



**UNPACKING
CONSTRUCTION
SITE SAFETY**

Fred Sherratt

WILEY Blackwell

Unpacking Construction Site Safety

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For Pru

Preface

I have worked in the construction industry for over 13 years. I began as a site secretary and worked my way up through the ranks via the planning function to site management. It is an industry full of interesting, entertaining and wonderful people who all make something happen. It is an industry that creates things, that makes places and spaces for people and changes the world we live in. Whilst sometimes fraught with conflict, aggravation and traumas, it is also an industry full of life and laughter and usually someone singing very loudly, a little bit off key. It is an industry that I love.

But it also has a big problem. I have seen the consequences of accidents that have stopped men working for weeks and months. I have had to collect the witness statements and take the photographs of the locations when accidents have occurred. I have had to gather the evidence that they had been inducted and read their method statements for the task they were performing at the time. I have donated to collections to try to keep a family going as no income will be forthcoming for the next few months whilst an injury heals and bills still have to be paid.

My position within this environment enabled me to approach health and safety in a different way from many of my peers. As a woman on site I was different, although I never felt that I did not fit in; I found that construction accepts you if you can do the job you are there to do, no matter what gender, race or age you are. I am able to swear with the best of them, shout when shouting is needed, and coax and persuade when required. And because of this perhaps, I was able to argue from the point of view of the wife or daughter, I was able to show concern where my colleagues resorted to anger, I was able to suggest that the consequences might outweigh the benefits, I was able to say that I was stopping work

because I cared. And when this approach was articulated it did make a difference, and people did listen.

However, this did not manage to stop people acting unsafely. Every day I saw that people did not follow the rules, despite inductions and training they still acted unsafely, they still took risks and they still did not always behave with care and concern for everyone else on the site. I sat in training rooms with them on safety culture training programmes, which took a different approach to safety, and I heard the comments afterwards, not to mention the comments before, that they were to lose half a day's pay for this 'shite'.

And that is what initiated my research, once I'd finished my degree in construction management I carried on. I wanted to ask the question why, despite best efforts all round, and the agreement that things could still improve in terms of safety (although some of the training left a lot to be desired), did accidents and incidents still occur? Why were we still having collections? Why did you still hear stories and tales of accidents on other sites, of the deaths of people that we had been working alongside only a few months ago? Why in the twenty-first century had this not yet been sorted out?

Alongside my working life spent living the construction dream, I am also a geek. I like to study and explore and think about things, to learn about new ideas and approaches. I could see that most of the ways we tried to measure safety weren't working; safety climate questionnaires were completed with what the management wanted to hear, not a reflection of reality. This was also the case in academia, where research often measured people as if they were constant, that they could be predicted, that they behaved according to rules and logical thought. Reality tended to argue quite strongly with this. I wanted to know why this didn't work, or rather, didn't seem to me to work? What alternatives for exploration existed? Could they help? Could they provide a different perspective on people and help us understand how to make it safer on sites?

Consequently, I started at Plato and carried on. I discovered cognitive theories and became very excited, I applied this thinking to risk taking on sites, and it kind of worked, but didn't really tell me anything that had not been found out before. And as I kept investigating, I found that maybe this approach couldn't answer all the questions in terms of my experience. It couldn't predict or explain everything that was common in terms of the uncommon found on sites, and when it tried it tied itself in paradoxical knots. I kept

going, and found social constructionism which through its approach didn't even try to explain. It enabled acceptance and understanding rather than any 'scientific' explanations. It unquestionably embraced variation, irrationality, and crazy stupid people doing crazy stupid things, without trying to explain them. It let you explore and understand, without the need for assumptions or generalisations. As far as I could establish it hadn't ever been used on construction sites; this approach hadn't been tried before. Maybe it could throw out some new ideas, some new suggestions that could help?

I could see that it might not provide the answers that people who write training programmes might want to hear. It didn't produce firm explanations which could be located in the crosshairs and eliminated from sites. Rather it offered insight, illumination and understanding. More thinking would be required once this was achieved, but I wanted to see where this path led. So off I went.

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Chapter One

Introduction

This book aims to explore and unpack construction site *safety*. From the very start it must be made clear that this does not include its long-time associate *health*, or the more recent addition of *well-being*. The reasons for this will quickly become apparent, but are broadly due to differences in the way they emerge on sites, how they are managed in practice, and in part their very essence. As will be examined later, there are fundamental differences between them that should arguably be better acknowledged and considered within construction management, yet for this text they have been set to one side in order to ensure full attention can be paid to the specific concept of construction site *safety*. However, health in particular does still appear in general contextual discussions, placed alongside safety as part of a seemingly unbreakable, although at times impractical and often not very helpful, amalgam.

This book takes a different approach to safety on construction sites.

Rather than discussing the implementation of various regulations or seeking to evaluate the effectiveness of safety management systems against templates of 'best practice', it considers *how* people think about safety, what it means to them and how they go on to collectively use those ideas in their everyday work. This could also be deemed an evaluation of construction site 'safety culture', a notoriously problematic term and one that is discussed in more

detail in later chapters. Although to some extent, that is precisely what this book is.

This book takes the approach of asking some very fundamental questions.

- What is safety on site?
- Do we agree on our definition?
- How do we talk about it?
- How is safety associated with practice?
- Does it 'work'?

Although the last question has already been partly answered for us by the fact that we keep appearing in the list of the UK's most dangerous industries, it, and these other questions, will be explored as construction site safety is unpacked within this book.

The term 'unpacking' may seem a little odd. It comes from the way this book has been researched and prepared. It means to pull apart, to challenge, to question and to consider from as wide a variety of perspectives as possible, both academic and practice-based. It therefore lets us take safety apart within the specific construction site context to see what we can find – an ideal approach to help us answer the questions above, allowing us to explore and address them from outside the traditional frameworks of legislation, management systems and best practice. Instead, we can see how these approaches actually work in practice, how they are received by those who have to use them on a daily basis, and how they ultimately contribute to what safety actually *is* on sites. The way this process has been carried out is discussed in much more detail in Chapter 3.

The context for this book is large UK construction sites (over £15 million in value) operated by large main contractors (found within the top 30 contractors in terms of annual work won by value in the UK), rather than those operated by small-to-medium sized enterprises (SMEs) or micro operations and sole traders. However, smaller industry organisations inevitably participate in work on large sites as they operate as subcontractors within industry supply chains. Research has shown that subcontractors take their ideas of safety with them when they move from project to project (Aboagye-Nimo *et al.* 2012), and therefore SMEs and even micro-SMEs play a considerable part in helping to create and perpetuate what safety is on large construction sites.

Within the contemporary UK construction industry, main contractors can be seen to be actively trying to improve their safety

management through the use of structured Safety Management Systems, a focus on accident targets and various safety management programmes. In this environment, such well-implemented safety management should ideally mean zero accidents, but it doesn't. Sadly there are still incidents on large projects; the death of a worker in March 2014 on Crossrail in London occurred despite a certified safety management system and Target Zero safety programme being in place (Crossrail 2015). These environments are where 'traditional' safety management has been suggested to have plateaued in terms of what it can achieve, and so where new thinking is needed for future improvements.

Reading this book will hopefully support the development of a deeper understanding of safety on sites, which goes beyond practical frameworks of legislation and management systems, and starts to consider the answers to the questions asked earlier in detail. With a better knowledge of how safety actually 'works' within the site context, the development and implementation of management systems, interventions and initiatives can be subsequently enhanced and tailored to improve 'fit' within this environment. There is also the potential to improve existing safety management practices, by enabling a better understanding of *why* people might sometimes act as they do when they carry out safety violations, enabling the best course of action to be determined, both with the individual (to engage and educate or to discipline and punish) but also within the wider work context (to change the work method or revise payment practices, for example).

This book is intended for practitioners, academics and students of construction management. It hopes to cross the divide between practice and academia, both of which need each other to gain a complete picture of any aspect of construction management. Where some elements of this book will necessarily explore how we think about things and what this means for our social interactions from academic perspectives, there is also the need to illustrate and explain these academic considerations in relevant and representational contexts of practice.

Although the author is now works as an academic, she has over 10 years' experience of working on large construction sites in the UK, including several years as a construction section manager. During this time she was directly involved in safety, and has therefore worked through the challenges of its implementation, as well as unfortunately been witness to the repercussions when it has sadly failed.

This book seeks to draw on both academia and practice, and it is hoped that from either perspective, the other viewpoint proves illuminating and that both can be brought together here to give a different, informative and most importantly *useful* understanding of safety on construction sites.

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Chapter Two

Construction Site Contexts

Our job, they say, is to get stuck in and get the job done, not to fill in forms. In time this macho approach becomes the local custom and practice.

Kletz 2012: 765

Although Kletz was not specifically talking about the UK construction industry when he made this statement, he might as well have been. Getting stuck in and getting the job done can be seen as one of our industry's most positive characteristics – nothing can't be done! – but it has also arguably contributed to one of the worst safety records in UK occupational safety.

The Health and Safety Executive (2014) report that the UK construction industry only employs approximately 5% of the UK workforce, but disproportionately accounts for 31% of fatal injuries, 10% of reported major/specified injuries and 6% of over-7-day injuries to employees. In the period 2013/14 there were 42 fatal injuries to workers in the construction industry and 592 000 working days were lost due to workplace injury, a total of 1.1 days lost per worker. All these statistics make for unpleasant reading, and also make construction one of the most dangerous industries to work in within the UK.

Often accidents happen because of changes to planned work, something pretty much inevitable in the construction industry.

We build our own work environments around us and so bring change to our workplaces on a daily basis – if we didn't we wouldn't be doing our job – but this is something no other industry really has to contend with. For example, the management of access routes around a construction site can be a very complex and time-consuming task – if the stairs used to access the third floor yesterday are being screeded today and so everyone needs to go round outside to the door at the bottom of the next staircore, but not round the east as the curtain walling is going up and there's no access through, but that will change next week when they drop onto the west ... and so on. And change is not limited to the physical workspace; change to programme, to sequence, to design, to work practices and methods can also occur on a fairly regular basis as labour and plant become available or unavailable, or our clients simply change their minds. As a result the construction industry is highly accepting of change, and sees it as an inherent part of work.

But changes in work environments can also make significant changes to the hazards and risks of a task, and in such cases change means safety should be reconsidered and re-planned and re-programmed. But these safety aspects can go unnoticed or even ignored, because getting the job done is our top priority. And that is when accidents can occur.

This flexible and fluid work context is also influenced by other aspects of the industry: the motivations behind getting the job done, the people who carry out the work, the way work is allocated and paid for and even the working conditions. Understanding of this wider context provides the groundwork for understandings of how safety itself works on sites, and the contextual influences that have shaped it within this construction site environment.

Winning Work

Winning work in construction can be a complex process, not least because of significant variations in work availability. Demand for construction work is directly derived from the needs of other industries or the public sector (Morton and Ross 2008). Given the nature of the product and the need for capital expenditure or investment for its production, this demand is closely linked to the overall health of the UK economy, and the industry goes through boom and bust periods as the economy fluctuates between growth and recession (Dainty *et al.* 2007). As the economic downturn of 2010 has