The Degree Value of Arts, Humanities and Social Science (AHSS) and Science, Technology, Engineering and Mathematics (STEM) for Elite Professional Service (EPS) Firms

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Abstract

In the United Kingdom (UK) and abroad, increasing students' employability has been one important concern of higher education (HE) in the last decades. In this context, there is large student demand for 'high value degrees' that teach employability-related skills and have strong labour market outcomes. In the scholarly literature, comparing the value of Arts, Humanities and Social Science (AHSS) and Science, Technology, Engineering and Mathematics (STEM) degrees have been the source of much interest and scrutiny. The literature to date, however, has focused primarily on investigating the financial returns (e.g., income) of AHSS and STEM degrees and has largely ignored their value and labour market utility for specific professions. Specifically, there is no research that has explored the value of AHSS and/or STEM degrees for securing employment at Elite Professional Service (EPS) firms, despite EPS firms being one of the most sought-after graduate careers for their high pay and elite status.

The thesis here addresses and adds to this evidence gap, by exploring student and graduate perceptions of the value of AHSS and STEM degrees for securing employment at EPS firms. The thesis focused on consulting and investment banking (IB) firms, as there is a conspicuous lack of research that specifically explore these two EPS firms. The purpose of this is research is not to argue whether an AHSS or STEM degree has greater value for EPS firms. Rather, it aimed to understand what skills students/graduates gained through their respective degrees (AHSS and STEM) to secure employment opportunities at EPS firms (Consulting and IB). To understand this, 21 semi-structured interviews were conducted with students and graduates from four Russell Group universities with internship and/or full-time opportunities at EPS firms.

The findings indicate that both AHSS and STEM degrees were perceived to help students develop specific employability-related skills that are of high value for EPS firms. These skills included the quantitative abilities of STEM graduates and the analytical abilities of AHSS graduates. At the same time, however, participants described the skills which they perceived were lacking from their studies, such as specific commercial and business knowledge. To supplement these skill gaps, students took the time outside of their degree programmes to improve their employability for EPS firms. This was perceived to be highly valued by EPS firms, in addition to the specific employability-related skills gained from their respective degrees.

An additional contribution of this research is the finding of 'hybrid degrees' which have course content from both AHSS and STEM subjects. In this research, hybrid degrees included a social data science-related degree, a sustainability and business-related degree and a technology and business-related degree. The students in these hybrid degrees revealed that they provided students with both the hard and soft skills gained through AHSS and STEM subjects, positioning employability at the forefront of their curriculum agenda. The skills and employability-related opportunities that were provided at hybrid degrees were perceived to be of high value for EPS firms. In addition, the research findings corroborated some underlying and well-established knowledge about graduate employment such as the overarching importance of institutional prestige and social capital to secure employment at EPS firms.

List of Acronyms and Abbreviations

AHSS	Arts, Humanities and Social Science
CV	Curriculum Vitae
DfE	Department for Education (UK)
EPS	Elite Professional Service
HE	Higher Education
HEI	Higher Education Institution
HESA	Higher Education Statistics Agency (UK)
IB	Investment Banking
IIP	Integrated Internship Programme
STEM	Science, Technology, Engineering and Mathematics

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Chapter 1: Introduction

In the last decades, increasing students' employability has been one important concern of higher education (HE) policy and discourse. In the United Kingdom (UK), given the need to prepare work-ready graduates for economic growth, the Dearing Report (1997) first put forward the issue of employability on national agenda, articulating that an important goal of British HE is "to meet the legitimate aspirations of its citizens to improve their qualifications and employability" (p.263). Since then, employability—embedded in the language of student skill development—has underpinned much of HE and graduate employment-related policy in the UK, as seen in the Leitch Review of Skills' Analysis (2006), Browne (2010), the White Paper (2016), Augar Review of Post-18 Education (2019) and the Teaching Excellence Framework (TEF), for example.

In this policy context, there is great student demand for 'high value degrees' which equip students with employability-related skills and have strong labour market outcomes (e.g., Belfield et al, 2018; Chevalier, 2011; Lyonette et al, 2017; Robson et al, 2021; Vries, 2014). Specifically, there is scholarly and public debate on the value between Arts, Humanities and Social Science (AHSS) and Science, Technology, Engineering and Mathematics (STEM) degrees in terms of labour market utility and outcomes. Implicit within this debate is that, with HE becoming increasingly market and performance-based, there is also greater student demand for degree subjects with strong graduate labour market outcomes and individual financial returns (Marginson, 2013; Tomlinson, 2018). These demands are especially pronounced today, given the significant economic disruptions caused by Covid-19 and the youth unemployment crisis in the UK (Robson et al, 2021).

In this lens, STEM subjects have been remarked as 'high value degrees', given their strong financial returns and employability in the labour market (e.g., Chevalier, 2011). For example, STEM graduates in the UK consistently earn more than AHSS graduates even after accounting for differences in student demographic variables, such as gender, race and socioeconomic background (Belfield et al, 2018). The perceived high value of STEM degrees is also evident in the increased university applications/admissions to STEM degrees with strong anticipated market growth, such as computer science, engineering and Artificial Intelligence (AI) (DfE, 2021). Consequently, critics have positioned AHSS subjects as "low value degrees" for their apparent lack of labour market utility and returns. For example, it has been described as "supremely impractical (...) a 'frivolous' indulgence that one consumes only when all other basic needs have been met" (Kent,

2012, p.273). At the same time, however, there is also a wide body of literature advocating the employability of AHSS degrees. For example, AHSS students/graduates have been remarked for their strong set of transferable/soft skills, such as critical thinking (British Academy (BA), 2020), adaptability (Haskell et al, 2005) and written communication skills (Davidson & Goldberg, 2004), to name a few.

Turning to the demand side of the graduate labour market, however, there is a conspicuous lack of literature which specifically addresses the value of AHSS and STEM degrees for securing business-related employment, particularly at Elite Professional Service (EPS) firms. According to Rivera (2011), EPS firms refer to:

> "Businesses whose main focus is selling customized advice (e.g., managerial, financial, legal, etc.) to corporate clients" (p.72)

In recent years, EPS firms have been the source of public interest, given that they are one of the most sought-after career opportunities by students for their high salary and elite status (Ashley & Empson, 2017; High Fliers, 2022; Rivera, 2016). Broadly, EPS firms comprise of: 1) Law 2) Accounting 3) Consulting and 4) Investment Banking (IB) firms (Rivera, 2011). Amongst the four, the former two are considered 'specialised EPS firms', given that they require specific knowledge and qualifications (e.g., a Bachelor of Laws (LLB) requirement for law in the UK). The latter two are considered 'general EPS firms' as they often do not have degree subject specifications for entry. Consulting and IB firms are the focus of this thesis, given that there has been no research that has specifically investigated 'general EPS firms' in the UK to date, despite being one of the most high-paying and sought-after careers by graduates (High Fliers, 2022). Hereafter, EPS firms refer only to consulting and IB firms.

Much of the literature on EPS firms, however, are situated within the business and management literature, with a lack of focus on the synergies with HE. In other words, there is very little research on EPS firms in the current policy context which discusses the employability and the value of AHSS and STEM degrees, as described earlier. To my knowledge, Ashley and colleagues (Ashley et al, 2015; Ashley & Empson 2016; 2017) are the only scholars to have specifically explored EPS firms in the UK. Although they have provided empirically and theoretically rich insights on EPS firms, there have not been scholarly contributions since then. With growing concerns around 'low value degrees', there is therefore an urgent need to understand

how the value of AHSS and STEM degrees are perceived and understood by students and graduates for securing employment at EPS firms. Given this scholarly and policy context, this thesis aims to contribute to both the HE and business/management literature, by bridging the supply (student/HE) and demand (employers/EPS firms) side of the graduate labour market. The following describes the research aims and research questions (see Chapter 3: Research Methodology on how these research aims and questions were established):

Research Aims:
1. To describe students' perception of the value of AHSS and STEM degrees for increasing their employability at EPS firms (Consulting and IB); in other words, this research aims to describe what skills students gain through their respective degrees and demonstrate in the process of securing graduate employment opportunities at EPS firms (Internship/Full-time).

2. To explore and understand how students studying AHSS and STEM degrees at a Russell Group University secure internship/full-time employment opportunities at EPS firms.

Research Questions:
1. How do students perceive their studies of AHSS and STEM degrees at a Russell Group University help or hinder them secure internship/full-time employment opportunities at EPS firms?

2. What skills did students gain through their degrees? How did they use these skills to secure internship/full-time employment opportunities?

3. How and where else did they develop skills to secure internship/full-time employment opportunities at EPS firms? What skills did they develop?

Table 1: Research Aims and Questions

Defining AHSS and STEM

Before further delving into the research agenda above, I outline the definitions of AHSS and STEM employed in this thesis. Surveying the literature, although there are some variations in the acronyms to address these subjects, such as SHAPE (Social Science, Humanities and Arts for the People and the Economy) (BA, n.d.) and HARTSS (Humanities, ARTs and Social Science) (Kahn & Zeidler, 2014), overall, there is relative agreement on how to define most STEM and AHSS subjects. For this thesis, I draw on the definition by the Higher Education Statistics Agency (HESA) in the UK to categorise AHSS and STEM subjects. This list is by no means exhaustive of AHSS and STEM subjects.

AHSS	STEM
Social studies	Medicine & Dentistry
Law	Subjects Allied to Medicine
Business & administration	Biological Sciences
Mass communication & documentation	Veterinary Sciences
Languages	Agriculture & Related Subjects
Historical & philosophical studies	Physical Science
Creative arts & design	Mathematical Science
	Computer Science
	Engineering & Technology
	Architecture, Building & Planning

Table 2: AHSS & STEM Subjects
Source: Author's Own, HESA (2018)

These subjects are further detailed into subcategories. For example, under 'Subjects Allied to Medicine', include 'Anatomy & Physiology' and 'Nutrition', to name a few (see HESA, 2018 for the full list of subcategories). Despite the utility of the list above, however, I acknowledge that there is also debate on how to categorise a few subjects, especially the subjects which 'hover' between the AHSS and STEM (e.g., Bosworth et al, 2013). Primarily, these subjects include 1) economics 2) psychology and 3) business-related subjects (e.g., management, marketing) (Daly, 1968; Frey, 1999; Held, 2021; Hudson, 2017; Marshall, 1920; Mayer, 1980; Schabas, 2009; Stanley et al, 1999; Wierzbicka, 2011).

Overall, these three subjects above are generally categorised as AHSS subjects, specifically under the social sciences. In this research as well, I categorised them as AHSS subjects, following the HESA (2018) definition. However, I acknowledge the difficulty in defining these subjects which have elements of both AHSS and STEM. Therefore, in this research, subject categorisations are also based on the participants' perception of their respective degrees (i.e., I asked where they thought their respective subjects fit best in the AHSS/STEM categorisations). Moreover, throughout this thesis, AHSS and STEM subjects denote 'AHSS-related' and 'STEM-related' subjects, rather than strictly 'AHSS' and 'STEM' to recognise that some subjects may not fit these specific categories. For simplicity, however, 'AHSS-related' and 'STEM-related' subjects are referred to as AHSS and STEM throughout this thesis. In these ways, I attempt to recognise the nuances between AHSS and STEM degrees to gain contextually grounded and empirically rich insights of their value for EPS firms.

A Note on 'Degree Value'

As described, this thesis investigates the value of AHSS and STEM degrees for EPS firms by employing the term 'degree value' through student and graduate perspectives. However, the value of a degree (and HE) certainly expands beyond employability and labour market concerns. These include the pursuit of research and scholarship (Nybom, 2007); the pursuit of a holistic education to cultivate the mind and character, based on the Humboldtian model of HE (Yang, 2021); the pursuit of the intrinsic value of learning, rooted in Newman's Idea of the University (1852/2008); and, to a lesser extent, the spread of cultural and religious values (Albatch & Peterson, 2015). Indeed, the purpose and value of a university degree has been the source of much scholarly debate since the birth of the modern university (e.g., Anderson, 1993). However, addressing these debates is beyond the scope of this thesis. Therefore, it is important to note that the use of the term 'degree value' or 'the value of a degree' in this thesis is not to say that increasing students' employability is the 'default', 'standard' or 'central' value of a degree. Rather, these terms are used to address the labour market utility and employability of AHSS and STEM degrees described in the literature and the research findings.

Thesis Outline

The remainder of the thesis is structured as follows. Chapter 2 provides a critical review of the relevant literature to situate this thesis within the wider scholarly literature. Here, the contributions of the thesis are also described, with respect to the evidence gaps in the literature. Chapter 3 is a comprehensive overview of the research methods, discussing the research design and its implications for research quality. Chapter 4 is the empirical chapter of this thesis, presenting interview findings and discussing key themes. Finally, Chapter 5 concludes this thesis by reflecting on the contributions of the research, the research questions, theoretical and methodological limitations and providing some future research themes.

Chapter 2: Literature Review

The chapter here provides a critical overview of the most relevant empirical and theoretical literature to the discussion on the value of AHSS/STEM degrees for EPS firms. From the onset of reviewing the literature, it was evident that the 'employability discourse' was an overarching theme that concerned HE systems, policy and institutions in the UK and abroad. For this thesis, the employability discourse provided the basis for the discussion on the degree value for AHSS and STEM. I, therefore, begin by unpacking the employability discourse, specifically discussing key scholarly debates (e.g., student perspectives, criticisms of the employability discourse). I then introduce key quantitative and, to a lesser extent, qualitative literature which discusses the value of AHSS and STEM degrees. This 'AHSS and STEM debate' provides relevant scholarly perspectives on the discussions on degree value and the overall employability of both subjects. I conclude this chapter by discussing the limited, but empirically rich literature on EPS firms to understand their graduate hiring practices. Themes such as 'cultural fit' at EPS firms are discussed in this section. In summary, below are the three relevant themes identified in the literature:

1. The Employability Discourse
2. The AHSS and STEM Debate
3. EPS Firms: Consulting and IB

The following sections review these themes individually. Please note that Theme 1 (the Employability Discourse) is further divided into two sub-themes: 1) Student Strategies to Improve their Employability and 2) Criticisms of the Employability Discourse. After critically reviewing the literature, I outline the evidence gaps. It is noteworthy that this chapter draws primarily on literature from the UK, given the focus of this thesis. References to literature outside of the UK are made where relevant.

The Employability Discourse

Employability is not entirely new to HE, having traces of it in the mediaeval university (Alves & Tomlinson, 2021) and assuming an even greater position within HE in the 18th century when vocationalisation became a central concern of universities across Germany (Nybom, 2007), France (Anderson, 2004) and England (Rothblatt, 1981). Today, employability is defined in two broad

ways: 1) the ability to gain initial employment (Dougherty & Lombardi, 2016; Hillage & Pollard, 1998; Oliver, 2015; Yorke, 2007) and 2) the ability to maintain employment (Harvey, 2001; Holmes, 2013; McQuaid & Lindsay, 2005). In the last decades, fulfilling both of these definitions has been a central concern for HE systems, policy, institutions—embedded in the language of the skill development of their students (Tomlinson, 2012; 2018). This increased focus on employability within HE (i.e., 'the employability discourse') is also attributable to several factors which address the supply, demand and policy side of the labour market in the UK. These include include the need to prepare work-ready graduates (Minocha et al, 2017); the need to remain competitive internationally (Bosworth, 2014); the skill shortages of graduates (Confederation of British Industry (CBI), 2017); the growth of the knowledge-based economy (Brown et al, 2003) and the marketisation of HE (Kornelakis & Petrakaki, 2020). As Chadha and Toner (2017) remark, for these reasons, British HE institutions (HEIs) and policy are characterised by "a targeted preparation for employment" (p.1).

In practice, curricula to develop students' employability has been implemented across British HEIs. The University of Nottingham, for example, hosts a five-year programme that includes a mandatory course that builds students' employability-related skills (e.g., teamwork, problem-solving, etc.), to have a "streamlined approach to the curriculum and the recognition of student achievement that promotes employability" (Speight et al, 2012, p.113). Similarly, the University of Aberdeen, puts forward that its primary goal is "to develop flexible thinkers and prepare graduates for the challenges of employment in a rapidly changing world" (ibid., p.114). In recent years, there has been an increase in programmes with Integrated Internship Programmes (IIPs), where students are required to participate in internships (ranging from a few weeks to a full year) as a part of their degree programme to develop their employability. This is seen primarily at the postgraduate level at top-tier Russell Group universities (e.g., Imperial Business School, n.d.; Oxford University, n.d.).

There is a small body of literature that explores IIPs in the UK specifically. Most recently, Ryan (2020) explored IIPs at a UK creative arts university and found that they were useful in developing specialised hard skills and interpersonal/communication skills for students. Similarly, Helyer and Lee (2014) evaluated the 12-week IIP at Teesside University and found that the amalgamation of degree subject knowledge and practical working experience provided students with "a catalyst for future development" (p.369). Overall, however, there is a significant lack of

research on IIPs in the UK, despite their recognised utility in recent years. Turning to the literature outside of the UK, IIPs have been recognised as vehicles for increasing students' employability (e.g., Ishengoma & Vaaland, 2016). Students in Sri Lanka, for example, found that IIPs allowed them to understand the work culture of specific industries and to gain important hard and soft skills, although some students also argued that they would have benefitted from a long-term IIP of 6 to 12 months (Karunaratne & Perera, 2019). In Taiwan, IIPs were found helpful in increasing students' confidence levels by establishing a more positive and clear perspective of their future career paths, in addition to the soft/transferrable skills gained (Chang & Chu, 2009). Overall, the literature on IIPs is indicative of the growing salience of increasing students' employability in HE systems worldwide. More specifically, the studies above indicate that IIPs develop students' hard and soft skills and outlook towards future career opportunities—although there is a paucity of literature in the UK.

Student Strategies to Improve their Employability

Employability has been a central concern for students as well. Students recognise that the acquisition of HE qualifications increased their level of human capital, providing them with positional advantages in the graduate labour market when compared to non-graduates (Robertson, 2000). However, owing partially to the massification of HE (i.e., the large increase in HE participation) and the consequent increase in qualified, work-ready graduates, the graduate labour market is now crowded with graduates "with similar academic and class-cultural profiles" (Tomlinson, 2012, p.20). Therefore, an HE qualification alone is now not enough to indicate a student's employability (Tomlinson 2007; 2008). Recognising this, students have employed additional strategies to signal their employability in the labour market.

To understand how students increase their employability, Pierre Bourdieu's theoretical and empirical works have been well-cited. In particular, according to Bourdieu (1986), social capital refers to "the aggregate of the resources which are linked to possession of a durable network" (p.249) with the possession/lack thereof facilitating social reproduction. In simple terms, implicit within social capital is that investments in social relationships reaps benefits (Lin, 2017; Rogošić & Baranović, 2016). In the context of graduate employment, Bathmaker et al (2013) drew on the works of Bourdieu (1990) and concluded that, students who earn high-paying positions (e.g., banking) knew how to strategically enhance their chances of gaining employment by 'play[ing]

the game' of the graduate labour market successfully, with a consistent strategy being the use of social capital. Students recognise the benefits of social capital and, therefore, draw on resources, such as social networking sites (particularly LinkedIn), to build social connections with potential employers (de Janasz & Forret, 2008). In this way, students 'play the game' of the graduate labour market successfully, by creating further opportunities to showcase their talents, skills and overall employability to potential employers. However, students with high social capital are generally those from socioeconomically advantaged backgrounds, raising issues of fair access to employment and social reproduction as Bourdieu (1986) argued (Bathmaker et al, 2013; Bathmaker, 2021; Smith, 2010).

In addition to social capital, soft/transferrable skill development has been discussed as an important strategy for students/graduates to improve their employability.[1] It is well-established in the literature that soft/transferrable skills are important indicators of a student's employability, given their utility in the rapidly changing nature of work in a knowledge-based economy (Azim et al, 2010; Clarke 2017; Dixon et al, 2010; Majid et al, 2012; Grugulis & Vincent, 2009; Jones et al, 2017; Rani & Mangala, 2010; Schulz, 2008; Sin & Neave, 2016). Soft skills include leadership, teamwork, effective communication and self-management, for example (see Table 3). Recognising its importance, students cultivate and signal their soft skills through extracurricular activities and internship experiences (Tomlinson, 2008). For example, participating in sports teams demonstrates strong communication skills and teamwork, an important pair of soft skills to signal employability (Griffiths et al, 2017).

[1] The remainder of this thesis uses the terms 'soft' and 'transferrable' skills interchangeably, depending on the term used by the literature and participants in this research. In this thesis, there are no significant differences in the definition.

Personal Soft Skills	Social Soft Skills	Methodological Soft Skills
1) Being Committed to Work 2) Being Professionally Ethical 3) Being Tolerant to Stress 4) Creativity/Innovation Skills 5) Learning Skills 6) Life Balance Skills 7) Self-Awareness Skills	1) Communication Skills 2) Conflict, Management & Negotiation Skills 3) Contact Network Skills 4) Cultural Adaptability Skills 5) Leadership Skills 6) Teamwork Skills	1) Adaptability to Change Skills 2) Analysis Skills 3) Continuous Improvement Skills 4) Customer/User Orientation Skills 5) Decision Making Skills 6) Management Skills 7) Results Orientation Skills

Table 3: Soft Skills
Source: Author's Own, Succi & Canovi (2020)

The difficulty with building and demonstrating soft skills, however, is the plural definitions of the term. As shown in Table 3, there are multiple definitions/categories of soft skills (e.g., personal, social and methodological), which make them nuanced and complex to pinpoint. Indeed, Table 3 is far from being a comprehensive list of soft skills (Succi & Canovi, 2020). The plurality of soft skills is a pronounced issue between students and employers. For example, Succi and Canovi (2020) found that students ranked 'communication skills' as the most important and prioritised soft skill. By contrast, business-related employers ranked 'commitment to work' as the most important soft skill. To better understand which soft skills employers desire in their employees, therefore, some students strategically draw on their social capital to connect with employers and learn more about their firm (Bathmaker et al, 2013). In this way, students improve their employability (Tomlinson, 2008). Overall, the scholarly literature evidences that improving employability is a central concern for students. This is demonstrated through their commitment to strategically enhance their chances of securing employment by building social capital and developing valued soft skills.

Criticisms of the Employability Discourse

Although the prominence of the employability discourse within HE policy and discourse is growing, it has also been met by criticism. Most notably, there is extensive literature arguing that employability is embedded in simple readings of the human capital theory by Becker (1964), ignoring complex social, cultural, economic and political nuances of university-to-employment transitions (Brown et al., 2011; Green, 2013; Keep & Mayhew, 2010; Payne, 2017; Robson et al,

2021; Tholen, 2017; Tomlinson, 2017). For example, Morley (2001) argues that the employability discourse 'decontextualises' the diversity of students, "overlooking how social structures such as gender, race, social class and disability interact with labour market opportunities" (p.131). Implicit within this argument is that social structures "are written on the body and cannot be ignored or somehow neutralised by the development and portrayal of some 'neutral skill' " (Moreau & Leathwood, 2006, p. 319). Skills are, therefore, socially and culturally constructed with significant variations between students (Blackmore, 1997; Burton, 1987). With universities increasingly becoming market- and employability-based, universities now operate at an "input-output mindset" (Morley, 2001, p.132), where a diploma from a (top-tier) university is expected to yield an increase in employability and labour market outcomes, embedded in the language of human capital (Marginson, 2013; Tomlinson, 2018). In this way, the growing emphasis on employability within HE largely ignores the complexities, nuances and context of each student and their labour market outcomes.

There is also concern that the employability discourse is interrupting the value of HE in itself. Globally, there is an increased responsibility for academic staff (e.g., tutors and professors) to have "strong engagement in the development and delivery of employability skills within the curriculum" (Artess et al, 2011, p.8). However, academics are increasingly "less comfortable with 'learning for employability' within the formal curriculum" (Speight et al, 2012, p. 123), as they are spending more time orienting their curriculum to improve student's employability, which interrupts formal learning (Bennett, 2009). This challenges the value of HE in itself—rooted in Newman's Idea of the University, which emphasises the intrinsic value of learning (Newman, 1852/2008). This also challenges the notion of lifelong learning, as employability generally concerns younger students than older, more mature students (Stephenson & York, 1998).

The AHSS and STEM Debate

With the growth of the employability discourse in HE, the value of AHSS and STEM degrees has been the source of scholarly interest and scrutiny. According to the latest HESA (2022) data, there were slightly more AHSS than STEM students across British HEIs—with 1.5 million (55%) and 1.2 (45%) million each, respectively. In terms of labour market outcomes, the employment rate between AHSS and STEM students are identical with 89% and 88% each, respectively (London Economics, 2019). However, in terms of graduate earnings, there is a large body of evidence which

finds that STEM graduates consistently earn more than AHSS graduates (e.g., Belfield et al, 2018; Boero et al, 2019; BA, 2020; Britton et al., 2016; Chevalier, 2011; DfE, 2021; London Economics, 2019; Lyonette et al, 2017; Robson et al, 2021; Walker & Zhu, 2011; 2013; 2017). For example, Belfield et al (2018) found that medicine and computer science graduates, on average, earn 20% and 10% greater than the average graduate earnings, respectively, even after accounting for differences in gender, race and socioeconomic background. On the other hand, the three lowest earning degrees for male students were all AHSS degrees (i.e., creative arts, communication and social care). Findings from Chevalier (2011) were similar with the top four high earning degrees being all STEM subjects (i.e., medicine, mathematics, engineering and architecture) and the bottom four being all AHSS subjects (i.e., linguistics, communication, psychology and creative arts).

Consequently, this difference in graduate earnings has positioned STEM subjects as 'high value degrees', pushing more students to study STEM-related subjects (BA, 2020; Palmer et al, 2017; Robson et al, 2021; Skatova & Ferguson, 2014). For example, a degree in AI has gained a 400% increase in admissions since 2011 (DfE, 2021). Similarly, a computer science and an engineering degree have gained a 50% and 21% increase in admissions since 2011, respectively (ibid., 2021). The increase in admissions in STEM degrees has also reinforced the greater push towards the 'STEM Pipeline' in many HE systems, particularly the US and UK, where there is a clear career trajectory for students from an early age to study STEM-related degrees and pursue STEM-related careers (Cannady et al, 2014).

The difference in graduate earnings can be attributed to the expected market growth of STEM-related industries (e.g., AI, computer science and engineering) (DfE, 2021). For example, the market size of AI is expected to grow by 38% per year in the following eight years (Grand View Research, 2022). The difference in graduate earnings between STEM and AHSS degrees is also attributable to the strong employability-related skills of STEM students, such as technical expertise (e.g., computer programming), problem-solving skills and teamwork, that are high in demand in the labour market today (Bosworth et al, 2013; ComRes, 2019; Healy et al, 2017; Palmer et al, 2017; Payton & Knight, 2018; Steele et al, 2012). For these reasons, employers perceive STEM qualifications as highly valuable in the current labour market, despite many graduate roles not having degree specifications for entry (Prinsley & Baranyai, 2013).

Consequently, this has contributed to the large number of STEM graduates entering non-STEM roles, particularly high-paying roles in business (Grinis, 2017).

Interestingly, however, recent HESA (2021) data on median graduate earnings reveal that the number of students who are in the highest graduate earning bracket (i.e., £48,000+/year) were greater for AHSS graduates with a total of 5075 graduates compared to 4325 STEM graduates in the UK per academic term. However, driving this growth is the large number of 'business and administration' graduates. Specifically, these graduates make up 42% of all AHSS graduates earning £48,000 or greater. Without business and administration graduates, there would only be 2905 AHSS graduates earning £48,000 or greater which is significantly less than STEM graduates. Similarly, Belfield et al (2018) found that economics graduates had the second highest earnings in the UK, following medicine. However, the precise categorisation of an economics degree was not clear in this study (i.e., Is it an art, humanities, social science or an 'AHSS'?), making it difficult to understand the true financial returns of AHSS degrees. These studies demonstrate the importance of how subject degrees are defined and categorised, as described earlier (see Chapter 1: Introduction).

Despite the overall high earnings and the perceived high value of STEM degrees, however, there is a small body of literature that points to their limitations for employment. Most notably, the Wakeham Review (2016) in the UK concluded that STEM graduates lacked "understanding about how the skills and knowledge they have developed during their degrees relate and map onto the jobs market" (p.3). Specifically, the employers that were interviewed in the study argued that STEM graduates lacked soft skills and business/commercial awareness and training. This was a particular concern for biological sciences, environmental sciences and mechanical engineering graduates, as these subjects had the highest proportion of graduates in 'non-graduate roles' (i.e., not requiring a university qualification to apply for the job) within the STEM.

Overall, though, growing concerns around employability has led AHSS subjects, more than STEM, being under challenge and scrutiny. In the lens of the employability discourse, the AHSS are considered as 'low value degrees', given their apparent lack of employability and low graduate earnings. For example, Speight et al (2012) criticised arts degree graduates for having low employability-related skills and limited postgraduate opportunities. Similarly, AHSS degrees are further criticised for having graduates with less developed quantitative abilities, including numerical, technical and IT literacy (Lyonette et al, 2017). Consequently, critics have advocated

further teaching of STEM-related subjects more than AHSS, particularly at younger age groups. For example, in the private sector, Sir James Dyson, (the founder of Dyson ©) argued that schools need to focus strictly on science and not the arts for the UK's future economic development (Whipple & Lay, 2012). Hence, in British HE policy, there is greater emphasis to improve students' STEM abilities through policy and funding commitments. This has particularly evident since the influential UK government report by Sir Gareth Roberts (2002), which argued the necessity of high-quality STEM graduates for continuous innovation and business growth in the UK (Hoyle, 2016). Overall, given this context, some policymakers have called the need "to teach more STEM in non-STEM subjects" (Grinis, 2017, p.61) to increase students' employability.

Despite the criticism directed towards AHSS degrees, however, there is extensive literature advocating their value in the labour market (e.g., Bate, 2011; Belfiore & Upchurch, 2013; BA, 2020; Crossick & Kaszynska, 2016; Davidson & Goldberg, 2004; Haskell et al, 2005; Jacobs, 2009; Kent, 2012; Small, 2013). Jacobs (2009), for example, argues that a humanities degree allows students to understand the "diverse valuative matters and concerns" (p.26) that is "methodologically pluralistic in ways that do not emulate the sciences" (p.35). This is an important ability, particularly in complex and diverse social contexts such as businesses (Tymon, 2013). Moreover, compared to STEM students, humanities and social science students felt that they had greater time management and social skills (see Figure 1 below). Furthermore, Bennett (2009) observes that the well-roundedness and adaptability of AHSS students/graduates are useful in the current climate of job insecurity where there "will be periods outside of employment linked by periods of learning" (p.324). As Mirvis and Hall (1996) argue, workers today need to continue to learn to improve their employability. AHSS students are argued to be able to this and navigate the uncertainties of the labour market (BA, 2020; Bennett, 2009; London Economics, 2019; Lyonette et al, 2019).



Figure 1: Skills that students felt that they developed at university, by subject group
Source: BA (2020, p.12)

There is also a body of literature describing the labour market utility of individual AHSS degrees. These include archaeology (Schadla-Hall, 2006), the creative arts (Carey, 2015), history (Nicholls, 2005), product design (Spruce & Evans, 2011) and music degrees (Comunian et al, 2015). For example, Nicholls (2005) found that history students had strong abilities to critically analyse qualitative and quantitative evidence, given their strong reading and writing skills. These employability-related skills were highly regarded by employers and have been evidenced in later studies as well (e.g., BA, 2020, Crossick & Kaszynska, 2016). For arts and humanities students overall, Robson et al (2021) found that they have strong narrative skills— "the ability to tell your story and your direction" (p.11). In their study, narrative skills were valued by FTSE100 executive and chairs, as narrative skills were described to be "fundamental and indispensable" (ibid., 2021, p.6) skills in the business world today.

In terms of labour market outcomes, the graduate destinations of AHSS students are diverse, both within the public and private sector. One reason for this diversity is attributable to the fact that most entry-level graduate jobs in the UK do not have a degree subject specification to make an application (BA, 2020). Specifically, the Institute of Student Employers (ISE) (2019) found that only 14% of employers in the UK had degree specifications for graduates, suggesting the greater

salience placed on employability-related skills (e.g., soft/transferrable skills) over specific hard skills gained by degree subjects.

Despite this diversity in graduate destinations, however, there are some noticeable trends in the employment patterns of AHSS graduates. For example, BA (2020) found that two thirds of AHSS graduates in the UK are employed in the private sector, making "strong progress up the career ladder into roles attracting higher salaries" (p.4). At the executive level, Terras et al (2013) found that 34% of all FTSE100 CEOs studied an AHSS degree while 31% had studied a STEM degree. In terms of industry, AHSS students are entering growing industries such as finance, real estate, information, media and creative industries, attributable to their broad and flexible skillsets (BA, 2020). In politics, 65% of the UK parliament had AHSS degrees with the most popular being a Politics, Philosophy and Economics (PPE) degree (Terras et al, 2013). There is, therefore, evidence to suggest that AHSS graduates are progressing into key social and economic areas of the labour market, with their specific employability-related skillsets.

Elite Professional Service (EPS) Firms: Consulting and IB

EPS firms are one of the highest-paying firms in the labour market, given that EPS firms sell customised advice to industries with high economic value (Rivera, 2011). In the UK, the average graduate base salary for IB firms, is in the £30,000 to £40,000 ballpark, with top-tier firms such as Goldman Sachs and J.P. Morgan paying £52,000 and £58,000 to their graduates respectively (High Fliers, 2022). Similarly, the average graduate base salary for consulting firms is in the £26,000 to £35,000 ballpark with the upper-end being £45,000 to £50,000 at top-tier management consulting firms such as McKinsey and Bain (ibid., 2022). It is noteworthy that both consulting and IB firms offer lucrative bonuses in addition to these base salaries. Considering that the average graduate salary in the UK nationwide is approximately £25,000 (HESA, 2021), these are financially lucrative career opportunities for young graduates. Consequently, despite the long working hours and heavy workload of EPS firms (Blagoev et al, 2018; Oyer, 2008), the competition to get into these top firms have been substantial, with most firms only taking in between 1 to 10 new graduates from a pool of hundreds to thousands of candidates per application term (High Fliers, 2022; Rivera, 2016).

In the UK, much of the extant literature on professional service firms, however, employs broader terms such as elite professions (e.g., Wakeling & Savage, 2015) or high-status professions

(e.g., Macmillan et al, 2014), instead of the term 'EPS firms' specifically. These studies, therefore, include a wider array of professions such as business and medical professionals, in addition to the four (i.e., Accounting, Law, Consulting and IB) that make up EPS firms, as described in Chapter 1 (Introduction). Thus, none of these studies have explored consulting and/or IB firms specifically. They, instead, focus on student/family background and its effect on acquiring high-paying, elite professions such as law, accounting and a few business-related professions. The findings all point to a similar conclusion—students from a socioeconomically advantaged background can better access elite/high-status professions (e.g., Macmillan et al, 2014).

To my knowledge, the only literature to have explored EPS firms in the UK specifically is the works of Ashley and colleagues (Ashley et al, 2015; Ashley & Empson 2016; 2017)[2]. Their work focuses on the graduate hiring practice at EPS firms. Ashley and Empson (2016), for example, explored the hiring practices at top-tier consulting, IB, accounting and law firms and found that, underlying their hiring practices, is the 'war for talent' at EPS firms in recent years. Coined by McKinsey & Company consultants, the war for talent advocates that top-tier firms should only recruit the 'best and brightest' talent to drive corporate performance and outperform its competitors (Michaels et al, 2001).

Ashley and Empson (2016), however, problematises the war for talent, concluding that 'ideal talent' at EPS firms is defined by a narrow set of educational qualifications, based primarily on institutional prestige. In practice, employers generally define ideal talent as those "from an elite university, almost always within the Russell Group and ideally Oxford/Cambridge" (Ashley & Empson, 2016, p.29). Indeed, in an earlier study, Ashley et al (2015) found that more than half of all EPS employees in London were graduates from top-tier Russell Group universities. Wakeling and Savage (2015) describe these universities (e.g., Oxford, Cambridge and a few London universities) as the 'golden triangle' universities which channel graduates access to high-earning positions in British society (e.g., EPS firms). Importantly, this has implications for socioeconomic inequality as places of high-income and/or elite status professions are overrepresented by Russell Group students/graduates, who are also represented by those from privileged backgrounds (Ashley et al, 2015; Ashley & Empson, 2016; 2017). Consequently, this perpetuates a 'cycle of privilege' within HE and graduate employment systems where students from high socioeconomic

[2] Please note that Ashley and colleagues use the acronym/term Elite PSFs (Professional Service Firms) by contrast to EPS firms, as employed in this thesis and by other scholars (e.g., Rivera, 2016). Both Elite PSFs and EPS firms point to the same categories of occupation—consulting, investment banking, accounting and law. There are no significant differences.

backgrounds continue to dominate professions of high-income as well (Crawford et al, 2016; Friedman & Laurison, 2019).

Turning to the literature outside of the UK, the hiring practices of EPS firms have been the source of scrutiny in the US. In her seminal work, *Pedigree*, Rivera (2016) investigated the graduate hiring practices at American EPS firms (i.e., management consulting, IB and law firms) at Wall Street. Consistent with Ashley and colleagues, she identified that institutional prestige was the foremost important hiring criterion for graduates at EPS firms, followed by extracurricular activities of the applicant. As a result, there was a targeted focus towards elite, prestigious institutions (e.g., the Ivy Leagues) with EPS firms spending most of their hiring resources to recruit students from these institutions through regular campus visits and practice interview sessions, for example.

In addition to the 'war for talent', implicit within the hiring practice at EPS firms, is the importance of 'cultural fit/matching'. In her earlier work, Rivera (2012) found that "employers sought candidates who were (...) culturally similar to themselves in terms of leisure pursuits, experiences, and self-presentation styles. Concerns about shared culture were highly salient to employers and often outweighed concerns about absolute productivity" (p.999). The salience of cultural fit has been evidenced in further studies as well. For example, in consulting, McKinsey & Company seeks graduates with high 'professionalism' (Kipping et al, 2019). Similarly, in IB, indicators of class (e.g., language, received pronunciation, mannerism) are key indicators of cultural fit (Rivera, 2016).

The hiring practices at EPS firms today echoes a body of empirical and theoretical scholarship in sociology and psychology which discuss the importance of cultural similarity to be included in a social group. These include, for example, theories about class and social inclusion/exclusion (Weber, 2013; Veblen, 1899), cultural capital (Bourdieu, 1986), social/cultural reproduction (Bourdieu, 1999) and the similarity-attraction hypothesis (Bryne, 1971; Montoya & Horton, 2013; Yeong Tan & Singh, 1995). These empirical and theoretical interpretations suggest that underlying 'cultural fit' is that similarities (e.g., in lifestyle, leisure and language) "serve as badges of group membership and bases of inclusion or exclusion from desirable social opportunities" (Rivera, 2012, p.1001). In the context of EPS firms, the hiring strategies are specific, by only seeking graduates from elite institutions that fit their culture of 'professionalism and prestige' (Rivera, 2016).

On the supply side of graduate employment, recognising the salience of demonstrating their cultural fit to a firm, Kalfa & Taksa (2015) found that students develop sough-after traits by employers such as professionalism and mannerism. Practically, internships and university clubs/societies have been described as important spaces to improve and signal cultural fit (Bathmaker et al, 2013, Rivera, 2016; Tomlinson, 2008). For example, Rivera (2016) found that EPS firms in Wall Street preferred students who played sports such as lacrosse, golf and tennis over spots such as basketball and baseball, given the 'prestige and reputation' attached to the first three sports. Students who aspired to work at an EPS firm, therefore, would deliberately play these sports through university societies/clubs (Rivera, 2016). It is noteworthy, however, that hiring practices that prioritise cultural fit seem to be more visible in IB, as the majority of consulting interviews employ a business 'case study/interview' to test the applicant's job-specific skills such as logical thinking, communication and numeracy which appear to be more objectively evaluated (Liu, 2019; Rivera, 2016).

Gaps in the Literature

In critically reviewing the literature, four evidence gaps were identified. First and foremost, there is a lack of understanding on the value of AHSS and STEM degrees ('degree value') for EPS firms. Much of the existing literature focuses on the effect of other demographic variables (primarily, institutional prestige and socioeconomic background) to explore the synergies between HE and EPS firms (e.g., Ashley et al, 2016).

The second evidence gap is that there is a lack of qualitative research on AHSS and STEM students in the context of graduate employment. Much of the comparison between the two degree subjects thus far has done so quantitatively and has investigated their income differences (e.g., Belfield et al, 2018).

Third, the majority of literature compares arts and humanities with STEM degrees and overlooks the social sciences. The research here adds to the evidence gap by including social sciences with the arts and humanities—as AHSS.

Fourth, there is a conspicuous lack of research on EPS firms in the UK specifically, despite EPS firms being one of the most popular options for HE students/graduates. As described, the only literature in the UK that focuses on EPS firms specifically is by Ashley and colleagues. However, their work is situated within the business and management literature, instead of HE, as they focus

primarily on the demand side of EPS firms (i.e., the views of the recruiters/employers) rather than students/graduates.

This research aims to contribute to the body of scholarly literature by addressing and adding to the evidence gaps above. Specifically, it does this exploring student and graduate perceptions of AHSS and STEM degrees for securing an internship/full-time role at EPS firms (i.e., Consulting and IB). This is timely in its response to the current increase in applications to EPS firms in the UK and abroad (Ashley et al, 2015; High Fliers, 2022). The following chapter describes the research methods employed to investigate this.

Chapter 3: Research Methodology

This chapter outlines the research approach and methods employed, discussing the reasons and considerations for employing these methods. I begin by introducing the overall research design, describing how this was informed by the research aims and questions. The sections following this are in the order in which the research was conducted. I first describe how the participants were recruited, illustrating the inclusion criteria and the participants' basic descriptions. I then outline the semi-structured interview schedule and the ways in which the interview data were collected. I then describe in detail how the empirical data were analysed, introducing the 8-step thematic analysis and how this helped yield rich insights. These sections are followed by a discussion of the ethical considerations, the limitations of this research and the steps that I took to ensure research quality.

Research Design

The overall research design is based on the logic that the specific methods employed are based on the research aims and questions (Dammak, 2015; Punch & Oancea, 2014). As described in Table 4 (below), there are two main research aims with corresponding research questions. The research aims and research questions were informed by the four evidence gaps in the literature review and the need to fill these gaps (see Chapter 2).

Research Aim 1: To describe students' perception of the value of AHSS and STEM degrees for increasing their employability at EPS firms (Consulting and IB); in other words, this research aims to describe what skills students gain through their respective degrees and demonstrate in the process of securing graduate employment opportunities at EPS firms (Internship/Full-time).



Research Questions 1 & 2:
How do students perceive their studies of AHSS and STEM degrees at a Russell Group University help or hinder them secure internship/full-time employment opportunities at EPS firms?

What skills did students gain through their degrees? How did they use these skills to secure internship/full-time employment opportunities?

Research Aim 2: To explore and understand how students studying AHSS and STEM degrees at a Russell Group University secure internship/full-time employment opportunities at EPS firms.

↓

Research Question 3:
How and where else did they develop skills to secure graduate employment opportunities at EPS firms? What skills did they develop?

Table 4: How the Research Aims and Questions Link

Overall, the two research aims are concerned with how students studying AHSS/STEM degrees increase their employability to secure employment at EPS firms (Consulting and IB). Specifically, the first research aim is concerned with student perceptions of the value of AHSS and STEM degrees in securing graduate employment at EPS firms (i.e., how students gain skill/knowledge in their degree programmes and demonstrate this in, for example, the interview process). The first research aim led to the creation of two research questions which provided a clear focus for this research.

The second research aim is broader in scope when compared to the first research aim as it explores how students studying AHSS/STEM degrees earn graduate employment opportunities at EPS firms, in general, without focusing specifically on degree value and the skills/knowledge gained through their respective degree subjects. Implicitly, this research aim explores the factors and spaces outside of the value of AHSS/STEM degrees for securing employment at EPS firms, as the literature review revealed that employability-related skill development also occurs outside of students' degree studies, such as extracurricular activities (e.g., Griffiths et al, 2017; Tomlinson, 2008). In this way, as suggested in the third research question, I aim to explore and understand the multiple spaces of skill development and employability as well as the extent to which the specific subject (i.e., AHSS or STEM) is important in securing employment at EPS firms.

These research aims and questions lead to a research design that is based on an interpretative paradigm. Implicit with the interpretative paradigm is that reality is complex and socially constructed (Crotty, 1998; Phothongsunan, 2010; Pring, 2000). Interpretative research, therefore, draws mainly on qualitative data (Creswell, 2008). For this research, discussions on

employability and perceptions of degree value are complex and socially constructed, with nuances between each student (Morley, 2001). To uncover these complexities and social constructions, this research adopted a qualitative research design as well.

A few qualitative research methods were considered. Most notably, a longitudinal ethnographic research, as conducted by some scholars that have investigated EPS firms (e.g., Riviera, 2016), would have been ideal to investigate the long-term processes of student skill development, employability and their perceptions of degree value for EPS firms. However, due to time and resource constraints, this was not feasible.

Another prominent qualitative research method is the interview. As Cohen et al (2001) describe, an important strength of the interview is that it is intersubjective and that it allows participants "to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view" (p.267). Another key strength of the interview is its flexibility and adaptability to the research aims and questions. Specifically, the diversity of the ways in which the interview can be conducted (e.g., structured/unstructured/semi-structured, in-person/online, etc.) allows the researcher to adapt the interview to best fits the research aims and questions (Bryman, 2012).

This research drew on (online) semi-structured interviews. Semi-structured interviews were the most appropriate for this research as it allows the researcher to uncover the same themes across all interviews while offering flexibility to tailor questions to the experiences of the interviewees and investigate emerging themes (Maxwell, 2013). This was particularly important as understandings of employment and employability are ever-evolving with new themes and personally salient meanings emerging regularly (Chadha & Toner, 2017). The following section describes the steps taken to conduct semi-structured interviews, by first outlining how the participants were recruited.

Criteria for Inclusion

As described in Table 5, there were five inclusion criteria in total. I included many specific inclusion criteria so that I could recruit participants from similar backgrounds to gain rich empirical insights to answer the research questions. I will only discuss criteria 1, 2 and 5, as criteria 3 and 4 are the focus of this thesis and hence self-explanatory.

Criterion 1) UNIVERSITY:
- UK Russell Group University

Criterion 2) STUDENT STATUS:
- Final year undergraduate student OR
- Final year postgraduate student OR
- Recent Graduate (i.e., no greater than three years since graduation)

Criterion 3) SUBJECT (see HESA, 2018):
- Arts, Humanities, Social Science (AHSS) OR
- Science, Technology, Engineering and Mathematics (STEM)

Criterion 4) PROFESSION:
- Consulting OR
- Investment Banking

Criterion 5) PROFESSION STATUS:
- Previously have had OR Currently have OR Will have
- An Internship OR Full-Time Graduate Role in Consulting/Investment Banking

Table 5: Participant Inclusion Criteria

For the first criterion, I only included students from Russell Group universities as 'institutional prestige' is one of the most important selection criteria for hiring a candidate at EPS firms (Ashley et al, 2015; Rivera, 2016). By only including participants from Russell Group Universities, this research attempted to eliminate differences in institutional prestige between Russell Group and non-Russell Group universities to focus primarily on the discussion on degree value and employability, although the importance of 'institutional prestige' was a theme in the research findings (see Chapter 4: Findings and Discussion). Moreover, I do acknowledge the significant variations between 'top-tier' and 'lower-tier' Russell Group universities (Boliver, 2015). In the end, all participants were recruited from four 'top-tier' Russell Group Universities: University A, B, C, D.

For the second inclusion criterion, I initially only wanted to include final year students as they would have applied for internships or full-time opportunities for EPS firms recently (i.e., many of the applications to EPS firms are due by December to February and the interviews took place between March and June). It was, therefore, assumed that final year students would be able

to offer their immediate experiences of applying to and securing employment opportunities at EPS firms, which would provide in-depth understandings of their skill development and degree value in this context. However, there were only a few participants that fit this exact criteria. This is likely attributable to the fact that most students had still not accepted their internship or full-time offers in March/April and hence not updated their internship/full-time status on their LinkedIn (i.e., an employment-oriented online service) at this point, where I recruited an initial group of participants. Given this, I added 'recent graduates' to the participation criteria, specifically within three years of graduation. Adding recent graduates to the research offered breadth to the discussion on degree value and employability, as they all have first-hand experience of working full-time at EPS firms and would know which skills are used in consulting and/or IB. To illustrate this point, two of the recent graduates in this research also had part-time experience in hiring students/graduates for their EPS firms, which, as it will be shown in Chapter 4 (Findings and Discussion), provided alternative and rich perspectives to answer the research questions.

For the fifth criterion, I initially only wanted to include participants with full-time graduate roles as it has been argued that there are differences in the content and difficulty of the application processes between internship and full-time roles (Jørgensen & Becker, 2015). However, similar to the reasons for criterion 2 (student status), it was initially difficult to recruit many participants that had full-time graduate roles. Therefore, I included students with internship opportunities as well. In the end, however, many of the research participants had both full-time and internship offers. In fact, I later found out that the application process for prospective internship and full-time candidates were very similar, if not the same, with negligible differences in difficulty (Rivera, 2016).

Sampling

All participants were recruited through non probability, purposive sampling techniques. Specifically, sampling occurred in a two stage process of 1) convenience (n = 9) and 2) snowball (n = 12) sampling (see Figure 2). In the initial stage of sampling (i.e., convenience sampling), I reached out to 1) a student-led society across Russell Group universities that focuses on EPS firms (Consulting and IB) and 2) utilised LinkedIn to reach out to contacts who fit the inclusion criteria (see Appendix F for sample message). I was then introduced to further contacts from the initial

stages of sampling. This snowball, chain-like technique continued until the intended sample size was reached.

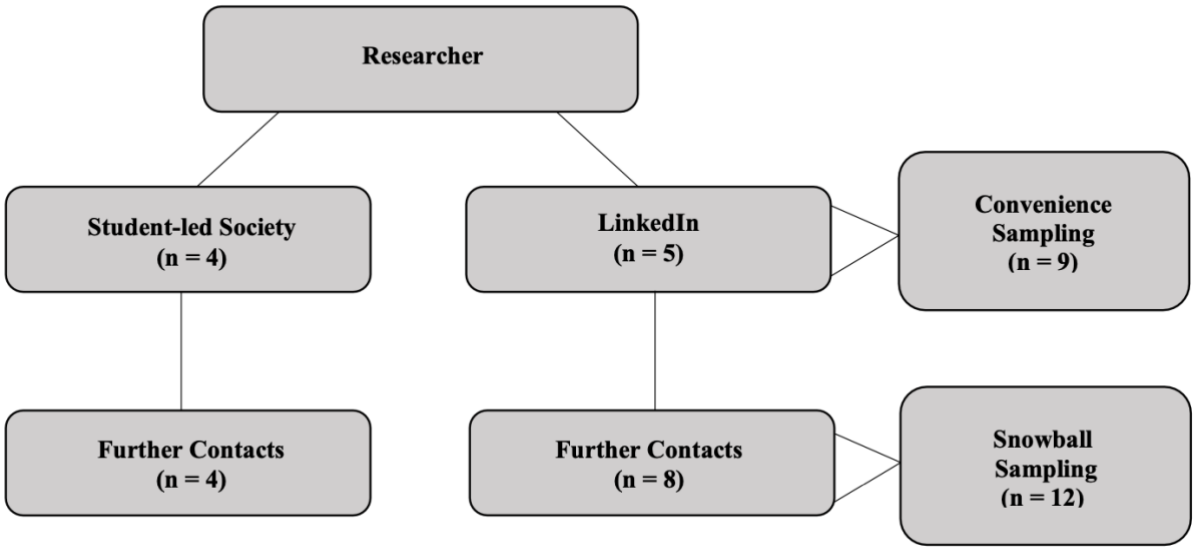


Figure 2: Basic overview of the convenience and snowball sampling

This was the most appropriate recruitment strategy for this research, as a student's employment status is personal and may be sensitive information for some, which could make it difficult to recruit participants without prior personal connections (Bryman, 2016). Moreover, a career at EPS firms is highly competitive, with each HEI only having a small proportion of their students/alumni in these careers (High Fliers, 2022), making it difficult to identify and recruit them for research. Indeed, it was difficult to recruit participants from one Russell Group university alone, which led to the recruitment of participants from four distinct universities but with similar prestige and reputation. Overall, convenience and snowball sampling are useful recruitment practices for populations that are difficult to identify and reach out to (Bryman, 2012). Indeed, for these reasons, much of the literature that explores employability at selective EPS firms draw on convenience sampling through personal connections (e.g., Rivera, 2016).

Participant Description

There were a total of 21 participants with 15 in consulting and 6 in IB. I acknowledge that the disproportionate number of consulting and IB participants limits the explanatory power of EPS firms overall (i.e., for both consulting and IB) and is a limitation of this research. However, interviewing 21 participants generated rich data that allows to explore and describe the rich student/graduate experiences of securing employment. The initial target of 12 to 16 total participants was based on the resources and time available for the research to be conducted. Although there was no age restriction for participating, all participants were in their early 20s. As literature on similar topics have identified, a benefit of having students within a close age range is that it helps "avoid the additional complexities of comparing mature and younger students" (Bathmaker et al, 2013, p.728). In terms of gender, there were 16 female and 5 male participants. Although there were less male participants in the research, the findings did not suggest any noticeable differences. Overall, although the five, detailed inclusion criteria described earlier attempted to provide depth to the research by recruiting participants from similar backgrounds, in the end, the diversity of participants (e.g., four different universities, full-time employment and internships, final year students and graduates, male and female—not to mention the diversity in ethnic and cultural backgrounds as well), provided breadth to the discussion on the value of AHSS and STEM degrees for EPS firms. This is a strength and contribution of this research. The basic descriptions of the participants are in Table 6 and their full descriptions are in Appendix E.

Participant	AHSS/STEM	Consulting/Investment Banking	University
A	STEM	Consulting	C
B	STEM	Consulting	A
C	AHSS	Consulting	C
D	AHSS	Consulting	C
E	STEM	Consulting	C
F	STEM	Consulting	B
G	STEM	Consulting	B
H	STEM	Consulting	D
I	AHSS	Investment Banking	D
J	STEM	Consulting	B
K	AHSS	Consulting	B
L	STEM	Investment Banking	D
M	AHSS	Investment Banking	D
N	STEM	Investment Banking	C
O	STEM	Investment Banking	C
P	STEM	Consulting	B
Q	AHSS	Consulting	C
R	STEM	Investment Banking	D
S	STEM	Consulting	A
T	STEM	Consulting	A
U	STEM	Consulting	C

Table 6: Basic Description of the Participants (n = 21)

Semi-Structured Interview Schedule

In preparing for empirically rich data collection, I developed a semi-structured interview schedule which outlined a set of questions to guide me throughout the interview (see Appendix D). Prior to conducting the interviews, I piloted the preliminary interview schedule with a close contact who fit the majority of the inclusion criteria. The pilot interview revealed that separating the discussion on EPS firms and the value of AHSS and STEM degrees first, before discussing the two together, provided more clarity to the research participant and was predicted to provide contextually grounded and rich empirical insights. Keeping these reflections in mind, in the end, the interview schedule was structured into three main sections: 1) EPS Firm Applications 2) Perceptions of AHSS and STEM subjects and 3) Thinking outside of AHSS and STEM subjects. Each section followed a set of closed questions (e.g., 'What do/did you study?') and open questions (e.g., 'How do you think your degree has helped you get an offer from [company name]?). To

further reduce biases in the research, I attempted to eliminate any leading questions. Moreover, although the basic structure of the interview remained the same throughout all 21 interviews, the content and order of the questions were edited or omitted to best fit each interview and the overall research aims and questions.

Before each interview, several minutes were dedicated to scaffold rapport with the participants. As the literature on qualitative interviews remark, scaffolding rapport is an important procedure to build trust with the participants and to also yield truthful and authentic data (Bryman, 2016; Weller, 2017). During this time, however, some participants asked me for the specifics about the research that I was conducting (e.g., research aims, the existing scholarly research, my 'hypothesis', etc.). Discussing (extensively) about the research aims prior to the interview can contribute to response biases in the data (Chenail, 2011; Novick, 2008). I, therefore, made a conscious effort to describe only the basic context of the research, although this was difficult to do at times.

Although the interview schedule was useful, the strength of semi-structured interviews is that the interview schedule is only a guide and not an exhaustive list of questions. The semi-structured style, therefore, leaves flexibility for additional questions to emerge (Galleta, 2013). Indeed, in all of the interviews, I asked many further clarifications (e.g., examples to illustrate the point) to help gain nuanced and personal understandings of the participant's perception of degree value and employability. Overall, this helped generate rich empirical data.

Data Collection

All of the interviews took place between March and June of 2022 and were conducted online using Microsoft Teams. An important strength of online interviews is its accessibility and convenience (Bauman, 2015). In this research, all 21 participants chose to participate online, despite having the option to participate in person. This is attributable to the fact that data collection occurred between March and June, a relatively busy term with exams/assessments for current students. The option to participate online, therefore, seemed to contribute to increased participation. Indeed, some participants described to me that they would not have been able to participate if the interviews were conducted in person, given the predicted longer duration of in-person interviews (e.g., getting to the physical location of the interview).

The length of interviews ranged from 38 to 52 minutes. Close attention to the length of the interviews was kept, as the pilot interview with a close contact revealed that the participant felt fatigued as they approached an hour. Indeed, as Adams (2015) remarks, interviews should not exceed an hour to minimise the risk of fatigue for both the participant and researcher and to also stay concentrated on the research topic. Lastly, once interview data were collected, they were transcribed verbatim to assist with the data analysis.

Data Analysis

The research took an inductive approach to data analysis. I, therefore, conducted a thematic analysis of the interview data. Overall, the research followed the six-step process to thematic analysis by Braun and Clarke (2006), as it provided a clear framework for interpreting the data. However, this research also made adaptations to this framework, adding the steps of 'Data Cleaning' and the 'Creation of Themes' to the analysis by the inductive analysis framework by Thomas (2003) (i.e., Steps 1 and 5, as indicated with an asterisk in Table 7 below) to interpret the data rigorously. The full eight-step process to thematic analysis is outlined below.

Step 1*	Data Cleaning
Step 2	Familiarisation with the Data
Step 3	Generation of Initial Codes
Step 4	Search for Themes
Step 5*	Creation of Themes
Step 6	Review Themes
Step 7	Finalise Themes
Step 8	Write up

Table 7: The 8-Step Process to Thematic Analysis
Source: Author's own, Adapted from Braun & Clarke (2006) and Thomas (2003)

The transcribed interview data were formatted and 'cleaned' so that they were easy to follow and review (Step 1). Specifically, I detected any errors (e.g., misspelling) in the qualitative data so that it could be better understood in subsequent analyses. Although 'data cleaning' is often associated with quantitative research (Chu et al, 2016), this was an important step to include and emphasise in this qualitative research, as differences in the formatting of texts (e.g., font, sizing, emphases of texts) affect the ways in which data can be understood (Thomas, 2003). This is not explicitly emphasised in the Braun and Clarke (2006) six-step thematic analysis. I then read and re-read the formatted data while listening to the audio recording, seeking a comprehensive understanding of the data rather than the specific details (Step 2). At this point, the basic overview of the interview content was understood. This provided a foundation for subsequent analyses.

After familiarising myself with the data, a list of initial codes was created (Step 3). The process in which codes are created are critical in interpreting the data (Saldaña, 2021). For this step, I employed In Vivo coding (not to confuse with the software, *NVivo*), where I analysed and focused on the specific terms and phrases that the participants described first, before categorising and interpreting the codes and themes at the latent level (Manning, 2017). For example, as it will be further elaborated in the findings chapter, terms such as 'degree-agnostic' and 'airport test' were key terms that were picked up at this step and provided rich insights. Through In Vivo coding, a wider range of codes were created and included first, without limiting the analytical field of vision of the research (Manning, 2017). A total of 68 initial codes such as 'pressure from university' and 'emphasis on employability in some degrees' were created at this stage.

I then surveyed the initial codes to search for themes (Step 4). As interpreting qualitative data and generating themes are subjectively-constructed (Silverman, 2015), I reflected continually on the meanings behind the themes. In the Braun and Clarke (2006) six-step process, the themes are generated in this step. However, it was important to include and emphasise an additional step to 'create themes' as this separated how the themes were identified (Step 4) to how they were interpreted (Step 5). In this way, the research recognises the positionality of the researcher in identifying and interpreting the data (Thomas, 2003). For Step 5, themes were generated through process coding where the researcher interprets 1) the texts 2) the participant's articulation of the text (e.g., pauses and punctuation) and 3) conceptual ideas of their responses (e.g., peer networks signifying social capital) (Saldaña, 2014). This multi-level approach to theme creation was also important to prevent the misrepresentation of the participants' experiences, a well-cited limitation

of qualitative research (Burke, 2012). It also allowed for main and sub-themes to be created, an important strength of the inductive analysis (Thomas, 2003). These themes were reviewed carefully, before they were finalised and written (Step 6, 7 and 8). In total, five main themes and two sub-themes were identified and created. These are discussed in detail in Chapter 4 (Findings and Discussion).

Ethical Considerations

The protection of research participants through ethical considerations extends from the inception to the dissemination of the research data and are hence integral to research (Arfin, 2018; Pietilä et al, 2020). All intended research procedures were reviewed carefully and approved by the University of Oxford Department of Education Departmental Research Ethics Committee (DREC), following ethical guidelines set out by the British Educational Research Association (BERA). The research used the Central University Research Ethics Committee (CUREC) Form 1A (see Appendix A for the approval). Overall, the research was conducted following the guidelines outlined by the BERA (2018).

The literature on ethics in qualitative research rank 'honesty' and 'openness to research participants' as the two most important ethical conduct and principle of research (Shamoo & Resnik, 2009; Shaw & Satalkar, 2018). Therefore, prior to the interview, all participants were provided with an information sheet which clearly delineated the research topic, aim and safety issues (see Appendix B for the full information sheet). The information sheet aimed to use jargon-free, clear language so that the participants were clear with the research that they were being asked to participate in. In fact, I primarily avoided the use of the term 'EPS firms' throughout the interview, since it is primarily used in the scholarly literature and is much less well-known to the general public. Moreover, it was made clear to all participants verbally and in written form (i.e., information sheet and consent form) that they were permitted to withdraw from the study (or any information that they had provided) at any point without an explanation until the research was submitted. The participants were also informed of the potential benefits of participating in the study which included: 1) receiving an electronic copy of the thesis, 2) learning novel findings in understanding how AHSS and STEM graduates secure jobs and 3) reflecting on and articulating their own experiences about employability and securing their internships/jobs.

All participants were also given my institutional (Oxford) email address should they wished to ask further questions or discuss any concerns. It is important to note that the institutional email address may have raised issues related to power between the researcher and the participant, particularly given the connotations and 'prestige' attached to Oxford (Karnieli-Miller et al, 2009; Råheim et al, 2016), although this was not particularly shown or addressed by the participants. Lastly, the information sheet required all participants to carefully read instructions and provide their signature. I obtained written and verbal consent from all participants prior to the interviews.

Data protection is a key concern when doing research. To protect the privacy and confidentiality of research participants, any information that could reveal their identity directly (e.g., name) and indirectly (e.g., university and employer name) were either anonymised or omitted. Moreover, all data obtained were therefore stored safely as password protected digital files in encrypted folders on the researcher's personal password protected computing device until the end of the research (i.e., September 2022). Only my supervisor and I had access to the data. Once audio and video recordings were transcribed and anonymised, they were deleted permanently, in order to comply with the UK General Data Protection Regulation and the Data Protection Act 2018.

Overall, the primary topics that were covered and explored in this research (e.g., employability, HE, AHSS/STEM) did not raise particular issues related to sensitivity. However, it is important to note that graduate employment and employability encompasses a wide range of topics and issues, in addition to degree value (McQuaid & Lindsay, 2005). Although the interviews did not explicitly ask or discuss any topics outside of employment, some sensitive topics, such as socioeconomic status, may have been included in their thought processes. In order to reduce the risk of distress, I articulated clearly to the participants before (i.e., through the information sheet and verbally before the interview) and during/after the interview (i.e., verbally) that they could skip questions or amend/withdraw their answers from the research should they wish to do so.

Limitations

There are a few methodological limitations that need to be acknowledged, in addition to the ones already described in the sampling selection (e.g., the disproportionate number of consulting and IB participants)[3]. Most notably, the use of online interviews involved some limitations. First and foremost, online interviews are heavily reliant on the internet connection and

[3] Note that empirical and theoretical limitations are discussed in Chapter 5 (Conclusion).

capabilities of the participant (Salmons, 2014). Although all of the participants were familiar with the use of online platforms, the poor internet connection of some interviews raised difficulties in data collection. Indeed, in two of the interviews, I had to end and resume the video call because of this, which compromised the continuity and 'natural flow' of the conversation. For these interviews, drawing themes were slightly challenging during transcription and data analysis as there were interruptions in the interview recordings.

Online interviews also lose a great deal of analytical power to non-verbal dialogues (Janghorban et al, 2014; Sullivan, 2012). To illustrate this point, in an audio-only interview, there were some occasions where the participant and I interrupted one another due to difficulties in determining when the other person had finished their conversation. This also caused disruptions in the 'natural flow' of conversation which could have led to misinterpretation. Indeed, I had to ask multiple clarifying questions which further compromised the natural flow of conversation. As Weller (2017) comprehensively remarks, "anything that disrupts our ordinary speech rhythms, as well as the way we process tone of voice, facial expression and other physiological cues, can affect interpretation and transform meaning" (p.621). Hence, this is also a limitation.

Research Quality

Transparency is an important measure of research quality (Yardley, 2000). According to Treharne and Riggs (2014), central to transparency are acknowledging the 1) researcher positionality and 2) the transferability and credibility of research data. They are hence discussed here.

In qualitative research, the researcher is "the primary instrument for data collection and analysis" (Ochieng, 2009, p.14). The positionality of the researcher, therefore, has critical implications for the research process (Coghlan & Brydon-Miller, 2014). As a final year postgraduate student at a Russell Group university who also has an internship and full-time offer in consulting, I (the researcher) shared many similarities with the research participants. This may have helped participants perceive me as an insider to the topic. On the one hand, this has important implications for building rapport with the participants, which may have contributed to yielding authentic data (McGrath et al, 2019). However, on the other hand, this may have also contributed to response bias, where the participants may have under-reported their responses given that I was familiar with the topics covered (Smith & Braunack-Mayer, 2014). Indeed, in many of the interviews, I had to follow up with clarifying questions to participants' responses.

Researcher positionality also informs data analysis as the researcher actively identifies and generates themes from the research findings (Corlett & Mavin, 2018). During the interviews, it also informs the follow-up questions which are asked. Given that language and dialogue are social constructs (Von Glaserfield, 1988), interpretations of interview findings are also socially and subjectively constructed, based on researcher positionality. Although I aimed to reduce biases by allowing the themes to emerge inductively, it is important to acknowledge that the themes that emerged from this research are also informed by my background in studying a degree in HE and having close similarities with the research participants.

As aforementioned, the transferability of the research is also an important measure of research quality (Lincoln & Guba, 1985; Treharne & Riggs, 2014). The aim of this research is not the generalisation of its findings. Thus, this chapter has provided a detailed, 'thick description' of the research methodology, particularly its context (e.g., research aims/questions, participants, data collection tool), so that the readers themselves can decide whether this research can be transferred in similar contexts. In this way, as Firestone (1993) notes, case-to-case transferability (i.e., transferability based on each individual research) of this research can be assessed.

Lastly, credibility is also an important measure of research quality (Patton, 1999). Credibility was first approached by situating the research in the wider scholarly context. The research aims and questions both evolved from the evidence gaps in the available literature. Second, I approached credibility by developing the interview questions based on previous knowledge in the literature. Third, the data collection tool was piloted and amendments were made accordingly. This allowed me to practise my interviewing skills and gain feedback with respect to the interview questions. As aforementioned, I learnt through the pilot interview that the list of questions needed to be slightly shorter to not cause fatigue to participants. The content and order of questions were also important improvements made through the pilot interview. Lastly, similar to transferability, the research methods are outlined clearly in this chapter, referencing the relevant literature to ensure the overall credibility of the research quality.

Chapter 4: Findings and Discussion

This chapter presents the empirical research findings, by discussing the key themes identified through the 8-step thematic analysis of the interview data. The five main themes (and two sub-themes) are outlined below:

Theme 1: STEM as the 'Tougher Degree'
Theme 2: the Analytical and Communication Skills of AHSS
Theme 3: Skill Development Outside of the Degree
Theme 4: Hybrid Degrees: 'Breaking' the AHSS/STEM Binary
Theme 5: the Subject Does Not Matter? Sub-Theme 1: Institutional Prestige Sub-Theme 2: Social Capital

Table 8: Main and Sub-Themes

These main themes and sub-themes answer the three research aims and questions (see Chapters 1 & 3). Specifically, themes 1, 2 and 3 primarily address the first research aim and answer the first two research questions, while themes 3, 4 and 5 primarily address the second research aim and the answer the third research question. Additionally, it is important to reiterate that this research does not argue whether an AHSS or STEM degree is more useful/valuable for securing employment at EPS firms than the other. Rather, it seeks to understand student and graduate *perceptions* of the value of AHSS and STEM degrees for EPS firms.

Theme 1: STEM as the 'Tougher Degree'

Certainly, both AHSS and STEM degrees have value in their own right with many overlaps in the skills which students gain. However, the participants described how their respective degrees had value for securing employment at EPS firms specifically. For STEM degrees, a consistent theme in the interview data was that participants perceived them as the 'tougher degree' and hence with strong employability and high value:

> The perception of a STEM degree is very important (...) Employers see engineering, for example, and they automatically think it's tough and prestigious.
>
> (Participant H, STEM Graduate, Consulting)

When asked why STEM degrees were perceived to be 'tough', both AHSS and STEM participants alike attributed it to their heavy workload/timetable and long contact hours (e.g., labs, lectures, tutorials). For example, Participant D, who had studied both an AHSS and STEM degree through her undergraduate and postgraduate degrees, describes the following:

> "STEM degrees are tough and rigorous as they need a lot of your time and effort through long hours of labs and coursework, for example. I think that prepares you well for consulting or IB. Whereas most arts, humanities and social science majors have only like 8 to 10 hours a week"
>
> (Participant D, AHSS Student, Consulting)

Consultants and investment bankers are well-known for their long working hours, particularly in the early stages of their career (Blagoev et al, 2018; Oyer 2008). Although evidence on their true working hours varies, the average weekly working hours for most EPS firms falls within 50 to 80 hours (Highfliers, 2022; Rivera, 2016), a significantly higher number compared to the UK average of 42.5 hours (Eurostat, 2022). Participants, therefore, perceived the ability to work long hours to be an important trait that employers sought, although this is not explicitly advertised as a sought-after skill/trait by EPS firms. To illustrate this point, Participant R, a recent graduate who works at an IB firm, could only participate in the interview near midnight, describing this as a 'typical day for IB'. Indeed, Rivera (2016) describes that EPS firms seek graduates who can withstand the 'workload' of these jobs, with the candidates' degree subjects and extracurricular activities (e.g., sports) being a strong indicator of this ability. Similarly, Succi and Canovi (2020) found that

business-related employers ranked ‘commitment to work’ as the most desired soft skill in a student/graduate.

The participants, therefore, perceived that the value of STEM degrees is that they ‘prepare’ students well for a career at EPS firms through their heavy workload, given their high contact hours. Indeed, four of the STEM participants mentioned that their weekly contact hours alone (e.g., labs, lectures, tutorials) were around 25 hours, on average, in addition to independent studying and meetings outside of lectures which contributed to another 20 hours per week. Implicitly, the long hours and claimed heavy workload of STEM degrees also developed their time management skills and being able to work with people for long durations, which are described as an important pair of soft/transferable skills (Succi & Canovi, 2020). Overall, as participants described, the heavy workload that they experienced through STEM degrees seem to develop their ‘toughness’ to work long hours, which was perceived as valuable for demonstrating their employability to EPS firms.

In addition to the heavy workload, the quantitative abilities gained from STEM degrees contributed to the perception that it was the ‘tougher degree’ and hence valuable for EPS firms:

"Employers definitely look at if your degree was quantitative enough (...) STEM students stand out more because you learn more quantitative and technical skills like maths and [computer] programming and so it is seen as a tougher degree with reputation"

(Participant F, STEM Student, Consulting)

Participants recognised the high demand of STEM degrees in the current labour market, as evidenced in the specific policies focusing on the development of student’s STEM abilities from an early age (DfE, 2021). Most participants had, therefore, placed some importance on hard skills for EPS firms, although to a lesser extent than soft skills. The hard skills described in this research included computer coding/programming skills, numeracy and comfortability with using software programmes, especially given the increased use of software and automation at EPS firms. For these reasons, STEM degrees, which teach students these quantitative skills, were perceived to be of high value.

Interestingly, however, the participants pointed out that specific hard skills are primarily not tested during the application process at many EPS firms. Indeed, the majority of the professions today do not have degree specifications to make a job application (BA, 2020; ISE, 2019), including general EPS firms (Consulting and IB) (Rivera, 2016). A term that was used consistently by

participants to describe the job application for EPS firms was that they are 'degree-agnostic' where there are no specific degree subject requirements for entry. Yet, the research findings and literature both describe that STEM degrees are seen as more valuable by employers when compared to non-STEM degrees (e.g., Prinsley & Baranyai, 2013). This, then, seems to suggest that what matters primarily to employers is the *perception* of degree value. Indeed, it was perceived by the participants that employers select students from degrees which are seen to have greater rigour, based on their quantitative abilities. In practice, two of the recent graduates, who also had experience hiring students at their respective EPS firms, described that the early stages of the application process at their firms (i.e., the CV/background check) operate on a 'key-word' basis where the automated system selects candidates from specific degrees, particularly the STEM and more 'technical' AHSS degrees (e.g., economics). Accordingly, degrees that do not fit this 'technical' and 'quantitative' criteria in the automated system are filtered out at the early stages of the application process (Nugent & Scott-Parker, 2021; Sandanayake et al, 2018).

In addition to the two participants who had experience in hiring students/graduates, many participants also recognised the automated hiring system at EPS firms today. These participants claimed that, because of the automated 'key-word' system, which prefers more quantitative/technical degrees that are perceived to be 'tougher', STEM students are more represented at EPS firms than AHSS students. In this research as well, STEM participants were more represented (n = 15), with all of the AHSS participants studying more 'technical' social science degrees such as economics (Hudson, 2017), although it is important to acknowledge the sampling techniques employed in this research (i.e., convenience and snowball sampling). Nevertheless, although most EPS firms do not have a degree subject specification to make an application, they are perceived to prefer applicants with hard, quantitative skills (e.g., mathematics, programming) that are perceived to be 'tougher' than AHSS degrees.

The preference for STEM graduates for their 'toughness', however, echoes the narrow definition of 'ideal talent' at EPS firms. As Ashley and Empson (2016) raised in their study, 'ideal talent' at EPS firms are defined by a narrow set of educational qualifications (e.g., an 'Oxbridge' graduate). The findings in this research that 'STEM is the tougher degree' also corroborates the works of Ashley and Empson (2016) as the perceived ability to endure a heavy workload and the quantitative abilities of STEM graduates are rewarded as valuable credentials for EPS firms. This seems to undermine the value of AHSS degrees for their lack of quantitative abilities and

(perceived) lighter workload, raising further concerns on the narrow definitions of 'ideal talent' at EPS firms.

Nevertheless, another perceived value of STEM degrees was the relevant industry-specific knowledge students gained, although to a lesser extent than quantitative skills and the heavy workload. In this research, sustainability and life sciences were described as two main industries that EPS firms were focusing their projects on, in recent years. Indeed, sustainability consulting, for example, is predicted to reach a global market size of $16 billion in the next five years (Verdantix, 2022), with many top-tier consulting firms including this as their top service priority (Hanneman, 2019). Consequently, although most EPS firms do not have a degree requirement as such, they were perceived to favour students/graduates who had knowledge in these subject areas. In this research, a third of the participants (n = 7) were studying these in-demand subjects, all acknowledging how their knowledge and skill acquired through their degree directly transferred to their graduate careers. This contradicts the criticism of STEM graduates by the Wakeham Review (2016) which found that STEM graduates lacked "understanding about how the skills and knowledge they have developed during their degrees relate and map onto the jobs market" (p.3) with environment-related and biology-related sciences being a critical concern for their lack of employability.

Overall, given these strengths of STEM degrees, participants described that their choice to study a STEM degree at university stemmed from their desire to improve future employment opportunities:

> "I didn't know what to study at 17, 18 years old, but I didn't want to choose a degree that would limit my career options. I knew that STEM wouldn't limit my career options because it was tough and you gained hard skills"
>
> (Participant H, STEM Student, Consulting)

Career-related motives have been cited as one of the most popular reasons for studying a specific degree subject at university (BA, 2020; Palmer et al, 2017; Skatova & Ferguson, 2014). In British HE policy, the increased funding commitments to the STEM in recent years and the greater focus on establishing the 'STEM pipeline' have encouraged more students to study STEM degrees for their high value in the labour market (Cannady et al, 2014, DfE, 2021; Hoyle, 2016; Roberts, 2002). In this research as well, the perceived rigour of STEM degrees was further contributing to

perceptions that they were high value degrees with strong employability and labour market returns. Consequently, as described by Participant H, this influenced some participants to study STEM degrees at university. Indeed, the popularity of STEM in recent years, owing to its high value in the labour market is a well-supported perspective in the existing literature (Belfield et al, 2018; Bosworth et al, 2013; ComRes, 2019; DfE, 2021; Healy et al, 2017; Lyonette et al, 2017; Palmer et al, 2017; Payton & Knight, 2018; Steele et al, 2012).

Theme 2: The Analytical and Communication Skills of AHSS

Although there was an overall perception that STEM degrees are tough and rigorous, the analytical skills of AHSS students and their value for EPS firms were also noted throughout the interview data. However, this is not to say that STEM students/graduates 'lack' analytical skills. Rather, as it will be shown, the specific analytical skills that AHSS students gain through their degrees were described as their value for EPS firms. In particular, the participants described that AHSS students/graduates were analytical in the way of synthesising information, considering multiple viewpoints and seeing the bigger picture:

> "Although they [AHSS students] may not know specific business concepts, they can deal with a range of opinions and see the bigger picture of issues (...) They also provide unique voices to different topics and can add their own flavour, which is important because consulting requires you to constantly evaluate and bring in different perspectives and ideas"
>
> (Participant E, STEM Student, Consulting)

Although analytical skills are unanimously described as an important soft skill across different professions (Succi & Canovi, 2020), they were described to be particularly important for EPS firms. This is attributable to the fact that a large part of the work at EPS firms consists of analysing extensive qualitative and quantitative data to create market reports and recommendations (Oyer, 2008; Lundgren & Blom, 2009). Thus, throughout the application process, candidates are tested on their ability to analyse information. For IB applications, analytical abilities are tested primarily through logic tests and discussions on recent current events (Rivera, 2016). In consulting, analytical abilities are tested through 'business case interviews', where they are asked to devise a business strategy with the resources and data given (Liu, 2019). For example, Participant J

described that, in their case interview, they were asked to devise a business strategy to increase the number of fans for a football team with low revenues.

In this context, the analytical skills gained through an AHSS degree and its transferability to business settings was described as their value for EPS firms. As suggested by Participant E, although AHSS graduates may not necessarily have training in specific business and commercial skills, their ability to synthesise information and provide a 'bigger-picture' analysis of business problems is as an important strength. This corroborates the works of Jacobs (2009), who argues that arts and humanities graduate are able to analyse "diverse matters and concerns" (p.26) which is an important skill in complex business settings (Robson et al, 2021). Moreover, the participants attributed the strong analytical skills of AHSS students to the extensive reading and writing they do regularly (e.g., essay and report writing). This was also remarked as a useful hard skill for EPS firms, as writing and reading market reports are an important part of their daily work.

The interview findings also revealed that a candidate's analytical skills were reflected in their communication skills. Although strong communication skills are also described as an important soft skill for a wide array of employment (Succi & Canovi, 2020), many participants felt that this was particularly assessed during the application process for EPS firms. For example, the 'business case interviews' for consulting firms not only assess how well a candidate can analyse business strategies, as described earlier, but they also assess their ability to logically and coherently communicate them (Liu, 2019). The importance placed on communication skills at EPS firms echoes the works of Robson et al (2021) who found the importance of 'narrative skills' — "the ability to tell your story and your direction" (p.11) — for business-related employment. Specifically, Robson and colleagues found that the ability to craft a narrative was valued by FTSE100 CEOs and chairs as an enriching tool to navigate the complexities of the social world today. Therefore, those who can critically craft and communicate their narrative through a discussion on business strategies, for example, are perceived to be a strong candidate for EPS firms.

In this context, AHSS students/graduates were perceived to be strong in communicating their analytical skills, given their greater focus on discussion and seminars in their coursework:

> "[AHSS] students have a lot of training in this area through regular seminars, for example. Their comfort with discussing their ideas really shows during an interview with the firm. This is important for all jobs, but it is especially emphasised for consulting and IB where it's very client-facing and you need to be articulate and confident with your suggestions

> and recommendations. STEM students are not as strong in this area because we don't get enough training"
>
> (Participant A, STEM Student, Consulting)

These findings suggest that a value of an AHSS degree is that it develops students' ability to communicate their analytical skills through their coursework (e.g., seminars, discussions). Indeed, this is a well-supported perspective in the literature (Bate, 2011; Belfiore & Upchurch, 2013; BA, 2020; Crossick & Kaszynska, 2016; Jacobs, 2009; Kent, 2012; Small, 2013). The participants also described that communication skills were not limited to verbal communication but also written communication, given the greater emphasis on essay/report writing in their coursework compared to STEM students. This is also consistent with the works of BA (2020) and Nicholls (2005), who found that AHSS students had strong overall verbal and written communication skills.

In addition to demonstrating a candidate's analytical skills, communication skills were also perceived to indicate a candidate's 'cultural fit' to a firm. Participant R, who has had experience in hiring students for an IB firm, described that employers at EPS firms apply the 'airport test' during an interview to assess whether a candidate would fit the firm culturally:

> "We will deliberately ask you questions about your interests outside of work. This is called the 'airport test' because we want to know whether we could hang out with you outside of work (…) and a good indicator of this is whether we would want to travel with you. Essentially, we want applicants who are interesting and who can communicate this (…) someone who can tell a story"
>
> (Participant R, AHSS Graduate, IB)

The 'airport test' seems to be a common hiring practice at EPS firms (Rivera, 2012; 2016). Through this test, EPS firms seek applicants who can effectively communicate their cultural fit to a firm through specific language, mannerism and describing their similarities in lifestyle during an interview. Indeed, recognising this, a few participants described their strategies that they have taken to 'pass' the airport test. For example, one participant mentioned that, throughout their final interview with a consulting firm, they discussed primarily their undergraduate dissertation which was on a topic that the interviewer happened to be interested in. Similarly, another participant described that they began their interview with a conversation about Manchester United (English Premier League football team), after seeing a jersey in the background of the interviewer, to establish rapport.

The discussion on cultural fit echoes a body of empirical and theoretical literature in sociology and psychology which describe that similarities between people (e.g., language, mannerism, lifestyle) serve as "badges of group membership" (Rivera, 2012, p.1001) (Bourdieu, 1986; Bryne, 1971; Montoya & Horton, 2013; Veblen, 1899; Weber, 2013 Yeong Tan & Singh, 1995). Effectively, those who can communicate their 'life outside of the job' (e.g., Manchester United), for example, are demonstrating their 'badges of group membership' and their cultural fit with an EPS firm.

Given the salience placed on cultural fit, there is evidence to suggest that the value of an AHSS degree is that it cultivates students' communicative abilities and 'narrative skills' through regular training (e.g., seminars and discussions). In the application process for EPS firms, this is assessed through more structured interviews (e.g., business case interviews) as well as less structured interviews (e.g., behavioural interviews and the 'airport test') (Rivera, 2016). Therefore, students who can carefully craft and demonstrate their 'story and direction' are seen as those who can navigate the complexities of the business environment and who can also fit the culture of EPS firms (Robson et al, 2021). This seems to play an important role in securing employment opportunities at EPS firms.

In addition to these soft skills, the value of AHSS degrees also included their industry-specific knowledge and skills, although described to a lesser extent than analytical and communication skills. This was particularly evident for social science-related subjects:

> "IB is related closely to geo-politics and international relations so if you study these degrees you will have an edge"
>
> (Participant N, STEM Student, IB)

> "I can design and handle surveys (…) This is important for consulting because we do a lot of market research with these tools"
>
> (Participant D, AHSS Student, Consulting)

The literature that discuss the value of AHSS/STEM degrees often associates soft/transferable skills with AHSS and hard/technical skills with STEM, given the greater focus on quantitative skills in STEM subjects (e.g., Belfield et al, 2018). Indeed, STEM students generally have strong quantitative abilities such as mathematics, coding and software (Lyonette et al, 2017). However,

there is evidence to suggest that AHSS students also develop important hard/technical skills that have value for EPS firms, such as designing and handling qualitative surveys. In this way, AHSS degrees similarly develop a set of hard and soft skills which are thought to be unique to STEM degrees.

Theme 3: Skill Development Outside of the Degree

Although both AHSS and STEM participants described the value of their respective degrees for EPS firms, in order to increase their employability further, they also described the importance of taking the time outside of their degree to supplement the knowledge/skills that they had acquired in their degrees. Broadly, AHSS students tended to focus on developing hard skills (e.g, numeracy and coding) while STEM students focused on developing soft skills (e.g., presentation and communication skills). The participants indicated that these skills were developed primarily through university clubs/societies, internship opportunities, peer/family/alumni networks and online platforms, echoing a body of literature (Bathmaker et al, 2013; Griffiths et al, 2017; Tomlinson; 2008).

However, for some STEM participants, a potential limiting factor to developing skills outside of their degree was their heavy workload:

> "I really wish that recruiters understood the differences in workload between degrees. I have so many contact hours on top of [job] applications and taking online courses for finance and Excel"
>
> (Participant O, STEM Student, IB)

The claimed heavy workload of STEM degrees seems to be a 'double-edged sword' for preparing job applications for an EPS firm. On the one hand, as described in Theme 1, some participants argued that the heavy workload of STEM degrees mimicked the working culture of EPS firms (i.e., long working hours), thereby 'preparing' them well for these careers. On the other hand, however, participants also argued that the heavy workload hindered them from being able to develop skills outside of their degrees and to make applications to these firms. Consequently, some participants had to forgo some of their academic workload in the autumn term, when most EPS firms publicly release their applications, to focus on completing applications. Participants described this as 'application season'.

A common theme for both AHSS and STEM participants who did not study business or finance-related degrees was that they felt that they lacked commercial, business skills. Although this appeared to be a disadvantage, participants argued that the individual effort to learn business knowledge indicated their strong motivation for a career in consulting and IB to employers. Indeed, demonstrating motivation and willingness to learn have been well-supported as important traits for employment (Clarke 2017; Grugulis & Vincent, 2009; Jones et al, 2017; Sin & Neave, 2016; Succi & Canovi, 2020). Participate I, who has had experience in interviewing students for an IB firm, describes this:

> "Even if you did not have a degree background in finance, and although we don't necessarily require it, it was nice to see people who knew the basics of finance because it showed that they had studied independently and that you have the motivation and interest for the job"
>
> (Participant I, AHSS Graduate, IB)

As described, evidence of independent learning and specific skill development outside of their degree programme was perceived to be indicative of their motivation for a career in business and EPS firms. Participants who were going into consulting/IB, therefore, developed skills that they perceived to be relevant (e.g., finance and business knowledge), in addition to the hard and soft skills that they gained through their AHSS/STEM degrees. For some participants, indicating motivation for a career in business was perceived as more important than the specific skills gained from their degree subjects.

Additionally, participants during the job interviews felt that those who did not study business/finance-related degrees were less expected to know business/finance-related jargon, skills and knowledge. As a result, they perceived that this made their interviews 'easier' than those who did study business/finance-related subjects. By contrast, those who did study business/finance-related subjects felt that they were tossed in the 'deep end' by EPS firm employers as they were asked questions that were beyond what they knew. This was particularly an issue raised by participants who studied economics, as an economics degree was perceived by employers to be closer to a finance and STEM-related degree, although they identify themselves closer to a social science. This echoes the importance of how to define subjects which 'hover' between AHSS and STEM, as described in Chapter 1 (Introduction).

Theme 4: Hybrid Degrees: Breaking the AHSS/STEM Binary

As described in Chapter 3 (Research Methodology), there were a few participants who studied degrees that were difficult to classify as either AHSS or STEM under the HESA (2018) definition. For example, Participant D, who studies a Social Data Science-related degree describes their studies as the following:

> "It's not in-depth social science, but it's not in-depth data science either (...) It's attempting to break the binary of arts, humanities, social sciences versus STEM"
>
> (Participant D, Social Data Science-related Degree, Consulting)

All the participants who study these 'hybrid degrees' described that their degree offers a good balance between the skills acquired through both AHSS and STEM subjects which were perceived to be of high value for EPS firms. Specifically, students in these degrees learn both the hard skills (e.g., quantitative abilities) and soft skills (e.g., communication and analytical skills) from both AHSS and STEM courses to gain a holistic understanding of their degree subject. Participants in a sustainability and business-related degree, for example, described that they explored sustainability-related issues interdisciplinarily, bringing in key theoretical and empirical perspectives from the social science, finance, business management and information technology (IT), to describe a few. The interdisciplinary nature of hybrid degrees was attributed to the fact that students and academics come from a diverse range of AHSS and STEM backgrounds. In this research, the four participants in the sustainability and business-related degree all came from distinct undergraduate backgrounds of chemistry, business, engineering and political science, all having their own perspectives and interests within sustainability and business.

In these hybrid degrees, increasing students' employability seems to be at an important goal of the programme. Practically, this is achieved through the wide array of resources and opportunities provided to students:

> "As a part of our course, we have to do either a summer internship or a consulting project with a company. We get practical experience, in addition to the academic learning that balances hard and soft skills"
>
> (Participant K, Sustainability and Business-related Degree, Consulting)

In the UK and abroad, incorporating career-related opportunities as a part of the degree programme (e.g., Integrated Internship Programme (IIP)) has increased across HEIs in recent years, particularly at the post-graduate level (Chang & Chu, 2009; Helyer & Lee, 2014; Ishengoma & Vaaland, 2016; Karunaratne & Perera, 2019; Ryan, 2020). Although this is seen more in business-related degrees, the participants described that this was also a growing trend in non-business degrees that seem to sit in-between the AHSS and STEM degree categories (e.g., social data science). Indeed, Participant D, who studies the social data science-related degree, described that she does an IIP at an EPS firm for 20 hours/week, in addition to her degree studies. These hybrid degrees, therefore, seem to develop students' employability by not only balancing AHSS and STEM-related skills but by also providing students practical working opportunities outside of the degree, particularly through IIPs. As practical business-related working experience has been ranked as a key hiring criterion for EPS firms (Rivera, 2016), this is a value of hybrid degrees.

To illustrate this point further, participants in the sustainability and business-related degree described their coursework as an eclectic mix of activities. This included group work, presentations, field trips, attending guest speaker events (from EPS firms as well) and a compulsory IIP with a sustainability-related firm of their choice, with some students working at an EPS firm. These activities seem to mimic the business world and cultivate students' employability as well, by providing opportunities to develop skills required for a career in sustainability and business. Participants described that this is particularly of value for EPS firms as they seek holistic candidates with employability-related skills from both AHSS and STEM subjects.

Despite the strengths of hybrid degrees, however, some participants also described their limitations. For example, Participant E, who studies a technology and business-related degree, argued that it may not hold much 'prestige', considering that hybrid degrees are relatively nascent and still less well-known:

> "My degree may not hold as much prestige as other degrees in the eyes of a consulting or IB firm (...) It's just not as well-known as economics or accounting. With an economics degree, for example, employers know what exact skills you get from it. Whereas in my degree, employers don't usually know what we are being taught, so there's more uncertainty. I noticed that some people just don't even get interviews because maybe they study a less well-known degree programme. There might be preference for more traditional degree programmes"
>
> (Participant E, Technology and Business-related Degree, Consulting)

There may be some truth to this, as all six of the participants in IB, for example, had studied relatively 'well-known and well-established' degrees (e.g., economics). However, it is important to recognise that the sampling techniques employed in this research elicited participants from similar backgrounds (i.e., convenience and snowball sampling). Nevertheless, one participant described that nearly 90% of their colleagues at an IB firm had studied 'well-established' degrees (e.g., mathematics and economics), suggesting the 'prestige' of degrees that may be valued at EPS firms.

Despite these potential limitations, however, participants claimed hybrid degrees were of high value in securing employment at an EPS firm as it balanced both AHSS and STEM-related skills. Hybrid degrees may, therefore, 'break the binary of AHSS and STEM', as described by Participant D, by complementing the strengths and limitations of both degree categories. In other words, hybrid degrees may dissolve the need to view the degree value of subjects as 'AHSS versus STEM' in terms of labour market outcomes, by recognising that both degrees have value in their own right. In this way, hybrid degrees respond to employers who wish to recruit candidates with both STEM and AHSS skills instead of a singular focus on one specific subject (Ginis, 2017; Robson et al, 2021).

It is noteworthy, however, that most hybrid degrees in the UK are offered at the postgraduate level, where the tuition has no upper limit and costing typically two to three times more than an undergraduate degree (Marginson, 2018). This would compromise widening access and participation, an important goal of British HE policy today (Robinson & Salvestrini, 2020). Moreover, the intrinsic value of learning, rooted in Newman's Idea of the University (1852/2008), may also be compromised at hybrid degrees, as increasing students' employability seems to be their foremost goal. This could also interrupt life-long learning—an important tenet of HE discourse today—as employability would be a greater concern for younger than more mature students (Artess et al, 2011; Bennett, 2009; Stephenson & York, 2008). To borrow the words of Morley (2001), this increased focus on employability in hybrid degrees may 'decontextualise' the diversity of student backgrounds by having all students develop similar employability-related skills. This is a well-cited limitation of the employability discourse that permeates HE policy, systems and institutions today (Brown et al., 2011; Green, 2013; Keep & Mayhew, 2010; Payne, 2017; Robson et al, 2021; Tholen, 2017; Tomlinson, 2017). This warrants further research.

Theme 5: The Subject Does Not Matter?

Although the value of AHSS, STEM and 'hybrid' degrees have been described, the participants also raised the extent to which the specific subject degree is truly important for securing employment at EPS firms. Specifically, the 1) institutional prestige and 2) social capital of the candidate were argued to dilute the importance of the specific degree that the student/graduate had studied. In other words, the specific degree subject (i.e., AHSS or STEM) were suggested to be secondary when compared to institutional prestige and social capital of the candidate.

Institutional Prestige

Consistent with the works of Ashlety and colleagues (Ashley et al, 2015; Ashley & Empson, 2016; 2017) and Rivera (2016), the prestige of the institution that the candidate attended was perceived as the most important graduate hiring criterion at EPS firms. Participant I, a recent graduate working in IB, described that EPS firms in the UK focus their hiring practices to top-tier Russell Group Universities:

> "At [firm name], we have five recruiters. One focuses on Oxford, another focuses on Cambridge, another focuses on Imperial and another focuses on LSE. The fifth person looks at the CVs for the rest of the unis"
>
> (Participant I, AHSS Graduate, IB)

With the growth of the 'war of talent' (Michael et al, 2001), EPS firms strategically hire only the 'best and brightest' students/graduates from a few elite target institutions (Ashley & Empson, 2016; Rivera, 2016). In the UK, these are the 'golden triangle' Russell Group universities of Oxford, Cambridge and a few London universities (Wakeling & Savage, 2015). To recruit the 'best and brightest' students/graduates, EPS firms allocate a large sum of their graduate hiring resources to these 'golden triangle' institutions (Ashley et al, 2015). In this research, career events, IIPs, university-specific websites, extensive alumni network and support systems were all described as examples of targeted hiring practices by EPS firms at the participants' respective institutions.

Graduates from the 'golden triangle' Russell Group universities, therefore, were described to have a 'foot in the door' at EPS firms by being favoured at the early recruitment stages (e.g., CV check). In this way, the labour market rewards graduates from universities that rank highly on performative measures (e.g., rankings and prestige) (Marginson, 2013; Tomlinson, 2018). Thus,

participants described that attending/graduating from a top-tier university as the foremost important indication of a student's/graduate's employability. This seems to dilute the value of the specific degree subject to employers. Indeed, a common understanding by the participants was that, theoretically, students could study any subject (regardless of AHSS/STEM) if they had studied at a top-tier university. In this way, institutional prestige seems to be the first and foremost hiring criterion for EPS firms. This would put the discussion on 'degree value' of specific subjects secondary to institutional prestige.

The participants also described that the importance of institutional prestige is attributable to the automated hiring practices at EPS firms today, as also described in Theme 1. Those who do not 'fit' the automated system (e.g., a student at a lower tier university) are immediately filtered out and are declined from proceeding to further stages of the application (e.g., interviews) without being evaluated by a human recruiter (Nugent & Scott-Parker, 2021; Sandanayake et al, 2018). In other words, those who do not study at top-tier institutions are not even given the opportunity to showcase their degree value and hard/soft skills. In this way, 'the AHSS and STEM debate' for EPS firms may only concern students/graduates at top-tier institutions who can advance from the early stages of the application process.

Social Capital

Participants also described the importance of building social capital with employees at EPS firms that they wished to work for. In addition to getting referrals to the firms, participants described that building social capital with employers provided an alternative opportunity to demonstrate their cultural fit to a firm:

> "A company can't tell who you are in a short interview so it really helps when there is someone who knows you and can vouch for you. For me, I received help from someone who happened to work in [firm name], who told the firm that I would fit the team culturally"
>
> (Participant O, STEM, IB)

Although securing employment through differences in social capital raises issues of fairness in hiring practices (Bathmaker et al, 2013; Smith, 2010), most participants described social capital as a necessary step of the application process where the lack thereof as a significant disadvantage. Indeed, many of the participants had described some use of social capital during the

application process, particularly by connecting with alumni and employees on LinkedIn, echoing the works of de Janasz and Forret (2008). As suggested by Participant O, building social capital with employees provide students with additional opportunities to showcase their employability. In this way, there is evidence to suggest that students/graduates who are going into EPS firms know how to 'play the game' of the application processes by building social capital, alluding to the theoretical and empirical literature by Bourdieu (1990) and Bathmaker et al (2013). Therefore, similar to institutional prestige, social capital seems to dilute the importance of the value of AHSS and STEM degrees for securing employment at EPS firms.

Chapter 5: Conclusion

With the growth of the employability discourse in HE, the value of Arts, Humanities and Social Science (AHSS) and Science, Technology, Engineering and Mathematics (STEM) degrees in terms of labour market outcomes has been the source of scholarly and public scrutiny. In this context, this thesis has made empirical and theoretical contributions by examining the value of AHSS and STEM degrees for securing employment at Elite Professional Service (EPS) firms. Specifically, the research described in this thesis has engaged critically with student and graduate perspectives, a largely missing perspective in the literature.

Reflecting on the three research questions, AHSS and STEM degrees were perceived to both help and hinder graduate employment opportunities at EPS firms. There is evidence to suggest that both degrees help students develop specific employability-related skills that are of high value for EPS firms. These include the quantitative abilities of STEM graduates and the analytical abilities of AHSS graduates. At the same time, however, participants described the skills which they perceived were lacking from their studies, such as commercial and business knowledge. To supplement these skill gaps, students took the time outside of their degree programmes to develop skills independently and to increase their employability for EPS firms. This was perceived to be highly valued by EPS firms, in addition to the specific employability-related skills gained from their respective degrees.

The research also provided novel insights into the scholarly work on employability and degree value, through the discussion on 'hybrid degrees' that bridge (or perhaps break) the AHSS/STEM binary. The research finding on hybrid degrees also contributed to filling the evidence gap on Integrated Internship Programmes (IIPs) at UK universities, describing how employability is practiced in the curriculum agenda. More broadly, the thesis corroborated some underlying and well-established knowledge about graduate employment such as the overarching importance of institutional prestige and social capital to secure employment at high-paying EPS firms.

This thesis may also have policy implications. For example, the empirical findings in this research could challenge the UK policy discourse that encourages students to specialise in the STEM subjects at an early age for its apparent greater employability and 'high degree value' at the HE-level (DfE, 2021). Most notably, the research findings revealed that both AHSS/STEM degrees have value in their own right that correspond with the skills required for EPS firms (e.g.,

quantitative abilities, analytical skills, communication skills). Moreover, the research findings highlighted the value of hybrid degrees where students have the opportunity to gain skills from both the AHSS and STEM subjects at the HE level. Both of these findings could challenge the need for students to specialise between AHSS and STEM at an early age in the UK education system (e.g., GCSE, A-levels). This policy implication, however, would require further research. Lastly, to conclude this thesis, I discuss the limitations of this research and provide a few future research themes.

Limitations

There are a few important empirical, theoretical and methodological limitations that need to be acknowledged, in addition to the limitations already discussed in Chapter 3 (Research Methodology). First and foremost, theorising the value of AHSS and STEM degrees is an ambitious task, given the diversity of subjects within each category. Certainly, there are significant variations in degree value and the skills gained between each subject within the AHSS and STEM as well, as alluded to in Chapter 1 (Introduction). For example, although both English and economics were categorised under AHSS in this thesis, they have clear differences in their specific degree content and the skills that students gain. This variation in individual subjects limits the explanatory power of the broad categories of 'AHSS and STEM degrees' overall. Similarly, the sample of AHSS participants were primarily represented by social science students, which limits the explanatory power for the arts and humanities degrees. Therefore, although theorising the broad categories of AHSS and STEM degrees was a key contribution of this thesis, the extent to which conclusions can be drawn from this research needs to be acknowledged, given the diversity and nuances of subject categories.

I also acknowledge the heavy reliance on scholarly work by Ashley and colleagues and Rivera to situate the empirical research findings of this thesis. The repeated use of their research has, to a certain extent, limited the analytical scope of this research (Javadi & Zarea, 2016). However, it is important to repeat that, to my knowledge, they are the only two scholars that have explored EPS firms specifically in the context of graduate employment. They were therefore referenced throughout this thesis.

Methodologically, this is a small-scale qualitative research using limited resources and conducted within a short period of time. Hence, the findings are limited to the 21 participants'

perceptions. While this is not a limitation, nevertheless, the extent to which conclusions can be drawn from this research needs to be acknowledged. Recognising this, Chapter 3 (Research Methodology) provides a 'thick description' of the research methods employed and describes the steps taken to ensure the quality and rigour of this research.

Themes for Future Research

There are a few important future research themes arising from this thesis. These research themes would provide further opportunities to understand the value of AHSS and STEM degrees for EPS firms and, more broadly, employability. I propose two broad research themes: 1) EPS firm employers' perception of degree value and 2) hybrid degrees.

Implicit within the first research theme is that hiring practices are a two-way process: with a candidate and an employer. A key missing perspective in this research, therefore, is that of the employers. There has been some research conducted both within (e.g., Ashley et al, 2015) and outside of the UK (e.g., Rivera, 2016) which explores the hiring practices of EPS firms and the perceptions of employers. Neither of these research, however, have explored specifically the value of AHSS/STEM degrees. Therefore, a research inquiry on EPS firm employers' perspective on degree value would be an important contribution to the HE literature. This idea is supported by the small number of participants in this research who also had experience recruiting students and provided some valuable perspectives on this issue. I do, however, acknowledge the difficulty in collecting authentic data from employers on their hiring practices, given the privacy and sensitivity associated with this information (Rivera, 2016).

Turning to the second research theme, both the HE and employment literature would benefit from investigating the value of 'hybrid degrees' from the perspectives of students and staff at these programmes. Specifically, the literature would benefit from a deeper understanding of how employability concerns are practiced at hybrid degrees. Overall, through these two future research themes, the HE literature could gain contextually grounded and empirically rich understandings of degree value and employability, in addition to the findings presented in this thesis.

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Appendix

Appendix A: CUREC Ethical Approval

Dear [OMITTED],

The 'Right' Major for High-Earning Graduate Jobs:
Exploring the perceptions of Arts/Humanities/Social Sciences and STEM students
CIA-22HT-026

The above application has been considered on behalf of the Departmental Research Ethics Committee (DREC) in accordance with the procedures laid down by the University for ethical approval of all research involving human participants.

Our prior discussion on this was very useful – an impressive team as ever, and project, vastly experienced, and a model of genuine care in relation to research ethics.

I am pleased to inform you, then, that, on the basis of the information provided to DREC, the proposed research has been judged as meeting appropriate ethical standards, and accordingly, approval has been granted.

Please continue to follow all current guidance issued by CUREC during the pandemic, notably COVID-19: CUREC guidance on research involving human participants, https://researchsupport.admin.ox.ac.uk/governance/ethics/coronavirus

If relevant please also check the CUREC website for their best practice research guides, these can be very useful in refining the writing up of ethical considerations in your research – see https://researchsupport.admin.ox.ac.uk/governance/ethics/resources/bpg

Good luck with your research study,

Keep well and safe,

Yours sincerely,

All good wishes,

Liam

Chair, DREC

Appendix B: Information Sheet

The 'Right' Major for Elite Professional Service (EPS) firms (Consulting and Investment Banking)?
Exploring the Perceptions of Arts/Humanities/Social Science (AHSS) and Science Technology Engineering Mathematics (STEM) students

PARTICIPANT INFORMATION SHEET

Central University Research Ethics Committee Approval Reference: CIA-22HT-026

Introductory paragraph

You are being invited to take part in a research project. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether you wish to take part.

Although there is rich amount of research exploring the employability of university students, there is a lack of research exploring the value of degrees in obtaining jobs at EPS firms. Given this, through interviews, the primary aim of this research is to explore how students studying Arts/Humanities/Social Science (AHSS) and Science Technology Engineering Math (STEM) degrees at a Russell Group University earn employment at EPS firms (consulting and investment banking). In other words, through their respective degrees, this research investigates which skills do students gain and demonstrate in the process of earning high-paying jobs. This may reveal any similarities and differences between AHSSS and STEM majors in how they earn jobs at EPS firm.

Why have I been invited to take part?

You have been invited to participate for an interview as you fit the research inclusion criteria (below). To gain a better understanding of this research topic, I plan to interview participants who have earned graduate jobs or internship opportunities at consulting or investment banking firms. Your participation will contribute to further understanding of higher education, graduate employment and skills gained through an AHSS and STEM degree.
Criteria to participate are as follows:

1) Final year student (undergraduate or postgraduate) OR graduate from a Russell Group University studying AHSS or STEM degrees
2) Have, have had, or will have at least one offer for a job/internship in consulting or investment banking

Do I have to take part?

No. It is up to you to decide whether to take part. You can withdraw yourself from the study, without giving a reason, and without negative consequences, by advising me/us of this decision. The deadline by which you can withdraw any information you have contributed to the research is 15 August 2022. Should you choose to withdraw, all data and digital files will be deleted and destroyed permanently, to comply with the UK General Data Protection Regulation and the Data Protection Act 2018.

What will happen to me if I take part in the research?

Details of the interviews:

- All interviews will be conducted either online (through Microsoft Teams) or in-person, subject to your availability and preference
- The interviews will take between 30 to 60 minutes, no preparation in advance is necessary and no follow-up sessions will take place
- This will be a semi-structured, conversation-style interview, where the researcher will prepare questions in advance and ask about your experiences. I will also ask follow-up questions based on your response
- An information sheet (this paper) and consent form will be provided, all participants are required to sign the consent form to participate
- With your consent, I would like to audio record and video record you so that I can have an accurate record of our conversation
- All participants can withdraw themselves from the study, without giving a reason, and without negative consequences, by advising me of this decision

What are the possible disadvantages and risks in taking part?

Although we do not anticipate any possible disadvantages or risk in taking part, should you do, please feel free to withdraw from the research at any time. Please note that all the data and information collected will be anonymised so that participants are not directly identifiable. The only information of the participants that will be disclosed is the inclusion criteria of this research (see under 3).

Are there any benefits in taking part?

While there are no immediate or personal benefits for those people participating in the project, it is hoped that this research will lead to a better understanding of employability development in higher education, particularly in the context of degree value and high-paying jobs. Once the thesis is written, you will receive an electronic copy.

What information will be collected and why is the collection of this information relevant for achieving the research objectives?

Identifiable data (including consent forms) will be stored safely and carefully as password protected digital files in encrypted folders on the researcher's personal password protected computing device until the end of the research (September 2022). Once audio and video recording are transcribed and anonymised, they will be permanently deleted. Only the researcher and supervisor will have access to the research data.

Will the research be published? Could I be identified from any publications or other research outputs?

The findings from the research will be written in a thesis. Given that all information that could reveal the participant's identity will be anonymised, it will be unlikely that the participants would be identifiable from the outputs of the research. I would like your permission to use direct quotations but without identifying you in any research outputs.

Data Protection

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study. The University will process your personal data for the purpose of the research outlined above. Research is a task that is performed in the public interest. Further information about your rights with respect to your personal data is available at https://compliance.admin.ox.ac.uk/individual-rights.

Who has reviewed this study?

This study has received ethics approval from a subcommittee of the University of Oxford Central University Research Ethics Committee. (Ethics reference: CIA-22HT-026).

Who do I contact if I have a concern about the research or wish to complain?

If you have a concern about any aspect of this study, please contact [OMITTED] at [OMITTED] and I will do my best to answer your query. I will acknowledge your concern and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the Chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter as soon as possible:

The Chair, Social Sciences & Humanities Interdivisional Research Ethics Committee; Email: ethics@socsci.ox.ac.uk; Address: Research Services, University of Oxford, Boundary Brook House, Churchill Drive, Headington, Oxford OX3 7GB

Further Information and Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:
[OMITTED]

Appendix C: Consent Form

Consent to take part in:
The 'Right' Major for Elite Professional Service (EPS) firms (Consulting and Investment Banking)?
Exploring the Perceptions of Arts/Humanities/Social Science (AHSS) AHSS and Science Technology Engineering Mathematics (STEM) Students

Central University Research Ethics Committee (CUREC) approval reference: CIA-22HT-026

Purpose of Study: The primary aim of this research is to explore how students studying Arts/Humanities/Social Science (AHSS) and Science Technology Engineering Math (STEM) degrees at a Russell Group University earn jobs at EPS firms (consulting and investment banking)

	Please initial each box if you agree with the statement
I confirm that I have read and understand the information sheet or the above research. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
I understand that my participation is voluntary and that I am free to withdraw at any point [until 15/August/2022], without giving any reason.	☐
I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.	☐
I understand that I will be the extent to which I could be identifiable from any publications.	☐
I consent to being audio and video recorded.	☐
I understand how audio and video recordings will be used in research outputs.	☐
I agree to the use of quotations in research outputs if I am not identifiable.	☐

I give permission for you to contact me again to clarify information.	
I understand how to raise a concern or make a complaint.	
I agree to take part in the research.	

Appendix D: Interview Schedule

Please note that this interview schedule is by no means exhaustive and that the questions were not always asked in the exact order presented in this appendix.

[The information sheet and consent form were read and signed prior to the interview]

Introduction to the Topic [Sample]: Hi, I am [OMITTED]. I am currently researching the perceptions of Arts, Humanities and Social Sciences (AHSS) and Science, Technology Engineering and Mathematics (STEM) students/graduates on how they secure jobs in consulting and investment banking. The interview should take between 30 minutes to 45 minutes. Feel free to ask me any questions at any point. I would be happy to answer them. If you do not have any questions at this point and are ready, is it okay if I start the recording and the interview?

[After consent was given, start with Category 1]

<u>Category 1: Personal Experience Questions (Expected: 15 min)</u>

- Let's start with a few basic questions. Could you tell me a little about yourself? What are you doing now? (i.e., Are you a student? A recent graduate?)

- FOR GRADUATES: Could you tell me about your experiences at (JOB/INTERNSHIP)?

- FOR CURRENT STUDENTS: Have you already participated in the (INTERNSHIP)? Could you tell me about your experiences at the firm?

- When you started applying for jobs, what kind of jobs were you looking for? Why these?

- What influenced you to apply to consulting/investment banking?
    - Potential follow up Q: How important was your degree subject in this decision?

- What other job opportunities did you have? Why did you take (JOB/INTERNSHIP)?

- Okay, now let's talk about the application process for (JOB/INTERNSHIP) specifically. Could you tell me about your experiences in getting an offer from (JOB/INTERNSHIP)?

- When you think back to your experiences in applying for (JOB/INTERNSHIP), what skills do you think are important to demonstrate in getting an offer in consulting/investment banking? In other words, what skills do you think are recruiters looking for in consulting/banking in, for example, interviews?

[Transition to Category 2: Now let's talk a little bit more about what you study/studied at university]

Category 2: Degree-Related Questions (Expected: 25 min)

- What influenced you to decide to study (DEGREE NAME)?
    - Potential follow up Q: Did your future career/job prospects influence your decision in any way?

- What are some things that you learnt from your degree that you found helpful, such as skills?

- How do you think your degree has helped you get an offer from (JOB/INTERNSHIP)?
    - Potential follow up Q: What specific skills did you gain from your degree?
    - Potential follow up Q: What 'hard or technical skills' did you gain from your degree?
    - Potential follow up Q: What 'soft or transferable skills' did you gain from your degree?

- Do you think your degree has hindered you from gaining more opportunities/offers in consulting or investment banking in any way? If so, how?
    - Potential follow up Q: What do you wish you had gained from your degree?
    - Potential follow up Q: What degrees, if any, do you think are useful for a career in consulting or investment banking? How?

- For STEM students: What skills do you think you gain, if any, from an Arts/Humanities/Social Sciences degree for a career in consulting/investment banking? And in what ways is it different from STEM degrees?

- For AHSS students: What skills do you think you gain, if any, from a STEM degree for a career in consulting/investment banking? And in what ways is it different from Arts/Humanities/Social Sciences degrees?

- Overall, do you think the degree that you study at university is important in getting an offer in consulting/investment banking? How and Why?

[Transition to Category 3: Now let's talk about securing a job/internship for consulting/investment banking overall and the university]

Category 3: Thinking outside of the AHSS and STEM subjects (Expected: 10 min)

- What factors/experiences do you think are/were important in getting an opportunity in consulting/investment banking?

- How did the university/institution that you study at help you gain an opportunity in consulting/investment banking? (E.g., Career guidance) In other words, how did your university prepare you for a job in consulting/investment banking? Please give me examples.

- What else do you think your university could have done to prepare you for a job in consulting/investment banking?

Appendix E: Full Description of Participant Information

I apologise for the small text. Inserting an image of this size was the only way to upload the file.

Participant	Student Status	AHSS/STEM	Degree Subject	UG Degree Subject (FOR PG ONLY)	Consulting/Investment Banking	Internship/Full-Time	University	Gender
A	Postgraduate	STEM	Physics	Physics	Consulting	Internship	C	Male
B	Postgraduate	STEM	Maths & Business-related	Economics-related	Consulting	Internship	A	Female
C	Undergraduate	AHSS	Psychology		Consulting	Internship & Full-Time	C	Female
D	Postgraduate	AHSS	Social Data Science	Social Science	Consulting	Internship	C	Female
E	Undergraduate	STEM	Technology & Business-related		Consulting	Internship & Full-Time	C	Female
F	Postgraduate	STEM	Life Sciences-related	Biochemistry	Consulting	Internship & Full-Time	B	Female
G	Postgraduate	STEM	Sustainability & Business-related	Business Analytics-related	Consulting	Full-Time	B	Male
H	Graduate (UG & PG)	STEM	Business-related	Engineering	Consulting	Internship & Full-Time	D	Male
I	Graduate (UG)	AHSS	Economics		Investment Banking	Internship & Full-Time	D	Female
J	Postgraduate	STEM	Sustainability & Business-related	PPE	Consulting	Full-Time	B	Female
K	Postgraduate	AHSS	Sustainability & Business-related	Chemistry	Consulting	Full-Time	B	Female
L	Undergraduate	STEM	Engineering	Engineering	Investment Banking	Internship + Full-Time	D	Female
M	Undergraduate	AHSS	Economics		Investment Banking	Internship + Full-Time	D	Male
N	Undergraduate	STEM	Chemistry	Chemistry	Investment Banking	Internship + Full-Time	C	Female
O	Undergraduate	STEM	Mathematics	Mathematics	Investment Banking	Internship + Full-Time	C	Female
P	Postgraduate	STEM	Sustainability & Business-related	Business-related	Consulting	Internship + Full-Time	B	Female
Q	Undergraduate	AHSS	Social Science		Consulting	Full-Time	C	Male
R	Graduate (UG & PG)	STEM	Economics		Investment Banking	Internship + Full-Time	D	Male
S	Undergraduate	STEM	Mathematics	Mathematics	Consulting	Internship	A	Female
T	Postgraduate	STEM	Computer Science	Computer Science	Consulting	Internship + Full-Time	A	Female
U	Undergraduate	STEM	Statistics		Consulting	Internship + Full-Time	C	Female

Appendix F: Sample Message for LinkedIn

Hi! For my MSc thesis, I am looking to interview final year undergraduate/postgraduate students/recent graduates (within three years of graduation) from a Russell Group university who have received at least an offer from consulting or investment banking internships or full-time opportunities. Participants will need to be currently studying or have studied either Arts/Humanities/Social Sciences or STEM degrees. The research will explore the perceptions of Arts/Humanities/Social Sciences and STEM students/graduates on how they earn jobs in consulting or investment banking. Please leave me a message if you would like to learn further or/and are interested. Thank you!