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**DIGITAL GIRL: CYBERFEMINISM AND THE EMANCIPATORY POTENTIAL
OF DIGITAL ENTREPRENEURSHIP IN EMERGING ECONOMIES**

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Abstract

Digital entrepreneurship has been described as a “great leveler” in terms of equalizing the entrepreneurial playing field for women. However, little is known of the emancipatory possibilities offered by digital entrepreneurship for women constrained by social and cultural practices such as male guardianship of female relatives and legally enforced gender segregation. In order to address this research gap, this paper examines women’s engagement in digital entrepreneurship in emerging economies with restrictive social and cultural practices. In so doing, we draw upon the analytical frameworks provided by entrepreneurship as emancipation and cyberfeminism. Using empirical data from an exploratory investigation of entrepreneurship in Saudi Arabia, we examine how women use digital technologies in the pursuit of entrepreneurial opportunities. Our findings reveal that women in Saudi Arabia use digital entrepreneurship to transform their embodied selves and lived realities rather than to escape gender embodiment as offered by the online environment.

Keywords: Entrepreneurship as Emancipation; Digital Entrepreneurship; CyberFeminism; Qualitative Methodology; Saudi Arabia; Emerging Economies

1. Introduction

Digital entrepreneurship has been defined as ‘the pursuit of opportunities based on the use of digital media and other information and communication technologies’ (Davidson & Vaast, 2010: 2). Novo-Corti et al., (2014) argue that a broad view of digital entrepreneurship, not limited to ‘high-tech’ entrepreneurship, is necessary if we are to fully understand the wider social and economic impact of digital technology. The attributes of the Internet, in particular the low barriers to entry and abundance of information, mean that the online environment is posited to provide significant potential for those groups who were previously excluded from bricks-and-mortar entrepreneurship (Novo-Corti et al., 2014; Shirazi, 2012; Hair et al., 2007); with one such group being women (Dy et al., 2017; Martin and Wright, 2005). More generally, prior studies within the domain of cyberfeminist research, which examines the relationship between women and digital technology, has highlighted the significant potential of the Internet as a forum for women’s empowerment and emancipation (Rosser, 2005). It is suggested that the Internet, with its protection of individual privacy, may provide a ‘safe space’ for negotiating the challenges women encounter in their day-to-day offline lives (Daniels, 2009; Nourai-Simone, 2005), and in so doing, help them realize their entrepreneurial ambitions. However, to date, few studies have critically assessed whether digital entrepreneurship provides such a neutral and meritocratic space with empowering potential for women (Dy et al., 2017; Dy et al., 2018), particularly within contextualized environments constrained by social and cultural practices (Rindova et al., 2009). This gap in understanding aligns with Jennings et al.’s (2016) call for more empirical research into the emancipatory potential of entrepreneurship in contexts beyond that of developing economies, such as countries that are economically wealthy but considered traditional. Accordingly, the aim of this paper is to examine the emancipatory

potential of digital entrepreneurship for women in economically wealthy countries with restrictive social and cultural practices. Specifically, our underpinning research question explores the potential of digital entrepreneurship in providing women entrepreneurs in Saudi Arabia a safe space in the pursuit of entrepreneurial opportunities.

In order to explore the potential of digital technology, in offering a safe space for women, we adopt an entrepreneurship as emancipation perspective. Such a perspective requires a shift in focus from wealth to change creation and from opportunities to constraints and as a result makes autonomy and the behavior of entrepreneurs the focal point of inquiry (Jennings et al., 2016). In addition, we draw on cyberfeminist research to provide a theoretical lens to critically examine the extent to which the online environment provides a neutral and meritocratic framework for women to realize their entrepreneurial ambitions, or whether offline inequalities are simply reflected online (Daniels, 2009; Morahan-Martin, 2000; Plant, 1997). The specific empirical setting for the research is Saudi Arabia, an economically wealthy but underdeveloped economy, where female entrepreneurship is constrained by social and cultural practices such as male guardianship of female relatives and legally enforced gender segregation (Achoui, 2009; Ahmad, 2011; Le Renard, 2014). According to the 2016 GEM report, women in Saudi Arabia hold highly favorable views of entrepreneurship but have lower self-efficacy and a higher fear of failure relative to their male counterparts. However, there is increasing anecdotal evidence to suggest that female entrepreneurs in Saudi Arabia are developing pragmatic combinations of solutions to transcend these cultural and social obstacles, which build on advances in digital and computing technologies. Accordingly, we present an in-depth exploratory analysis detailing how women in Saudi Arabia use digital technologies in the pursuit of entrepreneurial opportunities.

Within this paper, we make the following theoretical contributions. First, we provide empirical support for a socio-material approach to digital entrepreneurship (Nambisan, 2017; Davidsson and Vaast, 2010) in order to enhance understanding of how everyday activities interact with technology affordances to identify and enact entrepreneurial opportunities. Second, we complement prior research on the emancipatory potential of entrepreneurship by highlighting the importance of context and the specific constraints faced by women. Third, we contribute to calls within cyberfeminist research to examine how women can use the internet not to escape embodiment but to transform their lived realities. Finally, for policy makers and practitioners our study supports initiatives that focus on digital tools and technologies as a means to empower women constrained by restrictive social and cultural norms and expectations.

2. Theoretical Framework

2.1 Digital Entrepreneurship

The attributes of the Internet and in particular the low barriers to entry, are argued to provide significant potential for those groups who were previously excluded from bricks-and-mortar entrepreneurship (Novo-Corti et al., 2014; Shirazi, 2012; Aldrich 2014). Nambisan (2017) argues that digital technologies are not simply tools to facilitate entrepreneurship, rather digitization is fundamentally altering the boundaries of entrepreneurial processes and outcomes, necessitating the development of new theories which prioritize a technology perspective on entrepreneurship. Digital technology is theorized as an important ‘external enabler’ of new venture creation, reducing the time and resources needed in the creation of highly disruptive or radically new products or services (von Briel et al., 2017). Digital technology is therefore posited as a source of significant disruptive transformation in the

entrepreneurial process (Hull et al., 2007; Liao et al., 2013; Giones and Brem, 2017; Kraus et al., 2018).

While the radical and disruptive potential of digital entrepreneurship is significant (Khajeheian, 2013), theoretical development requires consideration of the social, economic and cultural context in which digital engagement takes place. Robinson et al. (2015) argue that digital engagement is a highly complex issue and that our behavior online is an extension of broader societal roles, interests, and expectations pertinent in society. This is evidenced by Duffy and Pruchniewska (2017) who argue that gender is a marked category in the online environment and use the term ‘digital double bind’ to refer to the pressure on women to develop an online personality that conforms to feminine stereotypes. Such a perspective runs counter to arguments of digital entrepreneurship as a ‘great leveler’ for those groups traditionally underrepresented in entrepreneurship and business ownership (Martin and Wright, 2005; Duffy and Pruchniewska, 2017). In fact, Dy et al. (2017; 2018) posit that the potential of digital technology to facilitate entrepreneurship for marginalized groups may be overstated in that digital entrepreneurship remains a resource-based activity, requiring capital investment, technical knowledge, access to online marketplaces and supporting hardware and software. As such, offline inequalities in terms of resource access are likely to be reflected in the online environment (Daniels, 2009).

Kelstyn and Henfridsson (2014) argue that in order to understand the true potential of digital entrepreneurship, greater attention needs to be paid to the everyday interactions with digital technology leading to the creation of new business ventures often outside of high-technology industries. Specifically, the importance of understanding how the ubiquity and everyday experiences of digital technology provide innovation opportunities. Nambisan (2017) and Davidson and Vaast (2010) draw on Orlikowski (2007) to argue for a sociomaterial approach to digital entrepreneurship theory, as “the social and material are considered to be inextricably related – there is no social that is not also material, and no material that is not also social’ (Orlikowski 2007:1437). A sociomaterial approach focuses attention on how users identify and develop entrepreneurial opportunities by building on ‘their own experiences in the digital world and having a deep appreciation for the context of these needs’ (Nambisan, 2017:1041). Cyberfeminist research provides a theoretical framework to examine the extent to which the online environment provides a ‘safe space’ for women to pursue digital entrepreneurship in an unsupportive socio-cultural context (Daniels, 2009).

2.2 Cyberfeminism

The concept of cyberfeminism was first coined by Sadie Plant (1997), who envisioned information communication technology as a place where women could feel comfortable enough to prosper. Plant’s (1997) cyberfeminist thinking was in opposition to the prevailing view of cyberspace as inherently masculine, created by and for men (Adams 1996). Cyberfeminist research has two primary lines of inquiry. The first argues that women’s lives on the Internet mirror their lives beyond computers and offline inequalities are simply replicated in the online environment (Adams, 1996; Dy et al., 2017; Duffy and Pruchniewski, 2017; Dy et al., 2018). A cornerstone of this argument is that women are constrained in terms of access, usage, skills and self-perceptions in relation to digital technologies (Bimber, 2000, Rosser, 2005). The fact that race and gender matter online, as per the offline environment, counters assertions that ‘cyberspace is a disembodied realm where gendered and racialized bodies can be left behind’ (Daniels, 2009: 116). The alternative view posits that cyberspace has the potential to be egalitarian and to provide unexpected new opportunities which build on advances in information and communication technologies (Rosser, 2005). Morahan–Martin

(2000:683) argues that online anonymity ‘frees individuals of social and physical restraints and has allowed women to express parts of themselves that they might not otherwise, in a safe environment’. Critics of such claims however, argue that such a view promotes ‘Cyberutopia’ - an idealized theory of internet use, which requires women to leave their bodies and gender behind when they go online (Brophy 2010). Accordingly, Brophy (2010: 932) argues that cyberfeminists should not view the virtual world not as a ‘replacement for the spaces of lived experience but rather an augmentation of them’.

Thus, there have been calls to focus on the lived experiences of women, and how online ‘virtuality’ and offline ‘reality’ constitute, rather than supersede the other (Sunden, 2001). As Sassen (2005) cautions, opportunities within cyberspace do exist but do so within the confines of existing hierarchies of power. In order to understand how digital technologies impact women, greater attention needs to be paid to the social and cultural context in which activities take place (Welter, 2004; 2011). This belief is reinforced by Daniels (2009), who argues that women use the Internet to transform their material, corporeal lives in ways that resist but may also reinforce hierarchies of gender. Indeed, Daniels (2009) is keen to stress the limits of the revolutionary potential of digital technology in the context of women’s offline reality and cautions against overestimating the emancipatory potential of digital entrepreneurship for women especially patriarchal societies.

2.3 Entrepreneurship as Emancipation

In a critical appraisal of the role and position of entrepreneurship in society, Rindova et al. (2009) argue that the construct of entrepreneurship is far broader than opportunity recognition actioned through venture creation with the objective of wealth generation. They draw attention to the emancipatory potential of entrepreneurship; not just as a productive process but also to address barriers and constraints embedded within the contextualized environment (Baughn et al., 2006). The critical influence of the contextualized environment on new venture creation and entrepreneurship practices (Welter, 2011), and on women’s empowerment (Cornwall & Anyidoho, 2010) is well recognized. Research examining the emancipatory potential of entrepreneurship for women have highlighted both the financial and personal benefits, focusing on how engagement in entrepreneurship facilitates liberation from constraints in the formal (law and regulatory) and informal context (social and cultural norms) in which women are embedded (Al-Djani and Marlow, 2013; Alkhaled and Berglund, 2018). As Welter (2011:165) notes, “context simultaneously provides individuals with entrepreneurial opportunities and sets boundaries for their actions”. In addition, contextual effects span across the socio-economic environment reflecting culture, institutional norms, time, space and regulation – as such, there are a multiplicity of influences which shape the role and position of entrepreneurial activities (Whetton, 1989).

Empirical studies considering entrepreneurship as emancipation have largely concentrated on women in developing countries enabling them to achieve freedom from poverty (Scott et al., 2016; Haugh and Talwar, 2016; Hanson, 2009). However, this body of research has tended to ignore notions of intersectionality which suggests that previous work has been embedded in generic racist and heteronormative assumptions that uncritically positions gender subordination as universal and dominant within the hierarchy of disadvantageous social ascriptions (Mojab, 2001). A notable exception is the work of Dy et al. (2017; 2018) which examines the experiences of British women, in the greater London area, across different social classes. Their findings indicate that women do not leave their bodies behind when they go

online and markers of race and class limit the emancipatory potential of digital entrepreneurship for non-white, middle class women.

Jennings et al. (2016) note that in order to fully understand the emancipatory potential of entrepreneurship, attention needs to be paid not just to developing countries or marginalized groups within developed countries. In this paper, we respond to this call by exploring the emancipatory potential of entrepreneurship for economically privileged women in Saudi Arabia who are nonetheless constrained by restrictive social and cultural practices that limit their autonomy in a tribal and patriarchal system (Alkhaled and Berglund, 2018). Thus, adopting a more critical appraisal of how context affects the emancipatory potential of entrepreneurship for economically privileged women seeking liberation from restrictive social and cultural practices offers potential to progress debate whilst acknowledging that competing and contrasting contextual influences require clearer recognition.

3. METHODOLOGY

In order to answer our research aim, we adopted a qualitative interpretive methodology (Cunningham et al., 2017; Tobin and Begley, 2004; Sirieix et al., 2011). This approach prioritizes the participants' own sense of their lived experiences and how this contributed to their decision to pursue digital entrepreneurship (Brophy, 2010). Such an approach allows us to build understanding of the properly contextualized experiences of female entrepreneurs in Saudi Arabia, with our aim being to "get beyond the images of Saudi women as nameless, faceless entities" (Minkus-McKenna, 2005: 7). Accordingly, we sought to conduct research "with" or "for" as opposed to "about" women (Sprague, 2016). In so doing, we seek to highlight the social realities of female digital entrepreneurs in Saudi Arabia and their use of creative responses to challenges faced in realizing their entrepreneurial ambitions (le Renard, 2014; Abu-Lughod, 2013).

3.1 Empirical Setting

The Kingdom of Saudi Arabia (KSA) is the largest economy in the Middle East and North Africa (MENA) region and one of the 20 largest economies in the world (Saudi Arabia General Investment Authority, 2016). Small and medium enterprises (SME's) represent 99.7% of all businesses in KSA, however they only account for 20% of gross domestic product (GEM 2016). The low contribution of SMEs to GDP is partly explained by the unusually high level of sole proprietors (85%) and the country's reliance on oil revenues. However, as outlined in the country's ambitious Vision 2030 (KSA Government, 2016) plan, this is expected to change as KSA decreases its reliance on oil and aims to increase its SME activity to 30% of its GDP (KSA Government, 2016). A core aim of the Vision 2030 plan (KSA Government, 2016) is to increase women's participation in the labor force and entrepreneurial activities. Saudi women currently account for 10% of the KSA labor force, however female entrepreneurship is increasing with women accounting for 38.6% of KSA's total entrepreneurial activity (GEM 2016: 25). Saudi Arabia was chosen as our research site for a number of reasons. First, a core pillar of Saudi Arabia's economic development plan, Vision 2030 (KSA Government, 2016) is the fostering of a digital culture and transitioning to a digital economy. Second, entrepreneurial activities are nascent but growing (Ahmad, 2011). Third, there is limited research on women's experiences of entrepreneurship in general and digital entrepreneurship in particular within this context (Dy et al., 2016). Fourth, given the restrictive cultural and social practices, such as gender segregation, this is an ideal site in which to explore the potential of digital entrepreneurship to transform women's lived experiences (Brophy, 2010).

3.2 Sample Characteristics

We adopted a theoretical sampling strategy, whereby exceptional cases were identified, with the focus on theoretical development as opposed to the generalizability of findings (Creswell, 2007). In order to identify participants, we focused on women entrepreneurs, located in the capital city Riyadh, who founded the business on their own or in cooperation with others, were responsible for businesses reliant on digital technology, and had been operating a minimum of two years. Significant heterogeneity exists among digital businesses, with some heavily technology based, with others classified as digital due to their use of digital business processes and this is reflected in our sample (Hull, 2007). The firms in our sample were all engaged in digital marketing and selling, however only two firms sold digital goods – an online application, and digital marketing service, while one firm was quasi-digital, as digital technologies were a key component of the service offered. In addition, three of the firms used quasi-digital distribution, whereby although the goods delivered were physical, the distribution chain was managed online. All firms utilized online communication tools to interact with stakeholders. Four of the firms had quasi-digital operations, in that despite having dedicated headquarters, organizational members worked remotely. Accordingly, our focus was on theoretical and not representative sampling.

The women were interviewed in person during 2016-2017, consisting of numerous meetings with subsequent telephone conversations to clarify and expand upon specific issues. Interviews were conducted in English audio recorded and transcribed verbatim. When scheduling the interviews, the women were given the choice of conducting the interviews in Arabic, with the use of a translator, however all participants requested that all interviews were conducted in English as they were fluent in the language. Three of the participants had studied English in the USA, two were English literature graduates and the other used English in the daily operation of her business. Interviews were conducted jointly by two of the authors who had been living in Saudi Arabia and working at a local University for a number of months prior to data collection and were therefore familiar with and sensitive to the local culture and customs. Table 1 provides descriptive detail regarding the respondents' personal profile and the characteristics of their businesses.

[Insert Table 1 here]

3.3 Data Collection

A semi-structured interview format was used to ensure that participants responded to a common set of questions examining the digital components of the business, impact of online and offline environment and family and societal expectations. The interview schedule focused on three broad areas; participants' use of digital technologies, offline and online challenges impacting the entrepreneurial process and the broad impact social and cultural processes on entrepreneurial intention and enactment. The interview followed a guided narrative approach which seeks to situate individuals 'stories' within the context of their personal experiences, social relationships and culture (Creswell, 2003). Participants were encouraged to elaborate on specific issues (Table 2). In line with Chase (2005), we view a narrative as having four key components. First, a narrative is a form of retrospective sensemaking, allowing the narrator to reflect on why they have made certain choices, engaged in key actions and activities and behaviors. Second, the narrator seeks to create a logical narrative encompassing their diverse history and experiences so that it can be understood by others. Third, the narrator elaborates on the impact of context on their experience, the impact of the community and culture in which they are embedded and the role of family and social relationships. Finally, a narrative is a co-creation, encouraged and guided by the listener but actively co-created and led by the narrator. Thus, rich data was collected focusing on the participants' experiences, perceptions, and

motivations to pursue digital entrepreneurship and the impact of such on their daily lives. The interviews which were conducted at the respondent's workplace or home, lasted approximately 60 minutes and were audio-recorded and transcribed verbatim. We adopted Leitch et al.'s (2010) validity and reliability protocol when conducting qualitative research. A number of steps were taken to ensure construct validity and reliability of findings at the data collection phase. First, we provide a traceable chain of evidence enabling other researchers to determine the methodological veracity and reliability of our research design (Pratt, 2009). Second, reliability was achieved by ensuring that the interview schedule reflected the theoretical framework, focused on eliciting an understanding of how the online environment and technology affordances supported or counteracted offline inequality.

[Insert Table 2 here]

3.4 Data Analysis

From the multiple conversations and reflective discussions between the respondents and the research team, a 'critical mess' (Gartner, 2010) of detail was created. We began the analysis by developing a detailed understanding of each woman's engagement with digital entrepreneurship and then conducted a comparative analysis of the women entrepreneurs with a focus on identifying rival explanations or conflicting behavior. In this process, we mirrored Eisenhardt's (1989) call for within case and cross-case analysis of qualitative data to improve the likelihood of accurate and reliable theory development. A number of steps were taken to ensure internal and external validity of findings at the data analysis phase (Eisenhardt, 1989). Internal validity was enhanced by sequential development from open coding, axial categories and aggregate theoretical dimensions. We began by identifying initial concepts to emerge from the data and grouping them into provisional categories (open coding) known as Free Nodes (Strauss & Corbin, 1990). We then sought to identify ways in which these categories related to each other (axial coding) which resulted in the formation of Tree Nodes (Locke, 1996; Strauss & Corbin, 1990). In stage three, we then identified aggregate theoretical dimensions underlying these categories (Corley & Gioia, 2004; Maitlis & Lawrence, 2007). This process was not linear but rather formed a 'recursive, process-oriented, analytic procedure' (Locke, 1996: 240) resulting in the development of three aggregate theoretical dimensions as illustrated in Table 3. In this process, we sought to breakdown and analyze the participants' stories and then 're-story' their narrative highlighting important themes that emerged and the impact of context on the women's experiences (Creswell, 2003). In addition, we organized follow-up interviews with participants to validate and corroborate the accuracy of our interpretations (Morse, 1991).

[Insert Table 3 here]

4. FINDINGS

We now present our findings, in which our aggregate theoretical dimensions (digital entrepreneurship, cyberfeminism and emancipatory potential- see Table 3) are explored in detail and illustrated with fragments of the narrative or "power quotes" (Pratt, 2009). Power quotations represent the most compelling and insightful evidence available and their usage has

been advocated in the representation of qualitative data (Lee, 2015; Coviello, 2014; Fawcett et al., 2014).

4.1 Digital Entrepreneurship: Utilization of Digital Technology Affordances

4.1.1 Opportunity Idea Identification

Aligning with Nambisan (2017), we highlight the significant role of the socio-cultural context in the provision of technology affordances and everyday activities as sources of opportunity identification and enactment of digital entrepreneurship for women in Saudi Arabia. As a result of our contextualized approach (Whetton, 1989), it was evident that the Saudi Arabian context was a part of the story for these female digital entrepreneurs in terms of idea generation and opportunity recognition (Zahra and Wright, 2011). The women drew on their experiences and access to digital tools and technologies to develop products/ services which augmented their lived realities (Nambisan, 2017). For instance, ZD developed an online package delivery application as a response to the challenges faced by women who at the time of data collection were not permitted to drive. *“Mainly they are working women from the age of 22-25 who value their time. We want to provide an end to end solution that fills the gap for delivery in Saudi Arabia.”* Similarly, SR decided to develop an online Abaya¹ clothing business based on the unmet desire for high fashion versions - *“we have a lot of designers and we have a lot of people here that have to wear Abayas and who would love to buy from them....so I thought the future is online, so why not jump into going online”* (SR). The Saudi Arabian context clearly provided the inspiration and the customer need whilst the digital technology provided the means to service that need, underlining the importance of a socio-material approach to understanding the process of digital entrepreneurship (Nambisan, 2017). Socio-materiality refers to the importance of attending to the social context in which digital technology is used in order to understand the entrepreneurial possibilities that may arise (Davidson and Vaast, 2010; Orlikowski, 2007).

4.1.2 Digital Operations

Fully or partially digital operations were a key characteristic of all the businesses under investigation. Digital businesses are less tied to a physical place and digital tools facilitate more distributed and flexible digital operations. In keeping with Plant (1997), the general sentiment amongst the respondents was that digital working was considered as a place where women felt comfortable and could flourish. This provision of a safe space appeared particularly relevant for the Saudi Arabian context which forbids the direct interaction with men (Achoui, 2009). As SDM remarked - *“One of our employees quit her job because she found it really difficult attending meetings, (with men), she always felt shy, out of her comfort zone”*. Thus, digital working given its objectification and separation from the biological body (Woodfield, 2000) empowered not only the respondents but also their employees. As Welter (2011) argues the contextualized environment creates boundaries for action. In the Saudi Arabian context gender segregation and associated socio-cultural norms and expectations can be a barrier to paid employment for some women. Digital operations and remote working offer significant potential for women in Saudi Arabia, particularly for those who want to work outside of traditional female sectors such as retail or catering, and in for example computing and engineering roles (McAdam et al, 2018; Brush et al., 2018; Fairlie and Robb 2009).

¹ An abaya "cloak" is a simple, loose over-garment, essentially a robe-like dress, worn by some women in parts of the Muslim world

4.2 Cyberfeminism: Online Activities and Offline Inequality

4.2.2 The Internet as a Safe Space

le Renard's (2014) ethnographic study of Saudi women found that they valued the Internet as a public space, where they could interact with strangers, benefitting from the security of anonymity while also enabling freedom of expression. The findings of our study support this view, as reflected in this statement by ACC – *"We love privacy. It's one of the ways that you conceal [go online] and you don't have to be out there."* Although the founder of DEM chose to study English at university, she referred to herself a self-taught hacker. *"I learned about hacking, I was interested to know how they would do it and if they would do it to my computer"*. In fact, the general consensus amongst the respondents was that the digital world is exceptionally well suited to women's way of working, which is in line with Plant's (1997) argument that the online world is inherently feminine. *"You know the first programmer in the world was female. She's our ancestor. I think this field really suits women because we are very detail oriented"* (ZD). The central debate within the cyberfeminist literature concerns the extent to which the online environment mirrors offline inequality (Daniels, 2009; Rosser 2005; Plant, 1997). Our findings indicate that for women in Saudi Arabia the internet provides a 'safe space' for women. Our findings build on the work of Dy et al. (2017; 2018) who find that for marginalized groups within the UK, markers of race, class, and ethnicity limit opportunities and resource access for women online as offline. Accordingly, we demonstrate that for economically privileged women in Saudi Arabia the internet allows women to challenge and circumvent social norms that significantly constrain their offline actions. Thus, cyberfeminist research can be advanced through greater consideration to the context and specific constraints that women are seeking liberation from.

4.2.3 Social Media and Business Development

Our findings indicate that social media is a powerful platform for women entrepreneurs in Saudi Arabia as a result of three primary benefits; interacting with customers, connecting with business partners and self-expression. With more than three million active Twitter users, Saudi Arabia has the highest Twitter penetration worldwide, making it one of the Middle East's most active countries in social media (Kemp, 2016). This is reflected in the following statement; *"We are the top YouTube users. We watch a lot of videos every day. We are top users on Twitter as well"* (SDM). Accordingly, social media sites were used as a business platform, to advertise and engage with customers, either directly or through social media influencers, who are afforded significant credibility in Saudi Arabia (Arab News, 2016) - *"I mean we operate 70% digitally through social media"* (EFJ). However, one of the greatest benefits of social media engagement was the provision of a platform that enabled the women to interact with people (including men) outside of their social circle. This is encapsulated in the following statement – *"Honestly speaking social media. empowered me. It broke down the walls between male and female"* (SDM). While le Renard (2014) found that the key benefit of online interactions was the anonymity provided, SDM felt comfortable using her real name online - *"Even if you use a nickname at the beginning, you will reach a point where you will use your own name, expressing your own viewpoints."* As such, social media acted as a means to liberate women (Rosser 2005), by providing new opportunities which build on advances in information and communication technologies. Brophy (2010) argues that cyberfeminists should not view the virtual world as a substitute for offline reality but as a means for women to expand and amplify their experiences. Our findings support this view, demonstrating that women in Saudi Arabia do not use social media to escape embodiment but as a means to realize new opportunities and experiences.

4.3 Socio-Cultural Context: Navigating Boundaries and Digital Entrepreneurship

4.3.1 Transforming Family Relationships

As argued by le Renard (2014), the constraints imposed by a patriarchal society result in family prohibitions against activities not deemed ‘respectable’ for women. Our findings demonstrate that if the emancipatory potential of digital entrepreneurship is to be realized women must directly challenge social and cultural assumptions regarding what is viewed as acceptable or permissible for women in Saudi Arabia (Rindova et al., 2009). By engaging in entrepreneurship, the women were fundamentally challenging social and cultural norms. As ZD explains – *“A lot of girls in Saudi think they belong to their homes. But when women themselves believe that they belong to what they want, or that they can follow their dreams, this is when the change starts”*. Hence, in navigating boundaries and pursuing their entrepreneurial ambitions, the female entrepreneurs became agents of change (Rindova et al., 2009) within their own lives and families and society. One of the key strategies used by the women to gain familial support was the telling of stories about their daily successes, as explained by DEM – *“Then I realized something, if I share more stories, they would be emotionally attached with what I’m doing, so they would be more supportive. Sometimes I just made up some success stories so they would feel “she’s doing well- why should we stop her”*. Interestingly, the participants who had to overcome the strongest discouragement from their parents spoke about how engagement in entrepreneurship led to a fundamental change in their familial relationships, particularly with their father, - as SDM explains in her retelling of a meeting between her and her father’s close friend – *“Wow he is really proud of you!” I know that there was a conversation between these two guys- my father and his friend. I know that he is really proud.”*. The transformational potential of entrepreneurship is underlined by DEM, who described her parents changed perception of her – *“Now they are supportive, and they allow me to travel alone and sometimes ironically when my sister wants to travel they say, “okay you are going with her!” so I’m the guardian now!”*.

4.3.2 Financial Independence

Our findings indicate that the financial performance of the women’s ventures were primarily used by the women as a measure of success, to prove to their families that their entrepreneurial endeavors were worthwhile, but not as the primary goal of the venture. Although all of the respondents came from wealthy families, the financial success of their ventures was viewed as an important symbol of independence and critically, as validation of their decision to enter entrepreneurship particularly to their families. *“I wanted to prove that I could do it, and when I had that first cheque worth 100,000SAR, I showed it to my parents and said, ‘look I did it, you know it’s in my account!”* (DEM). Whilst for SEM, it was important for her to share her financial success with her parents. *“Today I am giving money to my Dad and to my mother without them asking. I just give them a monthly gift to do whatever they want with it”*. Despite the significance of financial success, the real benefit of entrepreneurship appeared to be the self-fulfillment as a result of creating a business. *“I am not driven because I want to make money. That’s not why I wake up in the morning. That’s not what drives me. I have the satisfaction when you build up something from nothing, when you achieve your own goal. That is my driver”* (ACC).

5. Discussion

Based on our research findings, we argue that the emancipatory potential of digital entrepreneurship is dependent on the context and the nature of the constraints faced. Specifically, we highlight the Saudi Arabian context, the restrictive social and cultural practices and emergent entrepreneurial opportunities in response to such constraints (Welter, 2004, 2011; Zahra and Wright, 2011). In this paper, we respond to le Renard's (2014) call to 'de-exceptionalise' Saudi society in order to understand how gender as a socially constructed category interacts with technological affordances enabling the identification and enactment of digital entrepreneurial opportunities and the resulting impact on the social and cultural context. Mojab (2001) writing on Islamic feminism argues that the 'fragmentation of women into religious entities' has minimized the significance of patriarchy, and unequal power relations embedded in the state, religion, class, law, culture and social forces.

In this paper, the Saudi Arabian context was shown to be a significant source of entrepreneurial opportunities (Welter, 2011). Specifically, we support the call for a socio-material approach to understand how everyday activities and restrictions which affect women interact with digital tools and technologies (Nambisan, 2017; Davidsson and Vaast, 2010; Orlikowski, 2007). The women in our study drew on technology affordances to turn restrictions, such as the now repealed ban on female drivers and the requirement to wear Abaya's, into business opportunities. As Saudi women are best positioned to understand the needs and desires of the female demographic in Saudi Arabia, our research highlights significant scope for the development of female-led businesses within the country. In terms of enactment, digital entrepreneurship is believed to enable significant disruption in terms of "when" and "where" activities are carried out. Digital operations were seen as especially beneficial for women in Saudi Arabia as they could choose to work from home, while also interacting with co-workers in real time (Raghuram and Wiesenfeld, 2004). In fact, remote working allowed the women to overcome costs and time entailed in employing a driver and travelling to a physical office (Achoui, 2009). In addition, the women entrepreneurs in our study were keen to highlight that some female employees found working in a mixed-gendered environment stressful and consequently chose to work remotely as a solution to this discomfort. More generally, Lind (1999) finds that women have more positive experiences of virtual working relative to men, with higher perceived satisfaction and cohesion.

Our study complements prior research on emancipatory entrepreneurship by highlighting the importance of context and the specific constraints faced by women entrepreneurs (Jennings et al., 2016). Dy et al. (2017; 2018) find that class and race differences are reflected in the online environment leading to unequal resource access, arguing that for marginalized women in developed countries the emancipatory potential of digital entrepreneurship may be overstated. By contrast, our findings demonstrate that for economically privileged women in Saudi Arabia, not constrained by resource access, digital technology provides a path to navigate significant social and cultural obstacles in pursuing entrepreneurship. While entrepreneurship is enthusiastically promoted as a valid career option at a policy level, and women hold highly favorable views of entrepreneurship, Saudi women have lower self-efficacy and higher fear of failure relative to men (GEM, 2016). Such negative self-perceptions are likely a result of family and socially enforced codes of conduct, values and norms of behavior (Welter and Smallbone, 2016). As entrepreneurship necessitates longer hours and uncertain pay, relative to traditional occupational roles in teaching and government service (Welsch et al., 2014), women in Saudi Arabia are likely to face criticism by family members particularly if they choose to delay marriage in order to prioritize establishing their ventures. Only two of the six participants in our study were married, and both had founded their businesses prior to marriage (see Table 1).

The key debate in cyberfeminist literature concerns the extent to which gender inequalities are simply reflected online (Daniels, 2009; Morahan-Martin 2000; Rosser 2005). Our study suggests that women in Saudi Arabia do not use the online environment to escape embodiment but to transform their lived realities by providing a 'safe space' to challenge social and cultural norms in terms of behaviors permissible to and expected of women (Rindova et al., 2009). The women involved in this research were digital natives, fluent in digital technology (Prensky, 2001), who used digital tools to circumvent restrictions in the offline world, such as gender segregation and limited mobility due to male guardianship (Achoui, 2009). We thus concur with the cyberfeminist positions of Plant (1997) and Daniels (2009), by demonstrating that digital technology provides Saudi women with a means to transform their embodied selves rather than to escape embodiment. Digital tools and technology affordances provide a means to navigate these social and cultural practices, which have historically limited women's paid work outside the home (Ahmad, 2011) and pursue entrepreneurship, with significant transformational potential. In choosing to engage in entrepreneurship rather than enter into traditional occupational roles for women, such as teaching or other government service, women are fundamentally changing their social position, particularly in terms of their family relationships. Hence, in navigating boundaries and pursuing their entrepreneurial ambitions, the female entrepreneurs became agents of change (Rindova et al., 2009; Jennings et al., 2016). It is noted however that whilst digital entrepreneurship may have some transformational potential, it is not a 'magic' individualized solution addressing embedded patriarchal systems. As we demonstrate, the transformative potential of digital entrepreneurship is constrained by women's individual circumstances (Sassen, 2005; Daniels, 2009) with family support, or at least acquiescence, a necessary prerequisite.

6. Conclusion and Future Research

The paper examines the emancipatory potential of digital entrepreneurship for women in Kingdom of Saudi Arabia. Accordingly, we present empirical evidence detailing how women in Saudi Arabia use digital technologies in the pursuit of entrepreneurial opportunities. Our findings challenge the assumption that women experience entrepreneurship in a uniform manner regardless of context (Welter, 2004; 2011) and builds on prior work arguing in favor of the emancipatory potential of the Internet and social media for women (Duffy and Pruchniewska, 2017). The findings presented provide novel insights into how the social and cultural context interacts with technology affordances facilitating the identification and enactment of digital entrepreneurship.

Within this paper, we make the following key contributions. First, we contribute to the digital entrepreneurship literature by providing empirical support for a socio-material approach to understand how everyday activities and constraints interact with technology affordances, to enable the identification and enactment of entrepreneurial opportunities (Nambisan 2017; Davidsson and Vaast 2010; Orlikowski 2007). Second, we highlight the importance of context and socio-cultural constraints specific to women in order to expand the entrepreneurship as emancipation literature. As a result, we advance entrepreneurship as emancipation theory given our focus on liberation from restrictive social cultural practices, rather than unequal resource access due to class and race discrimination (Dy et al. 2017; 2018) or freedom from poverty (Al-Dajani and Marlow, 2013; Alkhaled and Berglund, 2018). Third, we contribute to the growing body of work on cyberfeminism, as we challenge the notion that gender inequalities are simply reflected online and argue that women in Saudi Arabia use Internet technologies in ways that enable them to transform their embodied selves rather than to escape gender embodiment. Finally, from a practitioner and policy making perspective, the findings of this study support initiatives which emphasize technology affordances and digital transformation

as a means to empowerment and positive change in women's lives, particularly in the context of emerging economies and traditional and patriarchal societies.

Our discussion suggests a number of possibilities in terms of future work to address some of the limitations of this research. Although in-depth qualitative interviews were deemed appropriate and the transcribed interviews provided novel insights into how the women's upbringing, educational choices and backgrounds informed their entrepreneurial endeavors, they were cross-sectional in nature. Therefore, a longitudinal focus involving the collection of data at different waves in time (Miles, 1979) would enable the capturing in real time of the development of the women's entrepreneurial behavior. Second, in moving away from treating gender as generic (Broadbridge and Simpson, 2011), we acknowledge how gender intersects with other social ascriptions. Accordingly, we recognize that the women featured in this research were all from affluent backgrounds and that digital technologies may not have the same liberating potential for all women (Daniels, 2009). As per Eriksson-Zetterquist (2009), we concur that in order to fully understand digital technology's transformational potential, greater attention needs to be paid to how it is enacted in different political, economic and cultural contexts. Therefore, future research could explore how other markers of differences such as age, disability and social class and religion intersect with the liberating potential of digital entrepreneurship within emerging economies. Notwithstanding these limitations, we believe that as a research domain, women's digital entrepreneurship can benefit from this research given its unique insights into the application of digital technologies in emerging economies characterized by restrictive social and cultural practices.

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Tables

Table 1: Respondents' Characteristics

	Age	Marital /Children Status	Industry Sector	Product/ Service	Years of Operation	No. of Employees
EFG	18-30	Married/ no kids	Jewelry	Product	3-5	6
ZD	18-30	Unmarried / no kids	Online Application	Service	<3	5
ACC	31-40	Married/ 1 child	Food and Beverage	Product	3-5	25
SDM	31-40	Unmarried/no kids	Digital Marketing	Service	3-5	28
SR	31-40	Unmarried/ no kids	Online Clothing	Product	<3	5
DEM	31-40	Unmarried / no kids	Event Management	Service	5-8	75

Table 2: Interview Schedule

<p>Personal / Business Background Information</p>	<p>Age Marriage Status Dependent Children Any other previous business experience? What types of goods / services does your venture provide? How many years has your venture been in operation? No of employees? Can you give me an approximate of your yearly sales turnover? What funding source(s) did you use to start the venture? Where do you sell your products/ services? What are your future development plans for the business?</p>
<p>Use of Digital Technology</p>	<p>How important is digital technology to your business? How does ICT impact the running of the business? Do you use the social media to interact with customers? What challenges have you faced in running a digital business (trust in online selling; developing digital capabilities; educating customers)?</p>
<p>Offline / Online Challenges</p>	<p>What key challenges or barriers did you face during in developing and maintaining your venture (legal, financial, family, managerial)? Can you identify any “Critical incidents” – breaking points where things were critical, and tell me about them and how they were addressed?</p>
<p>Socio-Cultural Context</p>	<p>Did your family influence your educational choices? How did your family feel about you setting up a business? Were your family / friends supportive when you decided to start the business? Did family responsibilities and expectations impact your business’s growth and entrepreneurial ambitions?</p>
<p>Reflection</p>	<p>Is there anything you would like to add regarding your experience of digital entrepreneurship? What advice would you give to other Saudi women wishing to start a digital venture?</p>

Table 3: Data Structure

Creating Provisional Categories and first Order Codes	Theoretical Categories (2nd order themes)	Aggregate Theoretical Dimensions
Statements about digital technology and the identification of new product/service opportunities; digital working; enhanced market reach; online selling positive and negative aspects.	Opportunity Idea Identification Digital Operations	Digital Entrepreneurship
Statements about the internet as forum to meet strangers, share ideas and collaborate, social media as a tool to interact with customers; develop scalable online business; online activities in response to offline restrictions.	The Internet as a Safe Space Social Media and Business Development	Cyberfeminsim
Statements about being a woman and an entrepreneur in Saudi Arabia; navigating regulatory frameworks; gender issues; pushing the boundaries; being a pioneer; inspiring others; instigating change; family support; challenging familial expectations; balancing work and life stresses.	Transforming Family Relationships Financial Independence	Socio-Cultural Context