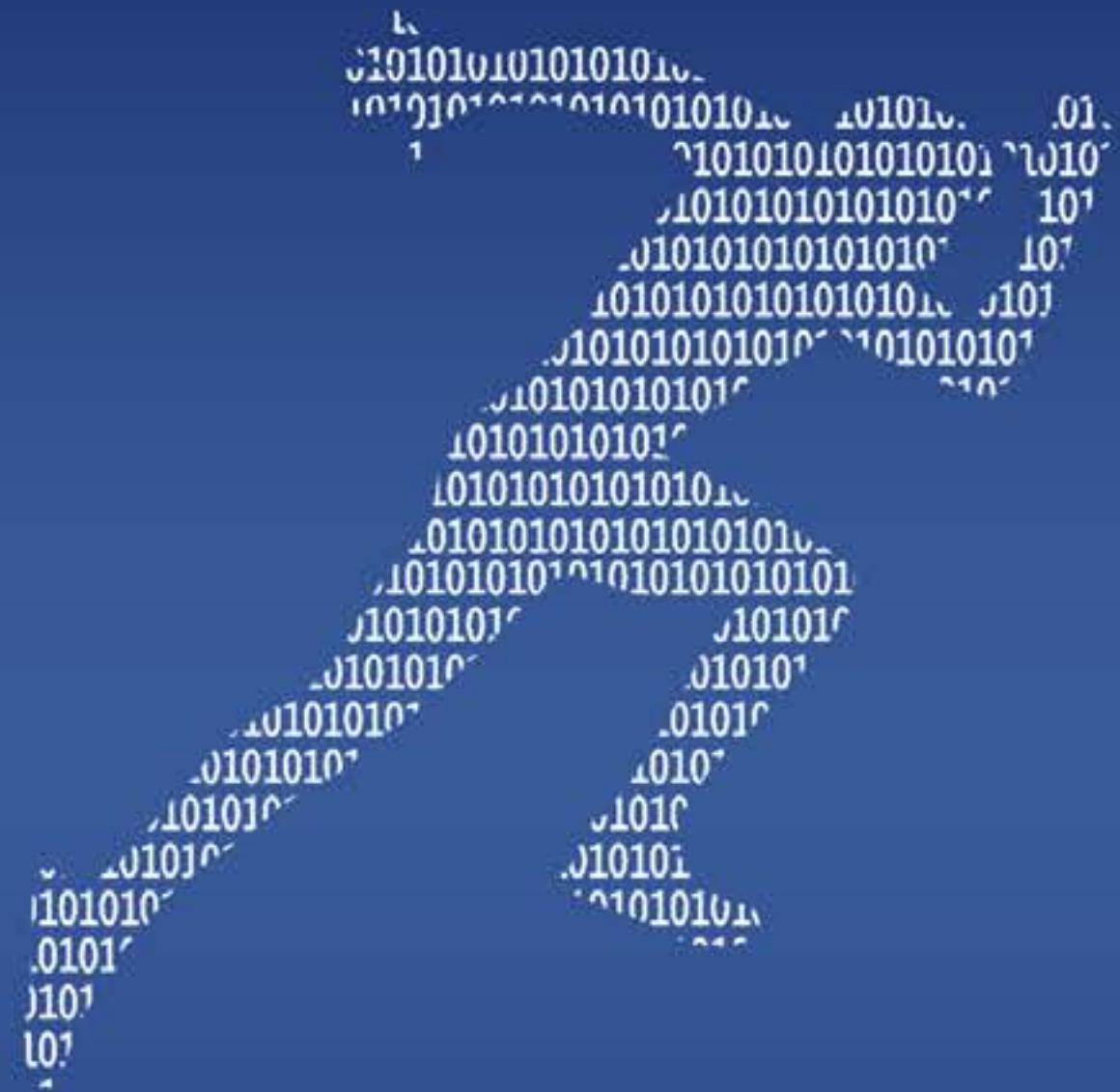
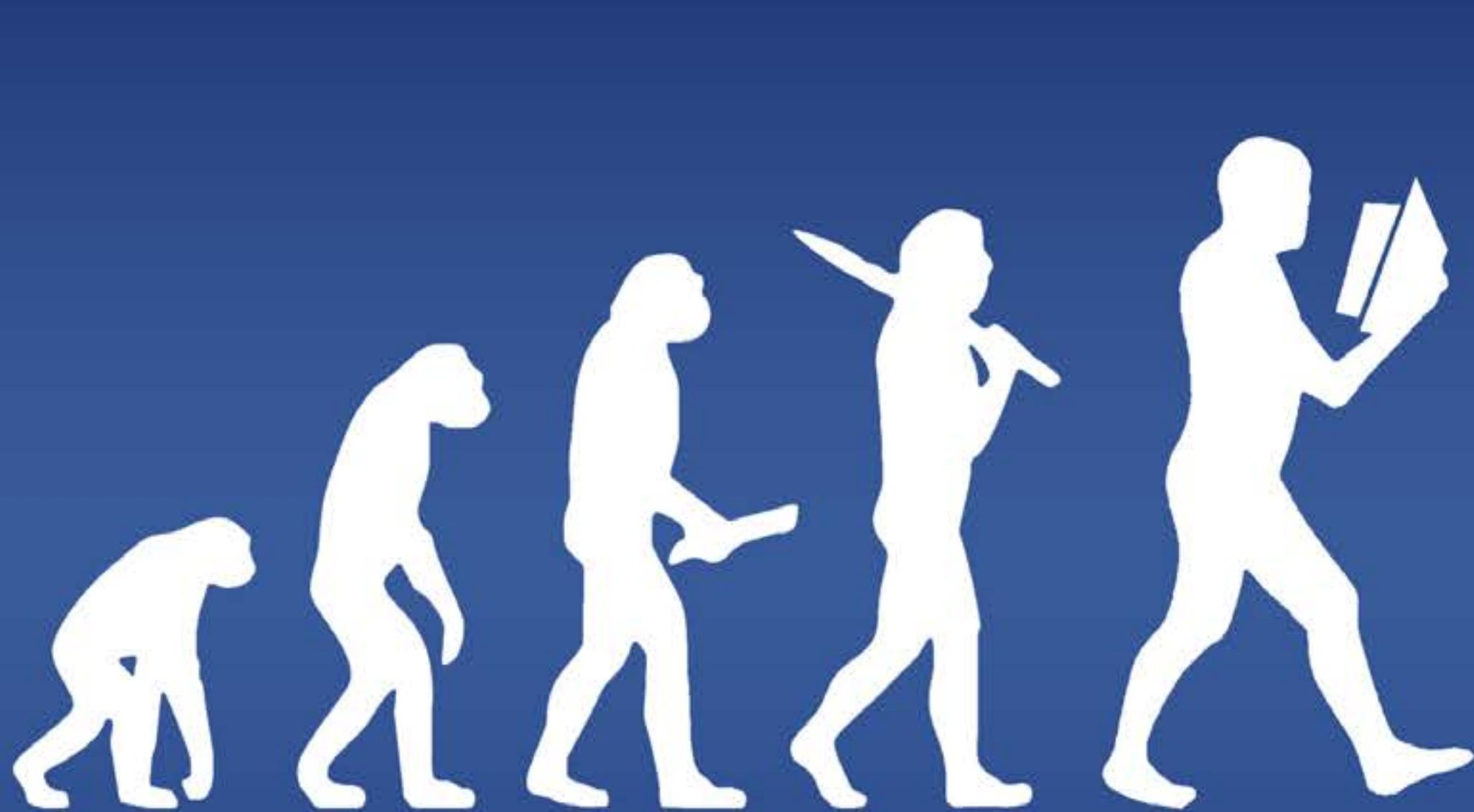
and expression' in the digital era (2005). This pivoting, away from the primarily textual and towards imagery as a parallel medium of communication, represents for some the third great communications revolution after writing, and then print. Each had radical implications for how we communicate, and teaching is undeniably about communication. The rise of digital communication and dissemination of information, combined with the expansion of the Web, has enabled the production, storage, dissemination and consumption of digital images. Facebook alone was absorbing 300 million images daily in 2013 (Cuthbertson et al, 2015: 158). An array of platforms host billions of images made by amateurs and professionals alike. Photography has been transformed from an expensive, laborious and slow

pursuit into a cheap, effective and instant way to represent, document and share planetary existence. Digital data banks have proliferated to buy, control, market and sell images to billions of consumers. Movies, news, mini-series and sport are carried globally through digital networks. Professor Emeritus Merlin Donald described these new digital media as 'the new interface between mind and world' (2014). The move towards imagery helps shape our students' lives and expectations long before they arrive with us, leading Julie Coats to argue that universities face 'the most visual of all learning cohorts' (2006: 126). Yet on arrival at university, this is not the experience they receive, for the most part. Until they get to tertiary education, their learning experiences have combined the textual and the visual, from

the first moments they see pop-up books, video and TV on demand, in playschool and through to post-16 education.

What is surprising is that in HE, we have largely ignored this opportunity and the intellectual rationale for embracing it. I would suggest this disconnect is at the same time disengaging and dangerous, and also a pedagogic opportunity. It's dangerous because the text-centric lecture format is pedagogically, cognitively harmful, since we have two key information processing channel and overload one whilst underusing the other. That implies by sticking with convention, we may be doing our students a pedagogic disservice. It's an opportunity, however, because we can easily transform lectures to overcome that crucial cognitive

disconnect. We can integrate imagery into lectures not as appendages or afterthoughts but as legitimated, parallel, simultaneous media of equal significance and value with text. Bifurcating intake between two cognitive channels instead of feeding exclusively text through just one reduces cognitive load which in turn increases mental efficiency. There's a handy video of Richard Mayer speaking at Harvard that describes this in greater detail [here](#). Not only do we then match how we teach to how our students learn at the physiological, cognitive level. But in addition, we organically increase student engagement and the production of active learning processes in lecture spaces. By moving from a dependence on a monomedia approach (primarily text) to a multimedia method (text and images),



we are balancing content delivery across apposite cognitive channels. It's not hard to see why Marcel Just (2010) would argue that biology 'has built into our brain our ability to see the visual world and interpret it'.

We can't ignore this knowledge. It's all around us and it's part of widely-respected and intellectually-authoritative scholarship spanning more than half a century. It's not subjective opinion and it's not based on particular academic content or social class. Nor is it speculative or solely theoretical; the method has been tested and shown to increase engagement and active learning by between 40% and 80% in a variety of disciplines. Some of that data appears later in this book. This may appear confusing: how can one approach work for multiple disciplines?

It's important to note that this approach has little to do with the academic content we present and lots to do with how we process it. It's based on a physiological construct that all sighted people share. We interpret information and knowledge through a visual processing ability, and this applies, at least theoretically, to all sighted people, regardless of the subject we study. There is plenty of room, of course, for more empirical testing, and I have designed a portable means of doing so. The lesson is brief and clear: we learn better with text and images than with text alone (Mayer, 2014).



A JOURNEY

I've been teaching in UK universities since 1992. In those days, there was much less regulation regarding the recruitment of lecturers. I heard of my first appointment as I was researching my PhD in Cambodia, in a letter from my supervisor that was sent to the American Red Cross office where I was temporarily working. Until 2010, I lectured using PowerPoint in the conventional manner, with text and bullet-points and the occasional image or video added from time to time. Conferences were my wake-up call. When I realized how disengaged I was becoming with standard presentations, I began to worry that my own lectures might be having a similar effect on my students, and I began to look around for alternatives. There was no doubt in my mind that PowerPoint had professionalized lecture presentations, but there appeared

to be some concerns arising about the pedagogic efficacy of the way Microsoft's technodeterministic prescription guided our use of PowerPoint.

My own concerns coincided with the rise of the digital and, more specifically, the increasing use of imagery in campaign advertising. These images were communicating complex matters and I started to adopt some of them to convey my academic messages. They were well-received, encouraging me to explore more fully why this was the case, leading me to Multimedia Learning (MML) scholarship. I realised I was becoming more engaged with the scholarship as my students appeared to be with my lectures and adjusted my research and REF direction accordingly. In exploring the means and rationale for the

use of imagery, I developed a theoretical and empirical basis that shortly became the route to a publications strategy which, in turn, supported a successful application to the Higher Education Academy (HEA) for a Senior Fellowship. This caught the HEA's attention and they publicly **endorsed** the method I was developing from the literature.

My approach also caught the attention of my School's Impact team for a Case Study for REF purposes, and at roughly the same time, I started a **consultancy** that continues to serve universities in the UK, Europe and the US. And with more support from my own institution, I also started a Community of Practice: the more I put the method 'out there', the more interest it appeared to attract from other HE bodies. To support

that consulting work, and the REF Impact Case Study, and because I believe this approach has much merit beyond my own lectures, I have produced this book to support colleagues who are interested in the potential and effect of matching how we lecture, to how our students become engaged and active learners. My own journey has reinvigorated my teaching and breathed life into lectures that were pedagogically one-dimensional. I hope you enjoy reading about and considering this approach, as much as I have done in developing and devising it.