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GRADUATE WORK

skills, credentials, careers, and labour markets

GERBRAND THOLEN



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This book is dedicated to the loving memory of my mother and father,
Grietje Tholen (1944–1989) and Hein Tholen (1939–2016).

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This book is the culmination of a three-year study into the UK labour market for graduates (2012–2015). The idea for this project emerged from a realization that in the last decade very few novel sociological approaches were trying to come to terms with how the current labour market for graduates is organized, and how the competition for graduate work can be understood within the wider economic and social context. What was evident to me, I thought, was the need for an update, a renewal, or potentially transcendence of existing attempts to theoretically explore the relationship between credentials, skills, jobs, and the work process for graduate workers. This is clearly easier said than done. The empirical work that followed examined what the university-educated do at work within four graduate occupations. Making sense of their stories and perceptions has been a demanding but ultimately rewarding challenge. Because of this intellectual struggle, it took me a long time to write this book. I really hope it will be of use to those interested in what graduate work represents in the twenty-first century.

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Excerpt from

The Schooled Society: The Educational Transformation of Global Culture

by David P. Baker

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Introduction

In short, the shift in America's workforce has not been from factories to fast-food outlets. Rather, the key growth in U.S. employment has come in offices and non-office settings like hospitals and schools that provide higher-skill services; nearly two-thirds of Americans now work in these higher-skill workplaces. The U.S. economy's largest and fastest growing sectors—business services, finance, healthcare, and education—are service sectors that have been clamoring for more educated workers and powering the dramatic upskilling of America's occupational structure. The rising value of education and training—especially postsecondary education and training—has been caused by the ongoing growth in these post-industrial service jobs. Advances in information technology and the rise of complex consumption and production networks have also been key factors in America's economic growth since the 1960s. This expansion of technology has only increased the demand for educated workers who can utilize that technology.

(Anthony P. Carnevale and Stephen J. Rose, 2015, p.16)

Schooled individuals are capable of (accustomed to and expected to use) certain kinds of skills, particularly those flowing from academic intelligence, which less-schooled or unschooled individuals tend not to be. Work is increasingly organized around these skills, and this process is sustained by formal organizations that contain significant numbers of jobs. This is not to say that the educated worker is a “naturally” more productive worker in every type of workplace, as cruder versions of the human capital view suggest. Rather, the educated worker is *the* definition of productive in the educated workplace. Worker and jobs dynamically change together as the full impact of the education revolution unfolds.

(David P. Baker, 2014, p.155; emphasis in original)

In these two rather long quotes, scholars aim to tackle how the growth in (higher) education drives changes in the workplace and vice versa. Indeed, a key question for all sociologists of work and education as well as many other

labour market experts remains how to understand the way the two forces impact each other. With the stark growth of higher education in recent decades came the growth of the number and share of workers with university degrees within the labour market. Mass higher education is not without its critics (see Attwell and Lavin, 2007), yet there exists a powerful idea that graduate workers that have attended university are a distinct category of workers with the advanced skills to succeed in the modern economy. Furthermore, it is thought that their growth in numbers is matched by a growth in the labour demand for their skills within a knowledge-based economy.

Some, like Carnevale and Rose, assume that in a post-industrial economy, more education means more skilled workers in the labour force yielding higher productivity, which leads to improved economic performance and higher relative wages for the educated. Others, like Baker, feel that education is shaping work fundamentally and makes university-associated advanced skills key assets in the modern workplace. Both see the growth in participation in higher education in recent decades as a logical step towards a high-skilled, high-waged economy.

In this book, I argue that both make the same mistake. The growth of higher education has not been the main leitmotiv within the world of work, neither as a catalyst of labour market demand nor in itself shaping skill use, job content, or working conditions in a particularly major way. This is not to say that for an increasing number of people higher education is not shaping their lives as they participate in higher learning.

Can we talk about graduates as a meaningful labour market grouping? What do they have in common? How has *higher* education (HE), in itself, shaped their skills, knowledge, and labour market status and power? This book tries to find some answers to these questions by examining how we can understand the graduate labour market as a social phenomenon, focussing mainly on the United Kingdom. In doing so, it provides a distinct sociological contribution to an ongoing debate on the extent that the modern economy is defined by the skills, knowledge, and contributions of graduate workers.

I take the position that the meanings of graduate labour and graduate work are not fixed but under continuous change due to economic, technological, and educational social changes which alter our understanding of their definition, their value, and their function within the wider economy. As with any other type of labour market, the labour market for graduates should not merely be understood as a result of supply and demand forces (as neoclassical economics would have it). Who gets which jobs and why is predominantly not a technical discussion of how features of human capital such as skills are matched with jobs. Instead, the labour market is understood as being socially constructed by those who compete for jobs as well as employers and stakeholders. Individuals try to advance their interest through the application of

the available resources. Akin to the struggle for material resources, actors participate in symbolic struggles to define other actors' understanding on the nature and rules of the labour market. Following Bourdieu (1984) I assume that individuals' cognition of the world is shaped by the terms, concepts, and categories created through a conflictual interest struggle. Powerful actors try to legitimize these classifications and categorizations in order to maintain their position within the hierarchy. Once the world view expressed in particular categorizations is accepted, domination is achieved and relatively easily maintained. This symbolic inequality is furthermore strengthened by wider cultural processes through which, for instance, individuals and groups identify themselves, and are identified by others, shaping and legitimizing systems of categorization (Lamont et al., 2014).

In the book, I argue that there is no valid reason to assume that graduate labour necessarily constitutes a special type of skilled and high-status labour, distinct through its association with higher education. Neither do university degrees play the same type of role across the whole of the graduate labour market. To rather deconstruct the consensual view that associates and often conflates knowledge worker, skilled worker, and graduate worker, the book focuses on four key questions that encapsulate some of the most important areas of contention and misunderstanding. These are:

What is a graduate occupation?

What is the role of education for graduates in the labour market?

What are graduate skills?

What are graduate careers?

Graduates now make up between 20 and 35 per cent of the workforce in most Western countries. Although concentrated in what are deemed highly skilled occupations, they work in various types of workplace and sectors. How can we understand something that is large and widespread and multifaceted, that is, the labour market for all these graduates?

What Happened to the Graduate Labour Market?

The labour market for graduate workers has never been so under pressure and in flux. A range of trends are changing the work of, and the demand for, graduate workers. In an earlier work, I identified seven key trends affecting the graduate labour market (see Tholen, 2014). These are still of key importance today. They are:

1. The fast expansion of higher education

The vast increase in supply of workers with higher education in recent decades in the UK and worldwide has created an abundance of highly

skilled workers, leading to questions as to whether demand for these workers has kept up.

2. The recession and the widespread effects on the general labour market

The 2008 recession, which affected most Western economies, in the UK context led to extensive austerity measures. Flexicurity measures have increased the labour market's flexibility and deregulation (Heyes and Lewis, 2014). Western labour markets have recovered in a fragmented way, with a high incidence of long-term unemployment and failing job growth. Although graduates tend to be less affected than lower-educated workers during a downturn, they still are dealing with the same economic landscape.

3. Global economic integration

Globalization has fundamentally changed the nature of not only low-skilled work but also other types of white-collar work such as professional work. The global economy relies on the ease of relocating parts of company production processes, making offshoring and global competition for advanced skills increasingly based on quality and price (Brown et al., 2011).

4. The emergence of new graduate occupations

A growing number of jobs are now 'partially graduate' (Brynin, 2013), meaning that graduates are entering occupations that were traditionally not pursued by graduates. In addition, new occupations emerge in which the majority of workers are graduates; this 'graduatisation' of the labour market differentiates the meaning or value of formal higher education credentials and skills.

5. New types of work organizations and technological change

Liberalization, technological innovation, and mobile production systems have turned markets in which even smaller companies operate into volatile, ever-evolving globally competitive arenas. Management systems are in place that change the content of many graduate-level jobs and careers. Within the UK, the rise of non-standard employee contracts and self-employment needs to be mentioned. There is evidence to suggest that technological change in general and computerization in particular are changing the nature of work of graduates (e.g. professions, Susskind and Susskind, 2015), as well as both negatively and positively impacting the demand for particular graduate occupations (Frey and Osborne, 2013).

6. The war for talent and the elite labour market

Many organizations increasingly rely on a limited number of graduate employees that are deemed 'talented'. These well-paid and fast-tracked positions are much coveted but the competition for these jobs is demarcated from the rest of the graduate labour market. Access is to a large extent closed off to most graduates, irrespective of their skills, knowledge, and abilities.

7. Increasing wage differentiation

According to most studies, wage premiums of graduates over non-graduates have continued in recent decades. Yet wages for UK graduates have dispersed in the last decade. It is most likely that some graduate occupations have seen their rewards increase rapidly, whereas others have stagnated. But also within occupations there is increasing wage inequality. We cannot assume that the increase in rewards for some graduates is fully or necessarily caused by an increasing demand for advanced academic skills. Here the role of institutions, organizational change, and closure strategies of certain professions are major forces.

These changes have made the graduate labour market increasingly elusive to understand and in this book I am making an attempt to shine a light on the four questions posed earlier. To explore the nature of modern graduate work I draw on a detailed investigation into four graduate occupations: software engineers, laboratory-based scientists, financial analysts, and press officers. The book uses these four occupations to develop a renewed sociological understanding of graduate work and the labour market for graduate workers.

The Study

During a three-year period four in-depth occupational case studies were completed. The decision to use occupation as a unit of analysis was not the obvious choice. Much of the existing research has focused on large-scale surveys and statistics distinguishing labour market outcomes according to different levels of education. Having a strong interest in what people do all day at work, akin to Studs Terkel's (1972) classic US study on the working lives of workers in various occupations (see Biggs, 2015 for a similar but more recent and UK-focused investigation), I made a conscious choice to use occupations as the level of analysis when I designed the study. There is a risk that occupations are not the right approach to understand the graduate labour market. Concentrating on very specific workers who work perhaps under very specific conditions does not tell us much. We also know how important organizations are in unequal labour market outcomes (e.g. Tomaskovic-Devey, 2014; Sakamoto and Wang, 2017). Yet, occupations matter within work; they are important in how workers understand their own work, their organization, the division of labour, and the power and status of workers. Occupations convey a much wider status of resources and opportunities. They are an important conduit for social reproduction (Jonsson et al., 2009), and thus represent meaningful categories through which workers relate to the labour market.

The goals of the case studies were to provide detailed vignettes of what workers do at work and how they think about their work within four occupations that are considered to be graduate occupations. In doing so, the case studies are able to provide valuable insights into the nature of graduate work and the so-called graduate labour market. Unlike some sceptical voices (e.g. Holmes and Mayhew, 2015), I strongly believe that in-depth case studies are able to elucidate greater understanding about the nature of graduate work in general through their strong focus. It is true that these four occupations can never be seen as 'representative' of the whole graduate labour market, nor are they intended to be. They are used to investigate how the work that graduates perform is organized, understood, and negotiated within their occupational contexts and how higher education interacts in those. The in-depth nature also provides scope for meaningful comparison of the work of graduates.

Much of the existing research on the graduate labour market relies predominantly on statistical data that is often based on large-scale surveys. These studies provide valuable knowledge about many aspects of the graduate labour market. For instance, they are able to explore in detail the relationships between a multitude of social factors such as social class, gender, degree, educational institution, and labour market outcomes for various graduate populations. Yet in doing so, they lack the detail and depth to explore how, within a single occupation, the role of graduates functions within the work process as well as in recruitment and selection. Also too often the focus is on early career outcomes and does not take into account further career trajectories or the work of more experienced graduate workers. In this study, the four case studies together construct an empirical base upon which we can theorize the labour market for graduates, accepting the difficulty in ascertaining its external validity.

The fieldwork took place between January 2013 and May 2015. Over this period a total of 107 interviews were conducted. The majority of these were with graduate workers in the four occupations. In addition, employers, HR managers/recruiters, non-graduate workers, and higher education lecturers from relevant fields were interviewed. Participants were selected and recruited purposefully from available LinkedIn profiles to allow significant variation in terms of sector, age, gender, and educational background. A small minority were recruited through snowball sampling. Participants were located all over the United Kingdom, although the majority were in the south of England. There was considerable spread in terms of age and career stages. The gender balance was somewhat skewed towards males (N = 65), particularly in software engineering and lab-based science.

The semi-structured interviews explored:

- How and where graduates obtain their skills;
- How the competition to enter the occupation is organized;

- What the roles of degrees and other credentials are within the competition;
- The employability strategies of those who enter the occupation;
- The skills demanded by employers to access the occupation;
- The influence of the 2008 recession on the occupation;
- The influence of the global labour market on the competition for jobs causing changes to the labour process;
- The effects of the influx of graduates into the labour market;
- The skills and abilities that are utilized in the work process; and
- How careers are developed and maintained within the occupation.

The interviews were fascinating and insightful. The interviewees were very generous with their time and effort to explain to me how they understand their work and the labour market. Overall, they have provided me with sophisticated accounts of their work in which they articulate their view of their own work, their work identity, and the day-to-day work experience. Through careful data analysis I have aimed to make sense of their narratives, highlighting both commonalities as well as differences within the occupation as well as between occupations. All the participants have been given pseudonyms.

The Four Occupations

The four graduate occupations have been carefully selected, albeit without fully knowing what I would find. Their work reflects many of the economic and employment changes that the graduate labour market has undergone, outlined earlier in this chapter. There are some potential weaknesses in this selection. Although sufficiently different, three of them at first glance rely on Science, Technology, and Mathematical scientific knowledge and skills. And although they are almost unequivocally seen as graduate occupations, none of them could be regarded as a traditional graduate occupation or profession. I will succinctly introduce each of them.

Software Engineers

It feels like software engineers have been a permanent fixture within the occupational landscape, but it is important to realize how novel the occupation actually is. Software engineering has made a stellar rise in the last three decades, during which time the concept of software engineering became a distinct occupation within the information technology field. Software engineers have inherently been associated with the economy of tomorrow,

and few occupations have more often been associated with the so-called 'New Economy' than this one. Software developers are seen as typical knowledge workers (Reich, 1991; Scarborough, 1999; Castells, 2000). This may be due to the ubiquitous nature of software applications embedded within a growing number of devices, technologies, and processes, as well as the ever-increasing role of the Internet over our lives.

Many perceive coding skills to be in growing demand for the future. Regularly, commentators argue that children should learn to code from an early age in order to promote future economic competitiveness, or that individuals must learn to function within a networked society or face being 'intellectually crippled' (Naughton, 2012). Recently, the UK government has replaced the old Information and Communication Technology (ICT) curriculum with a renewed focus to teach children as young as five to learn to code (Gove, 2014).

The occupation consists of a variety of roles in almost every sector imaginable. Next to software engineer, their job title can be 'programmer' or 'software developer'.¹ In essence, the task of software engineers is the designing, development, testing, and evaluation of software. This involves writing the code (program) that creates software that fulfils the users' needs and satisfies the requirements of customers or managers/team leaders. This means instructing a computer, line by line, how to perform a desired function. Before engineers start coding they analyse first the needs of the user/client, after which they commence to design, construct, test, and maintain computer applications software or systems (or some of these activities). A large part of the role is trying to understand what is needed and communicate with various stakeholders within organizations. There are a wide set of characteristics that good software needs to fulfil. An important quality standard distinguishes functionality, reliability, operability, performance efficiency, security, compatibility, maintainability, and portability (as well as sub-characteristics within these) (ISO, 2011). So, software engineers want to produce code that is correct and robust, as well as easy to reuse and to improve.²

Laboratory-based Scientists

For this study, only scientists working in pharmaceutical and biotechnological commercial companies were selected. No scientists working at universities were interviewed. This was to create some homogeneity within a wide scientific community of researchers. The study also focused on graduate workers and not postgraduate workers (despite the latter's ubiquity in those sectors). The two industries encompass research working on a wide range of scientific projects examining a wide range of topics. Whereas the modern pharmaceutical industry originated in the mid-nineteenth century, the biotechnology