From Chains to Change: Gendered Problems and Blockchain Solutions in Jordan's Refugee Camps

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Abstract

Blockchain technology is rapidly challenging existing social, political and economic order, positioning itself as a transformative force within the humanitarian-development nexus. Despite its growing prominence as the *solution* to refugee women's empowerment and financial inclusion, limited research challenges how and what humanitarian actors perceive to be the *problem* they intend to solve through blockchain technology. Through Carol Bacchi's 'What's the Problem Represented to be' framework and a feminist political economy approach, this research seeks to understand how humanitarian actors problematise and construct gender within refugee settings. Drawing on the World Food Programme and UN Women's blockchain initiative in Jordan, this research reveals the tensions and critical junctures between gender, neoliberalism, financial inclusion and empowerment. Ultimately, it questions the gendered assumptions underlying the use of blockchain technology to transform gendered inequalities, drawing attention to the gaps, biases and limitations of its usage.

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Abbreviations

BB	Building Blocks
CT	Cash Transfer
EXCOM	The Executive Committee of the High Commissioner's Programme
FI	Financial Inclusion
FPE	Feminist Political Economy
GoJ	Government of Jordan
ICT	Information Communication Technology
IDP	Internally Displaced Person
INGO	International Non-Governmental Organisation
IO	International Organisation
SAP	Structural Adjustment Programme
SDG	Sustainable Development Goals
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
WFP	World Food Programme
WID	Women in Development
WPR	What's the Problem Represented to be

1. Introduction

1.1 Leveraging blockchain: a new digital era within the humanitarian-development nexus

Over the last century, Information Communication Technology (ICT) has permeated almost every social, political and economic facet of life at an inexorable pace. Subject to this transformation has been the humanitarian-development nexus, which has increasingly harnessed ICTs to reconfigure and effectuate better crisis response.[1] At the 2016 World Humanitarian Summit, innovation was framed as a central priority as without it, "the humanitarian community will either become irrelevant or too rigid to function effectively" (World Humanitarian Summit, 2014, p.5). Additionally, ICTs have become an undisputed and widely accepted tool to promote economic and social transformation as the 2030 Sustainable Development Goals (SDGs) have positioned science, technology and innovation as intrinsic to accelerating progress and the fulfilment of the 17 development goals. Thus, many see the rise of ICT as marking an 'innovative turn' and a new digital era within the humanitarian-development sector (Scott-Smith, 2016).

A notable advancement has been blockchain technology, a "disruptive technology that could have the capacity for reconfiguring all aspects of society and its operations" (Swan, 2015, p.20). While a universal definition of blockchain has not yet been defined, it can be understood as a peer-to-peer network or digital ledger that forms a sequence of immutable transactions linked together in a chain and distributed among its users.[2] Its most prominent use pertains to economic transactions through its manifestation in cryptocurrency such as bitcoin. However, the blocks can be used to facilitate the transaction of any type of information or asset and have been applied to digital identification, forecast-based financing, mobile money, supply chain tracking and cash transfers (CTs) (Zwitter and Boisse-Despiaux, 2018). Fundamentally, it promises to facilitate decentralisation, enabling more equitable,

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[1] The humanitarian-development nexus encompasses the increasing interconnectedness between short-term humanitarian relief and long-term sustainable development to manage and respond to complex protracted crises (Harald and Lie, 2020).

[2] Blockchain technology will be pseudonymised to 'blockchain' henceforth. However, it must be acknowledged that 'blockchain' has become an ill-defined catch-all phrase for all distributed ledger technologies and does not accurately represent the underlying technology itself (Jeffries, 2018).

efficient and trackable transactions, without necessitating the control of hierarchal central actors and third parties.

Notably, blockchain has been envisioned as a pathway to socio-economic progress, empowerment and financial inclusion (FI), rapidly becoming the subject of intense focus in the Global South.[3] FI is framed as a key enabler and explicit objective of eight of the SDGs, including gender equality and economic empowerment of women (SDG 5). In terms of FI, blockchain has the potential to reach the unbanked, increase access to digital financial services and savings and facilitate the management of financial transactions (Mhlanga, 2023). In parallel, blockchain is also altering existing structures of humanitarian governance and bureaucracy through greater transparency, decentralisation, collaboration, efficiency, distributed authority, neutrality, cooperation and security (Weitzberg et al., 2021). However, many are raising concerns over data privacy, ethics, digital divides, participation and access (Zwitter and Boisse-Despiaux, 2018; Dencik et al., 2019). Additionally, often the major powers driving blockchain are the very actors the technology sought to exclude, including international organisations (IOs), corporations, banks and governments.

1.2 Protracted refugee situations and the search for durable solutions

The global refugee crisis has more than doubled over the last decade and according to the United Nations High Commissioner for Refugees (UNHCR), 117.2 million people are projected to be forcibly displaced or stateless in 2023 (UNHCR, 2023c).[4] With the sustained threat of climate change, prolonged conflict and climatological hazards, displacement is likely to continue to rise at an unprecedented rate. UNHCR defines a protracted refugee situation as "those in which at least 25,000 refugees from the same country have been living in exile for more than five consecutive years" (UNHCR, 2020, no pagination). But more recently the average duration of displacement has extended to 20 years and thus refugees are subject to

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[3] Rather than vague geographical descriptors of 'Third World' or 'developing countries', the term Global South is deployed as a dynamic construct situated within the global political economy, serving to challenge and subvert structural relations between the Global North and Global South (Rai and Waylen, 2014). It also provides scope for greater engagement with alternative epistemologies beyond dominant Western knowledge production (Fiddian-Qasmiyeh and Daley, 2019).

[4] Refugee is used to encompass UNHRC's 'person of concern' - refugees under the 1951 Convention, internally displaced persons (IDPs), asylum-seekers, stateless persons and returnees (UNHCR, 2006).

a "long-lasting and intractable state of limbo" (EXCOM, 2004, p.1). Against this backdrop, the global refugee regime has advocated for durable solutions, namely, repatriation, resettlement and local integration. This has included concerted efforts to support livelihoods, entrepreneurship, access to markets, FI and skill development (Hatayama, 2018). A surge in ICT innovation has also been deployed to enhance labour market participation (using gig platforms), formalise identities (through biometrics and blockchain) and FI (by promoting digital CTs, mobile money including through blockchain) (Weitzberg et al., 2021; Dhawan and Zollmann, 2023).

In particular, Jordan has become subject to the search for durable solutions. Since 2017, World Food Programme (WFP) rolled out its blockchain 'Building Blocks' (BB) programme to deliver CTs to refugees in Jordan's largest refugee camps: Zaatari and Azraq. WFP has since partnered with UN Women's Oases cash-for-work programme, with blockchain becoming envisioned as a tool for refugee women's empowerment, entrepreneurship and FI. Whilst many see blockchain as the 'solution' this has obscured the existing gendered 'problem' and boundaries of refugees' economic participation within Jordan's protracted refugee situation.

Drawing on emerging theories of feminist political economy (FPE), this dissertation aims to address the absence of research engaging in considerations around gender and blockchain. Through Bacchi's 'What's the Problem Represented to be' approach, it explores the gendered assumptions that underpin WFP and UN Women's integration of blockchain within the context of Jordan's refugee camps, Zaatari and Azraq. This research extends existing literature on technological solutionism and feminist critiques of neoliberal visions of entrepreneurship, FI and empowerment. It seeks to uncover how gendered refugee 'problems' are shaped by Western humanitarian actors and produced within programmes centred on blockchain as the 'solution'.

In what follows, Chapter 2 begins by locating the research within dominant debates surrounding ICT innovation within the humanitarian-development sphere. It then explores FPE and its value to the study of ICT and blockchain, followed by critical debates surrounding the pursuit of women's empowerment, FI and the productive entrepreneurial refugee woman. This is followed by an outline of the methodology and Carol Bacci's WPR approach in

Chapter 3. Chapter 4 turns to the policy context of Jordan and the WFP and UN Women's BB-Oases initiative.[5] Chapter 5 presents the findings and discussion around how WFP and UN Women respectively construct the 'problem' and underlying assumptions of gender in Jordan's refugee camps through their BB-Oases programme. Thereafter the findings critically analyse the silences and unproblematised gendered dilemmas. This section draws on additional insights from Azraq and Zataari refugee camp and other contexts to subvert, challenge and question the underlying assumptions further. Finally, Chapter 6 concludes with policy considerations and scope for future research in the field of blockchain.

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[5] The term 'BB-Oases' will be used henceforth to denote the convergence of the BB programme and the Oases programme

2. Critical literature review

2.1 Utopian visions and complex realities: from technological solutionism to technocolonialism

ICT has a longstanding relationship with global development due to its association with modernisation, economic progress, growth, productivity and the transfer of knowledge from the Global North to the Global South (Fejerskov, 2017). As a result, an expansive and polarised body of literature has been built traversing various disciplines including anthropology, media studies, critical international relations, science and technology studies (STS), sociology and political science. ICTs have become a complex and discursive terrain as they occupy a contested "liminal space between 'ideas' and material factors" (Bernards and Campbell-Verduyn, 2019, p.16). Accordingly, scholars have conceptualised ICTs in different ways but Marcelle (2000) captures their multifaced dimensions as:

"Complex and heterogeneous set of goods, applications and services used to produce, distribute, process and transform information. They include the outputs of industries as diverse as telecommunications, television and radio broadcasting, computer hardware and software, computer services and electronic media (e.g. the Internet, electronic commerce and computer games)." (Marcelle, 2000, p.5)

Extending this definition, scholars have emphasised that ICTs must be conceptualised beyond their passivity and neutrality as they privilege certain norms and social architectures (Gurumurthy and Chami, 2014; Chander and Vivek, 2018). De Miranda (2009) sees the widespread diffusion of ICTs or 'information society' being promoted in parallel with policies promoting neoliberal 'free-market' ideology where change is perceived as universal and equal. As a result, a techno-utopia and revolutionary vision of social change emerged with the popularisation of 'digital divides', a view that inequality could be solved through the spread of ICT (de Miranda, 2009). This has been perceived as a proliferation of technological determinism which merely serves to reinforce existing inequalities by suppressing human agency and preserving socio-economic divides, political interests and the prevailing dominance of the Global North (Suchman and Bishop, 2000; de Miranda, 2009).

Moreover, scholars are overtly critical of these new frontiers in ICT as a means to experiment, accelerate new innovative ventures and exert control over powerless subjects, namely refugees (Kinstler, 2019). Madianou (2019) examines how data extraction from refugees through biometrics and feedback apps plays a pivotal role in facilitating the competing and intersecting logics of accountability, audit, capitalism, solutionism and securitisation. This produces a form of 'technocolonialism' whereby ICTs are co-opted by humanitarian structures and converged with market forces to reinforce existing North-South colonial structures (Madianou, 2019). In a similar vein, Scott-Smith (2016) focuses on the capitalist logic of 'humanitarian neophilia' to encapsulate the convergence of ICTs, the 'Californian ideology' of Silicon Valley and neoliberalism. In this view, the humanitarian sector has integrated a selective component of the private sector through the business logic of competition and creativity as the key to success but with limited consideration of the populations they serve. While limited, studies are beginning to apply the same logic to blockchain, Howson (2020) explores how climate change is used to justify 'crypto-colonialism', a new form of North-South exploitation to extract labour, data and resources alongside 'green grabbing' for capital interests and carbon markets.

However, many of these perspectives adopt a discourse that humanitarianism is exclusively a form of neo-colonialism and rarely problematises ICTs beyond a homogenous and singular form of technology. For instance, existing studies of ICTs within humanitarian aid reference blockchain but fail to disaggregate its impact and conflate it with other forms of ICT such as biometrics. These studies have tended to depict a polarising view of ICTs between good and bad technologies, overlooking the variances between them and their transformative potential via human agency. Conversely, migration studies have highlighted the role of ICTs in creating digital diasporas, activism and political membership (Nedelcu, 2018). But as Biggs and Zambrano (2013) highlight, from a policy and programme perspective, most ICTs are constructed through a reductionist lens that assumes they are 'gender-neutral' and that gender equality will be achieved by default. Thus, the absence of gender from many of these studies necessitates incorporating feminist dialogue.

2.2 Towards a feminist political economy of ICT and displacement

It is well noted in feminist scholarship that ICT is both the source *and* the consequence of gendered power relations (Wajcman, 2010). Insights from feminist literature have highlighted how capitalist logic has shaped technological advancements and revolutionised industrial production processes and labour, extending into the domestic sphere (Wajcman, 2013). Early proponents of radical feminism viewed ICT as a tool to further patriarchy and control women (Corea et al., 1985; Wajcman, 2010). While these views tended to promote an essentialist view of gender roles, they played a pivotal role in the politicisation of technology as a deeply gendered process that is inextricable from power relations (Wjcman, 2010).

On the other hand, feminists have also viewed the digital age as a gender-neutral platform with the potential to promote equality and empowerment (Plant, 1997). For instance, Haraway (1985) envisioned a new feminist 'imaginary' where ICT is used as a tool to create change, new possibilities and to subvert conventional and entrenched views of gender identity. However, by focusing on the potential of ICT, these scholars tended to drift towards technological determinism and neglected a more critical evaluation. Thus, other feminists advocate a perspective which sees the relationship between gender and ICT as mutually constitutive, whereby gender relations and technology are both produced, configured *and* manifested by each other (Cockburn and Ormrod, 1993). Additionally, dominant liberal feminist literature tends to isolate ICT within the context of the Global North, with limited consideration of how these transformations intersect with existing social hierarchies, material inequalities and the neoliberal logic of development that has permeated the global capitalist economy and humanitarian-development nexus in the Global South.

Filling this gap is FPE, an approach that emerged as a critical response to the works of international political economy and Marxists to examine how gender interacts with political and economic power (Raven-Roberts, 2013; Rao and Akram-Lodhi, 2021). The ontology of FPE seeks to explore how power, production and social reproduction interact to legitimise and shape gender in its micro, meso and macro levels through both the *material* and *symbolic* levels for the individual (Bakker and Gill, 2003). Examining the interplay of social reproduction, labour and work reveals the 'everyday' of women's lives but also the global

processes which shape it (Mezzadri et al., 2022). Increasingly, the 'everyday' of refugees is pervaded by ICT and continues to be impacted by colonial legacies and global governance which shape complex regimes of labour in the Global South (Mezzadri et al., 2022). Thus, FPE reveals how the global economy relies on the maintenance of certain gendered relations such as women's unpaid care work. This coincides with the increasingly blurred boundary between productive work and social reproduction, which feminists claim is not 'natural' or inevitable and only further naturalises women's capacity within the domestic sphere (Rittich, 2002).

Moreover, FPE focuses on how gender is productive and shapes identities, including hegemonic and marginalised masculinities which in turn legitimise power, control and material relations (Meger, 2015). Crucially, within protracted refugee situations, informal economic processes and care economies are unstable and pervaded by the ongoing impact of economic insecurity, limited rights and disrupted social norms (True, 2012). Thus, casculinity and traditional gender norms are often disrupted in refugee settings catalysing a renewed reliance on "overt symbolic expressions of a distinct masculinity defined in cultural terms" to attain status (Meger, 2015, p.420). Therefore, whilst displacement is an opportunity to forge new relations and gender roles, it can deepen gendered hierarchies and the unequal distribution of resources. Whilst FPE focuses on the relations between men and women, it also highlights the importance of wider social identities (Lee, 2021). FPE is intersectional in its approach as it situates gender within the context of other historically constituted social relations which exacerbate inequality and social hierarchies, including ethnicity, religion, disability, race, class and geographical location (Crenshaw, 1991; Ferguson, 2016).

Whilst FPE has not widely been applied to ICT, feminists have established how ICTs serve as a "significant lens through which we can critically examine everyday life, relationships and power dynamics" (Larsson and Stark, 2019, p.3). Thus, applying an FPE approach to blockchain within the humanitarian-development nexus enables greater insight into how refugees are shaped and produced by the gendered division of labour, socio-economic inequality and discourses of technology-enabled FI, entrepreneurship and empowerment.

2.3 Linking blockchain, financial inclusion, empowerment and the entrepreneurial refugee woman

The increasing recognition of gender equality on the international agenda can be traced to the rise of Women in Development (WID) and the pioneering work of Ester Boserup (1970). Boserup (1970) highlighted women's exclusion from agricultural and economic opportunities, catalysing a newfound interest in the instrumentalisation of women. Women were increasingly seen as an untapped source of labour with their inclusion enabling 'empowerment' under the rubric of economic development. In response, "all UN actors, many government donors and many larger humanitarian NGOs have policies that explicitly advocate for gender equality and endorse the importance of a gender perspective in humanitarian aid to refugees" (Olivius, 2014, p.3). However, under neoliberal privatisation and structural adjustment programmes (SAPs), these strategies have been criticised for "socialising human bodies (female, male or otherwise) into a global system of neoliberal economic productivity […] while claiming to 'empower' people" (Griffin, 2010, p.87) Although countering this claim, the instrumental role of gender for economic development has been beneficial to make demands for social justice and equity to policymakers that are not otherwise convinced of its value (Razavi and Miller, 1995). But despite significant policy and programmatic focus on microcredit, entrepreneurship and women's incorporation into financial systems, progress has been limited and women continue to adapt to disproportionate outcomes through unpaid labour and social reproductive work (Langworthy, 2023).

Furthering the empowerment agenda within protracted refugee situations has been the search for durable solutions. Reaffirmed by UNHCR's Global Compact on Refugees, significant emphasis has been placed on FI, self-reliance and empowerment of refugees through cash assistance (Dhawan and Zollmann, 2023). Whilst this has subverted narratives away from refugees as dependent economic burdens and toward resilient and self-sufficient entrepreneurial subjects (Ilcan and Rygiel, 2015). Considering the proliferation of the 'business case' or 'smart economics' regarding women's empowerment, this agenda has been

likened to "accelerated modernity projects" constructed to 'empower' and emancipate refugee women towards responsiblisation, entrepreneurial and self-regulating subjects (Rosamond and Gregoratti, 2021, p.16). Hyndman and de Alwis (2003) draw on the experience of refugees in Sri Lanka to highlight how humanitarian actors pursue their own homogeneous conceptualisation of gender equality and empowerment despite the nuanced, fluid and relational lives of refugee women specific to a given locale. Thus, in protracted refugee situations, empowerment must be understood as a holistic and nuanced process beyond its instrumental value in economic development.

As such, defining empowerment has been highly debated but can be defined as "the process by which those who have been denied the ability to make strategic life choices acquire such an ability" (Kabeer, 1999, p.435). Central to empowerment is the three interrelated aspects of choice including: (1) access and future claims to resources (material, human and social resources), (2) agency and decision-making and (3) achievements (well-being outcomes) (Kabeer, 1999). Despite greater recognition around this holistic definition, neoliberal and efficiency-orientated approaches to empowerment tend to focus on income-generating activities and mobility (Biewener and Bacque, 2015). Accordingly, many IOs promote a narrow and static view of empowerment that depoliticises issues of gender as individual problems, undermining attempts to transform social injustice and capitalism (Biewener and Bacque, 2015). Moreover, within refugee settings, a hyper fixation on empowerment and agency has presented women as an essentialised vulnerable category in need of saving that Enloe (1993) expounds as the 'refugeewomenandchildren' category.

Emerging within this scholarly debate is the role of blockchain as it promises to circumvent unstable currencies and increase FI of refugees through economic empowerment, particularly within conflict-affected states (Baldet and Powell, 2019). FI is closely associated with empowerment due to its association with economic opportunity and can be understood as the "provision of access to appropriate, affordable, and accessible financial products and services to vulnerable and low-income individuals in a fair, sustainable and transparent manner by intuitional players" (Lichtfous et al., 2018, p.2). Henshaw (2023) delineates a clear linear path from FI towards decentralised finance, priming the 'unbanked' as risk acceptant and amenable to humanitarian intervention. Empirically, limited studies have examined

blockchain's impact and increasingly intimate relationship with gender, empowerment, FI and entrepreneurship.

However, many parallels can be drawn from the use of FI technologies such as mobile money and digital wallets. Existing studies have analysed the widespread adoption of M-Pesa in Kenya and Tanzania, and G-Cash in the Philippines as a means for FI (Gurumurthy and Chami, 2014). Whilst M-Pesa has become an "archetype of digital financial inclusion" and women have constituted the largest user of mobile money services, its overall impact has been mixed (Natile, 2020, p.228). In some respects, M-Pesa's functionality has offered women greater control over savings and spending (Cummings C and O'Neil, 2015). M-Pesa has also been criticised for creating new assumptions that poverty can be alleviated through "small and irregular income if they have access to a financial instrument such as M-Pesa to help them manage their money efficiently" (Natile, 2020, p.11). For refugees, though they have been increasingly included through ICT and market-led innovations, labour market access remains hindered by exclusionary host country policies. Digital wallets in Kenya and Jordan for refugees have created independent and separate financial ecosystems that solidify and reinforce economic exclusion and encampment (Dhawan and Zollmann, 2023). Evidence also suggests that CTs and cash-for-work initiatives construct an equally exclusionary and selective process based on the ability of refugees to pursue 'appropriate entrepreneurship' and livelihoods (Bhagat and Roderick, 2020).

Fundamentally, existing literature demonstrates how these 'solutions' fail to acknowledge the existing gendered problems of exclusionary policies, labour market entry and the burden of social reproductive work. Harnessing digitalised forms of CTs, mobile money and integrating blockchain doesn't necessarily reconcile existing socio-economic inequalities but creates an even more polarised and exclusionary system that is founded on the "moral superiority of technologically capable populations" (Henshaw, 2023, p.130). Given women's 'empowerment' within the global refugee regime and its dependence on their productive and entrepreneurial capacity, the interplay between blockchain and FI, empowerment, and the entrepreneurship of refugees warrants further exploration.

3. Methodology

3.1 Applying the WPR approach

This dissertation adopts Carol Bacchi's poststructural '**W**hat is the **P**roblem **R**epresented to be' (WPR) framework to uncover how WFP and UN Women frame the 'problem' of gender within Jordan's protracted refugee situation and constitute blockchain as the 'solution'. (Bacchi, 1999; Bacchi, 2005; Bacchi, 2012). While Bacchi's WPR approach has predominately been utilised to analyse policies, it has been widely adopted by feminists and has been positioned as an invaluable tool to uncover the conceptual underpinnings of programmes and interventions, particularly regarding gender mainstreaming and gender equality (Goodwin, 2012). Examining how gender is politically packaged and 'produced' reveals gendered subjectivities, including the disjuncture between rhetoric and reality (Magnusson et al., 2008). Thus, the WPR approach facilitates the identification of the way in which a problem may be presented and how other avenues or subjectifications are obscured. As Bacchi contends:

"Policy proposals or proposed 'solutions'…*by their nature* contain implicit representations of the 'problem' or 'problems' they purport to address. This argument builds on the commonsense understanding that what we propose to do about something reveals what we think needs to change and hence what we think the 'problem' is." (Bacchi, 2018, p.5, emphasis original).

Therefore, this dissertation does not seek to extensively deconstruct the technical infrastructure of blockchain itself but explores the surrounding discourse and justification of blockchain to address gender inequality, financial exclusion and disempowerment within Zaatari and Azraq refugee camp.

The research questions were adapted from the WPR's framework's seven-step process (*see Figure 1*) to three main research questions:

1. *How do WFP and UN Women represent problems relating to gender within Jordan's protracted refugee situation and how do they intend to address these problems via blockchain technology?*
2. *What assumptions underpin the problem?*
3. *What is left unproblematised in their discourse?*

What's the Problem Represented to be? (WPR) approach to policy analysis

Question 1: What's the problem (e.g., of "gender inequality", "drug use/abuse", "economic development", "global warming", "childhood obesity", "irregular migration", etc.) represented to be in a specific policy or policies?

Question 2: What deep-seated presuppositions or assumptions underlie this representation of the "problem" (*problem representation*)?

Question 3: How has this representation of the "problem" come about?

Question 4: What is left unproblematic in this problem representation? Where are the silences? Can the "problem" be conceptualized differently?

Question 5: What effects (discursive, subjectification, lived) are produced by this representation of the "problem"?

Question 6: How and where has this representation of the "problem" been produced, disseminated and defended? How has it been and/or how can it be disrupted and replaced?

Step 7: Apply this list of questions to your own problem representations.

Adapted from Bacchi, C. (2009), *Analysing Policy: What's the Problem Represented to be?* Pearson Education, Frenchs Forest.

Figure 1: What's the Problem Represented to Be (Bacchi and Goodwin, 2016, p.20)

3.2 Data collection

Evidence was collected through three interconnected searches: (1) academic literature search, (2) grey literature search and (3) snowballing. To address Q1 and Q2, evidence was collected from WFP and UN Women to reveal the framing and problematisation of gender

surrounding the BB-Oases programme. Sources included reports, commentary pieces, promotional videos, blogs and interviews. Secondly, further studies of Syrian refugees' experience from Zaatari, Azraq and other protracted refugee situations were used to address research Q2 and Q3. This included a wider range of empirical evidence including policy documents, reports and field research to draw parallels and connections between FPE literature and to highlight the gaps and problems overlooked within WFP and UN Women's discourse. The data collected was limited to English publications spanning 2010 to present. This ensured ensure coverage of both the BB-Oases programme and relevant social, political and economic factors impacting the gendered experience of displacement. The literature search was conducted using various search engines such as Google Scholar, ReliefWeb, LSE Library and WFP and UN Women's Website. Boolean logical operators "AND", "OR" and "NOT were used to combine search strings and eliminate irrelevant results.

3.3 Data analysis

This research builds upon the WPR framework's grounding in postcolonial feminism (Bacchi 2009) and extends its analysis through a FPE framework. Evidence was uploaded into Nvivo to conduct the discourse analysis and organise nodes from the key themes and concepts, including the implicit gender biases and assumptions. Discourse analysis was deployed in accordance with Bacchi's (2005) conceptualisation as a dual approach "that builds bridges across discourse traditions; identifying both the ways in which interpretive and conceptual schemas delimit understandings, and the politics involved in the intentional deployment of concepts and categories to achieve specific political goals." (Bacchi, 2005, p.198). Secondly, a thematic analysis was applied to further evidence from wider sources to uncover the common patterns pertaining to the lived experiences of refugees in Zaatari and Azraq refugee camp and to identify the unproblematised gendered dilemmas missing from the BB-Oases discourse (Attride-Stirling, 2001).

3.4 Limitations

Despite an abundance of literature on the potential of blockchain for refugees, there remains limited data on the 'ground'. Rather IOs, start-ups and international non-governmental

organisations (INGOs) often present blockchain as a back-end change, with limited impact evaluations and reports shared publicly. This dissertation originally sought to evaluate the use of blockchain across a range of protracted refugee situations, including Kenya, Uganda, Pakistan and Bangladesh. However, due to the lack of transparency and publicly available documents, this was not feasible. Therefore, it must be acknowledged that conclusions cannot necessarily be transferred to other protracted refugee situations. This is pertinent to research examining refugee experiences and gender to avoid a 'one size fits all' approach. Notwithstanding, this research provides valuable insights to shape and inform future research within other contexts and future blockchain initiatives.

Finally, a WPR approach necessitates the researcher to engage in active reflexivity to remain self-critical of their assumptions, biases and positionality (Bacchi and Goodwin, 2016). As a white university-educated researcher, I sought to integrate postcolonial feminist scholarship into the FPE approach alongside studies and literature that amplified the voices of Syrian refugees, alterities and different perspectives. This aimed to subvert the longstanding historical domination of liberal Western feminism on behalf of 'third world women'. Whilst step seven of the WPR approach (*see Figure 1*) was not included as a research question, it was incorporated in the research process to self-problematise and deconstruct my own historically and culturally entrenched knowledge (Bacchi and Goodwin, 2016).

4. Case study background and rationale: Jordan

4.1 Refugee policy context

Host to 1.3 million forcibly displaced persons and 740,000 registered refugees, Jordan maintains its status as the second largest refugee hosting country per capita worldwide (UNHCR, 2023b). Displacement largely occurred in 2013 and 2016, followed by a continuous flow from 2018 (WHO, 2023). Refugees predominantly originate from Syria (89.1%), followed by Iraq (8.2%), and the remainder from Yemen (1.7%), Somalia (0.1%) and Sudan (0.7%) (UNHCR, 2023b). In response, Jordan has established several refugee camps. The two largest camps, Zaatari and Azraq are located in the north of Jordan and are host to over 83,660 and 45,149 refugees respectively (UNHCR, 2023a). Despite this, only 18% of the refugee population resides in camps (UNHCR, 2023a).

Jordan provides an interesting case study as it is not a signatory to the 1951 Convention relating to the Status of Refugees or its 1967 Protocol. However, a Memorandum of Understanding was made between UNHCR and the Government of Jordan (GoJ) to enable refugees to reside in Jordan. Whilst the GoJ enabled an open-door policy to refugees from 2011 to 2014, it became an increasingly restrictive "laboratory for development-based refugee policy" and new strategies (Burlin, 2019, p.123). This included the 2016 Jordan Compact, which promised to alleviate the 'burden' of refugee hosting and increase development opportunities. The compact focused on integrating refugees into Jordan's national development plans through labour formalisation, access initiatives and supply-side interventions. Similarly, the Jordan Response Plan adopted a "resilience-based approach to respond to and mitigate the effects of the Syria crisis on Jordan and Jordanian host communities" (GoJ, 2015, p.6).

Despite this, the broader policy and legal framework in Jordan remains inadequate. Refugees in Jordan continue to exist under the policy of encampment. Whilst many see encampment as a tool for care and humanitarianism, Turner (2015) sees it as a distinct strategy to control and segregate populations from the labour market. Refugees in Jordan continue to face socio-economic marginalisation, exclusion, high levels of unemployment and dependency on low

wages (Turner, 2015). In addition, as the camps are envisioned as short-term solutions, refugees are subject to an indefinite and precarious existence. In camps, refugee women also face additional challenges due to gendered inequalities, domestic abuse, gender-based violence, early marriage, sexual exploitation and trafficking (Ritchie, 2017). Syrian refugee women in Jordan also face barriers to political and economic participation due to gendered norms that hinder agency. In Zaatari refugee camp, only 5 to 10% of Syrian refugee women participate in paid work due to cultural norms and are often restricted to gendered occupations such as beauticians, shop assistants or voluntary roles (Ritchie, 2017).

4.2 World Food Programme and UN Women's Building Blocks-Oases programme

Jordan is host to the largest and most well-known application of blockchain within the humanitarian-development sector. BB was first introduced in January 2017 to provide cash-based assistance to 100 refugees in Pakistan but has since scaled up its operation (See Figure 2). In 2017, WFP expanded BB to Jordan, followed by Bangladesh, Lebanon and most recently Ukraine (UNHCR, 2022; WFP, 2023a). As of 2022, the BB programme targeted over 4 million refugees a month and had delivered $529 million in cash-based transfers (WFP, 2022). BB emerged in parallel with the exponential growth of WFP's cash-based transfer portfolio, increasing from $880 million in 2016 to $2.27 billion in 2020 (WFP, 2020). WFP previously supported refugees through food and non-food items such as clothes and dignity kits (women's hygiene items), but aid is now delivered through prepaid debit cards and vouchers.

Figure 2: The expansion of the BB Programme (WFP, 2023a)

Cash-based transfers have always been dependent on intermediaries such as banks and mobile network companies to authenticate beneficiary accounts and establish payment methods. The BB programme acts as an extension to this method and utilises a private blockchain network to track and process refugees' identities without the need for costly verification by intermediaries. BB bypasses the need for local bank accounts and transfers the funds directly to refugees through biometric verification and records the transaction through blockchain. Additionally, BB fosters greater coordination between humanitarian actors, data symmetry, and more efficient and transparent aid (WFP, 2020).

In 2019, UN Women partnered with WFP's BB programme to target women participating in their cash-for-work 'Oases' programme in Zaatari and Azraq refugee camps. Employment, economic security and livelihoods form a central pillar of UN Women's work in Jordan. Subsequently, the Oases programme supports refugee women's resilience, economic empowerment, entrepreneurial opportunities, protection services, and child day care to enable them to work. The entrepreneurship activities include various craftmaking such as recycling and repurposing UNHCR tents as well as childcare responsibilities (UN Women, 2015). While Oases was first established in Zaatari it has been extended to Azraq (UN Women, n.d.). BB-Oases enables refugee women to access their cash-for-work entitlements through digital wallets rather than cash-in-hand. To access the digital wallet women are required to go to a WFP-contracted supermarket to use their biometric iris scans, which are linked to the women's funds and savings. Notably, access to cash disbursements does not require a mobile phone or connectivity. However, women do not have access to their virtual wallet, financial records or a peer-to-peer level transaction summary that blockchain promises. But crucially, BB-Oases demonstrates the increasing convergence between blockchain and programmes focusing on economic empowerment, FI and entrepreneurism (Thylin and Duarte, 2019).

5. Findings and Discussion

5.1 WFP problem representation

5.1.1 Building Blocks programme

The 'problem' that WFP intends to address through blockchain was not linear nor consistently represented. The first theme that emerged was around refugees lacking choice and agency. This is emphasised in a WFP blockchain promotional video as it contends "people displaced or affected by disasters, conflict or climate change deserve access to humanitarian services with *dignity*, *equity* and maximising *choice*" (WFP, n.d., emphasis added). Thus, the use of CTs via blockchain is framed around the problem that refugees often receive food aid with little power or choice to alternative forms of assistance. Hence, WFP posits a vision of empowerment that hinges on individual decision-making around how monetary funds are utilised. Simultaneously, BB is also framed as addressing problems of silo ways of working and over or under-targeting of aid, with blockchain supporting the optimisation and harmonisation between different humanitarian actors. Thus, the 'problem' is the competition for donor funds, and a "systems war" in terms of beneficiary management and cash disbursement between humanitarian organisations (WFP, 2023d). Accordingly, the WFP discourse projects a two-pronged approach whereby the "beneficiary is at the centre" (WFP, n.d., no pagination), whilst also unlocking a "new silo-breaking and collaborative approach […] built on inter-agency cooperation" (UN, 2020, p.6).

Whilst gender was an implicit part of WFPs BB narrative, the gendered problem representation emerged from various policy documents, interviews and annual reports. The discourse problematises gender by suggesting that existing financial services and products fail to serve Syrian refugee women due to a lack of government-issued identity documentation and as they are "more likely to be underbanked and excluded from financial systems" WFP 2023, p.4). Women are also framed as being excluded from the digital and formal economy and thus face fewer employment opportunities, with available opportunities remaining insecure and in the informal sector (WFP, 2023b). BB cash-based transfers are constructed as "life-changing" as they can enable refugees to start or grow small businesses and facilitate access to digital e-wallets. WFP also explicitly articulate that their wider goal is "supporting

women to unleash their economic potential" (WFP, 2023b, p.15). Accordingly, this problem representation echoes the same sentiment of the 'business case' of refugee women's empowerment whereby they are aligned with a trajectory to harness a latent entrepreneurial potential.

The second problematisation of gender relates to their pivotal role in transforming their families and children's vulnerability to poverty, hunger and malnutrition. WFP suggests that food aid and CTs are not always distributed equally among family members (WFP, 2023d). The discourse centres on women as the primary recipient of cash aid as they are more likely to pursue the interests of the wider family. For instance, the WFP's cash policy states "empowering women reduces their own and their children's vulnerability to poverty, violence, hunger and malnutrition" (WFP, 2023c, p.15). This was further exemplified by Houmad Haddad, WFP's Head of emerging technologies at the London Blockchain Conference as he states "When you're giving food, the female head of household typically takes charge and she makes sure everyone eats" (WFP, 2023d).

The assumption of this problem underscores a contested naturalisation of women within their reproductive role and assumes that they will pursue choices which benefit the whole family. However, the targeting of women with CTs can often lead to a trade-off between the immediate needs of the family and redressing disempowerment, injustice, gendered social stratification and inequality (Jenson, 2009). WFP further frames women's position beyond their caregiving role as a secondary consideration as they state "empowering women reduces their own and their children's vulnerability to poverty, violence, hunger and malnutrition. It increases their chances of getting jobs and starting businesses" (WFP, 2023b, p.15). In addition to their role in lifting communities and families out of poverty, this quote further suggests that women's income-earning potential hinges on their ability to be a good mother. Thus, this discourse further embeds a dialectical relationship between refugee women's role in social reproductive work and the productive potential of women in the economy.

5.2 UN Women's problem representation

5.2.1 Building Blocks-Oases programme

Documents pertaining to the Oases programme in isolation offered a useful framing to understand BB-Oases. UN Women's Oases model champion's itself as "the centre for building women's resilience and empowerment through access to multi-sectoral services" (UN Women, n.d.). Whilst the Oases problematisation recognises the broad range of challenges facing Syrian refugee women in Azraq and Zaatari including isolation, PTSD, stress and self-worth (UN Women, 2022). The problem is equally rooted in the same 'business case' for gender to catalyse economic development for Jordan. For instance, "increased female labour force participation are far reaching and benefit not only women, but *entire economies*" (UN Women, 2020b, p.4, emphasis added).

Comparatively, the discourse pertaining to BB-Oases did not project a singular clear problematisation of gender. Thus, a narrative was discerned from a coalescence of documents and publications from UN Women reports, news articles, commentaries and videos, albeit the narrative which emerged was dislocated and somewhat opaque. Similar to WFP, the discourse presented a tension between enhancing women's empowerment and realising organisational change. For example, in some instances, BB-Oases was considered the key to "exploring how blockchain can empower women affected by humanitarian crisis" and "using technological innovation to advance women's economic empowerment" (Cheesman, 2022, p.254). By contrast, the problem of gender was also presented as a tokenistic aspect with a focus on efficacy and how the cash-based transfers were delivered itself. For example:

 "'UN Women considers that blockchain can change the fundamental relationships of stakeholders along the value chain and enable them to increase collaboration by creating new ways of delivering services, new channels for fund disbursement and smart contract modules to automate activities, and by cutting out the middle layers in terms of cost and time saving" (UN, 2020, p.20).

Another core epistemic 'problem' presented by BB-Oases is the need for Syrian refugee women to more effectively 'monitor' and 'manage' their money, ensuring greater financial oversight and independence (UN Women, 2020a). However, refugee women do not have the ability to access financial records to track their cash disbursements through blockchain, rather this is envisioned as a long-term goal with aspirations "to increase the financial literacy of their recipients." (UN Women, 2018, no pagination). UN Women further contend that women in Zataari and Azraq are victimised, abused and subject to theft from their husbands due to cash-for-work being previously distributed in cash (UN Women, 2021, p.9). This furhtes a dominant discourse of Syrian refugee women as 'vulnerable' passive victims. Additionally, the discourse of the vulnerable Syrian refugee women did not offer any contextual nuance of gendered norms or root causes surrounding their vulnerability. Regarding the BB-Oases initiative in Jordan the UN Women Executive Director Phumzile Mlambo-Ngcuka states:

"Women in crisis situations and displacement settings tend to have *lower digital literacy* than men, and often *lack access* to the *technology and connectivity* that are so critical in today's world. UN Women is partnering with WFP to change this by using innovative technology to drive change for women in the most challenging settings and to *accelerate progress* towards women's *economic empowerment* on a *large scale*." (UN Women, 2018, no pagination, emphasis added).

Whilst this quote recognises that refugee women face disproportionate challenges, especially relating to ICT access, the emphasis on promoting the economic empowerment of refugee women on a 'large scale' further perpetuates a logic of efficiency and neoliberalism that prioritises refugee women's inclusion in the economy over realising refugee women's individual agency and sense of self. In parallel, documents frequently cited using innovation to find "the most efficient and effective means" (UN Women, 2018, no pagination; UN Women, 2020a; UN Women, 2021).

Financial literacy is also constructed as a core problem and is central to UN Women's "holistic approach to resilience and empowerment […] providing them with skills, access to public space and economic independence" (UN Women, 2018, no pagination). Financial literacy specifically aims to enhance Syrian women's skills in "tracking and budgeting to empower

them on the use of blockchain" (UN Women, 2018, no pagination). However, the problem of digital literacy further entrenches the view that the onus of FI remains on women to support themselves and assumes that women can be financially included by upgrading their skills to the same status as men. This discourse echoes the same Western neoliberal market-based paradigm of individual responsibility and ensuring that refugees have the right tools to shape their own lives and empower themselves. This also aligns with constructions of women from the Global South as they are interpellated as "somebody whose sense of self and empowerment will benefit from the acquisition of entrepreneurial skills" (Rosamond and Gregoratti, 2021, p.21). Accordingly, BB-Oases projects a longstanding assumption of "refugee women as in need of empowerment through technocratic programming" (Turner, 2019a, p.595)

Finally, across many of the sources, the 'problem' of gender is often obscured by a utopian vision of innovation with blockchain serving as a mystical power that "plays a key role in enhancing women's economic empowerment" (UN Women, 2020a, no pagination, emphasis added). But the problem and how blockchain specifically achieves economic empowerment is somewhat opaque. UN Women's pilot report further states "private-sector companies presented cutting-edge blockchain-based solutions that addressed current challenges faced by women and girls in humanitarian settings" (UN Women, 2021, p.6). Within this statement, the prospect of 'cutting-edge' solutions overshadows why women in Jordan's camps have lower digital literacy than men or what these challenges are. Beyond this excerpt, references to the BB-Oases programme in Jordan often remained void of specific challenges faced by refugee women within Zaatari or Azraq. Ultimately, whilst UN Women's discourse surrounding BB-Oases focuses on issues of FI and empowerment of Syrian refugee women, the discourse is dominated by concerns around efficiency and rational choice with access to technology as the panacea to gendered challenges.

5.3 Unproblematised gender dilemmas

5.3.1 The heterogeneity of gender roles across space and time

It must be acknowledged that the unproblematised gender dilemmas do not refute the benefits of the BB-Oases programme entirely. For instance, an independent study of the Oases programme in Zaatari Refugee Camp found that the programme enhanced women's confidence, self-esteem and entrepreneurial skills (Jabbar and Zaza, 2016). However, the benefits that refugee women report from new ICT are often intangible feelings such as freedom, self-worth and competence which remain subjective to the individual (Larsson and Stark, 2019). Despite this, how women negotiate and manage these complex and subjective feelings is left silenced. WFP and UN Women adopt a static discourse that assumes blockchain and FI ameliorate pre-existing socio-economic barriers, shaping refugee women's aspirations and roles.

Contrasting this discourse, feminists have highlighted how FI can disrupt the fabric of society and "remove the frameworks of intelligibility within which people know how to operate" (Larsson and Stark, 2019, p.4). Moreover, FI can further exacerbate structures of disadvantage through the "feminisation of responsibility and obligation", creating greater unpaid social reproductive burdens (Chant, 2008, p.165). Whilst camps can enact a space of static containment, social realities are constantly changing and inextricable from religion, social norms, traditions and their interaction with humanitarian interventions and ICT (Meiches, 2015). Thus, WFP and UN Women fail to problematise how gender is constantly shifting and changing as the refugee camp is a fluid and dynamic space composed of "complex networks of heterogeneous elements" (Rothe et al., 2021, p.45).

Gender norms for Syrian refugee women must be contextualised within the interconnected experience of displacement, history, ideology and religion. Crucially, these factors are heterogeneous and vary between geographical origins (Almakhamreh et al., 2022). For instance, refugees from rural areas of Syria such as Dara'a are "socially cohesive with a strong tribal and family structure" and more traditional gendered roles within the family (Ritchie, 2018, p.544). Within these gendered roles, Syrian refugee women are expected to conform

to traditional caregiving roles within the family with men adopting the breadwinner and 'protector' (Ritchie, 2018). Comparatively, other parts of Syria are much more connected to mainstream social and Islamic movements with women subverting traditional gender roles and shaping new narratives (Asaf, 2017). As women forge new lives within Zaatari and Azraq, the camp has become a space for women to transgress gender roles and adopt new responsibilities within the family and productive sphere, but this is highly dependent on individual circumstances. Empirical research suggests that women's entrepreneurship and empowerment can either challenge or reinforce social norms depending on the conditions, with fragile conditions and self-orientated entrepreneurs more likely to hinder women's position (Ritchie, 2017). Furthermore, while the BB-Oases discourse suggests women desire economic empowerment, studies indicate that this is not necessarily a consistent aspiration for refugee women. For instance, Syrian refugees in Turkey have been shown to demonstrate varying levels of resistance as around 50 per cent of women stated that they had no desire to engage in paid work even if they were given the opportunity (Yalim and Critelli, 2023). In Jordan's refugee camps, women have also experienced increasing scrutiny, expectations and judgement around their roles as mothers (Şahin Mencütek and Nashwan, 2021). Hence, aspirations are not homogenous but influenced by a range of factors over space and time within Jordan's camps. However, this complexity and its interaction with blockchain is absent from the BB-Oases discourse.

5.3.2 The invisibility of masculinity

While arguably causes of disempowerment are not always explicitly articulated within the BB-Oases discourse, it fails to acknowledge the need for empowerment between and beyond women. Men did not qualify as a gendered issue and thus the discourse surrounding BB-Oases renders Syrian refugee men entirely invisible. Research demonstrates how male Syrian refugees embody the plurality and heterogeneity of masculine ideals as they are discursively shaped over time (Turner, 2018). Male refugees in Zaatari refugee camps have often been presented as powerful, assertive, immune to risk and the precarity of the market, violent and threatening to women (Turner, 2019b). However, masculinity among Syrian refugees in Jordan is "constantly in flux and may change radically as their social-physical circumstances change" (Inhorn, 2012, p.45). Examining efforts to promote the entrepreneurial refugee

woman, Al-Dajani (2022) finds that the economic participation of Syrian women in Jordan was governed by their families, husbands and institutions. Thus, how men can equally support the empowerment and FI of women through their engagement with blockchain remains unproblematised. Additionally, not deconstructing the racialised vision of Syrian refugee men as agential, powerful and resilient subjects only further perpetuates women as 'vulnerable' victims in need of saving. In this view, empowerment and entrepreneurship become closely intertwined and mediated by notions of masculinity and wider gender attitudes, but how BB-Oases mediate these complex 'problems' is not established.

Furthermore, the problematisation fails to consider the negative consequences of BB-Oases and the use of blockchain as it interacts with changes to existing social norms, especially due to its targeting of women. Existing anxieties are already heightened as "gender dynamics have been dramatically altered by the transition to life in the camp. Men, used to providing for their families and having jobs in Syria, have suddenly found themselves in a sparse, aid-dependent economy" (Staton, 2016, no pagination). Findings suggest that challenging and transforming gendered roles have been shown to create greater hostility among Syrian male refugees (Ritchie, 2017). Whilst women have increasingly adopted opportunities for paid work, men have also been subject to issues of surveillance by the Jordanian authorities restricting their FI compared to women who have experienced lower levels of monitoring (Ritchie, 2018). Despite this, the discourse fails to consider how the BB programme impacts these dynamics and communities' perceptions of CTs. It is also largely left unquestioned how a separate system for FI through blockchain impacts the ability of refugees to integrate into Jordanian society, particularly as the BB programme is limited to the camp context.

5.3.3 Beyond Western visions of economic empowerment and entrepreneurship

Whilst UN Women's Oases programme offers a conception of empowerment that acknowledges the importance of well-being outcomes. Overall, UN Women and WFP's framing of gender surrounding BB-Oases offers limited consideration of empowerment beyond Western conceptions of *economic* empowerment. The dangers of presenting women's empowerment in a simplified and homogenised way in refugee settings have been well documented (Grabska, 2011). Notably, focusing on entrepreneurship, empowerment

and refugee self-reliance shifts responsibility from the international community and ignores the precarious nature of entrepreneurship and inevitable risk. In turn, the logic of providing opportunity obfuscates considerations around the redistribution of resources, responsibilities and social justice. Moreover, considering the potential risk and implications of empowerment on masculinity and gender norms, the focus on economic empowerment fails to acknowledge other important steps towards enabling entrepreneurship through women's 'defiance' and negotiation of new responsibilities and roles within the family and wider community (Al-Dajani, 2022). Notably, the BB-Oases programme has caused a shift in gender roles and new responsibilities for refugee women in managing their money where they have switched to more traditional forms of receipt keeping to track their salaries (Cheesman, 2022). Thus, it remains unclear how Blockchain alleviates and 'empowers' women to manage their money better when they create new burdens for women and "extends existing conditions of precarity and oppression by the aid apparatus in Jordan" (Cheesman, 2022, p.258).

The individual responsiblisation apparent in BB-Oases discourse fails to acknowledge how Syrian refugee women often embody a collective, household-centric vision of empowerment that is closely tied to religion. A study of women's involvement with the BB programme in Zaatari and Azraq found that the Islamic concepts were perceived as more important than 'empowerment', which lacks any direct translation to Arabic (Cheesman, 2022). Instead, the concept of *Baraka*, which roughly translates to 'blessed', was frequently cited in focus group discussions regarding the Oases scheme in Zaatari and Azraq. Notably, the concept reflected an intangible feeling, rather than just a material possession or process of gaining a 'thing', it encompasses acts of charity, miracles, a blessed quality and religious narrative (Cheesman, 2022). In a similar vein, a study suggests that for Muslim women, Islam has an integral role in fostering religious identity closely linked with personal aspirations, both economically and socially (Ritchie, 2018).

Studies also suggest that Syrian women in refugee camps are constrained to make choices out of necessity rather than 'authentic' choice and agency. Thorne (2021) found that women's aspirations and own vision of entrepreneurship were bounded by labour market conditions and the barriers which they face:

"In the past, everyone who came, they chose the hairdressing course. After the empowerment course, though, they changed their minds and they chose sewing because this way they were able to find a job and could work from home." (Thorne, 2021, p.538).

As Easton-Calabria and Omata (2018) emphasise, "employment opportunities do not necessarily lead to refugee self-reliance, nor are they alone a remedy for protracted situations" (p. 1459). Women's entrepreneurial activities do not exist within a vacuum and are constrained by local demand. For instance encouraging women to engage in crafts and beauty-based activities within a context where refugees have limited disposable income remains disconnected from market conditions and demand (Ritchie, 2017). Moreover, focusing on the promotion of certain entrepreneurial activities results in a saturation of the market (Ritchie, 2018). Notably, a study in Zaatari camp finds that refugees felt a greater sense of agency and resilience through the establishment of informal economies (Pasha, 2020).

While BB-Oases places significant emphasis on fostering digital and financial literacy, it fails to acknowledge other associated challenges beyond economic empowerment and entrepreneurship cited by refugee women in Zaatari and Azraq refugee camps. A focus group discussion with refugee women in Azraq regarding the alteration of CTs through blockchain highlighted how issues of mobility were much more pertinent. For example: "We've been asking for transport for so long […] we'll be very happy if they bring us donkeys instead" (Cheesman, 2022, p.259). Furthermore, studies suggest that Syrian refugees have been constrained by a lack of services such as education and healthcare, limited electricity, and movement within and beyond the camp (Ritchie, 2017; Ritchie, 2018). Other studies also suggest that across different settings including Jordan and Turkey, Syrian refugees have demonstrated consistency in priorities and aspirations pertaining to safety, education for children and social networks (Skran and Easton-Calabria, 2020). Therefore, the discourse by UN Women and WFP lacks a vision of empowerment that understands women's prevailing aspirations rooted in culture and religion alongside the actual needs of women in Zaatari and Azraq.

5.3.4 Blockchain and innovation for whom?

Across the WFP and UN Women discourse an obvious and alarming silence is what refugees in Zataari and Azraq perceive to be the existing inefficiencies and problem of the cash-for-work and CT modalities. An empirical study of the BB-Oases in Zaatari and Azraq found that the women receiving the CTs through BB were not even aware that the payment system was run on blockchain. Similarly, WPF frequently claims that for refugees "it [blockchain] is invisible" and that the use of blockchain does not change the experience for the user. Considering this, Cheesman (2022) contends that in the case of BB-Oases it is unclear whether the problem or solution came about first, putting into question to what extent the blockchain addresses FI and 'empowerment'. Other scholars have suggested that the same outcomes of coordination and efficacy could equally be achieved without the use of blockchain at all. Naraynan argues a "private blockchain" between several parties is just a confusing name for a shared database (Narayanan, 2015). Cheesman's in-depth interviews with staff operating within the BB-Oases programme in Azraq and Zaatari echoed this sentiment:

"The blockchain might be good for the UN but *wallah* [really] it's not for the women. The UN is a stage, and everyone is acting. The women can only use this technology during the time they are working with us. For most of them, that's three or six months, then [because of Jordanian policy in the camps] they will not be allowed to work again for a long time. They won't use the technology. We know this really. It's just not going to help them in their lives. Using something like a digital wallet... *ianni* [like]...it's a lifestyle...the contracts are not long enough to change people's lifestyle. We know the women won't like getting the salaries in the supermarkets too. This is for the UN, not for them" (Cheesman, 2022, p.242).

In this view, the 'innovation laboratories' which drive BB-Oases by UN Women and WFP are shaped by their own interests and competition which Krause (2014) sees as a marketplace where programmes are produced for institutional donors.

Conceptually, blockchain remains intrinsically inaccessible to staff and refugees. Its use and techno-social structure has become a 'black box' whereby recipients and programme managers are unaware of how the system works. For instance, interviews with field staff in Zataari expressed that "the enchantment with blockchain was inextricably tied to ignorance"

and therefore limiting more critical evaluations of its use (Cheesman, 2022, p.240). But arguably the inner workings of technology are irrelevant, rather it is the impact and transformative potential that they enable that are more important.

Notwithstanding, the problematisation by WFP and UN Women fails to adequate depth in terms of empirical data on previous learnings from their pilot applications of BB in other settings. Although other sources cite how UN Women have systematically integrated gender analysis from pilots in Kakuma refugee camp in Kenya (Thylin and Duarte, 2019). An independent evaluation of WFP's application of blockchain and innovation claims "there is a lack of systematic consideration of gender in the development and use of digital technologies, as well as a lack of monitoring of their gender-related impacts", even where they are used to empower and promote FI of women (Aide à la Décision Économique, 2022, p.37). Despite greater inter-agency coordination through Oases and BB, there are considerable discrepancies in how humanitarian actors are integrating considerations around gender. Additionally, it raises questions around how BB has been adapted to each individual country as WFP have been observed to "struggle to develop country-specific solutions while developing corporate solutions" (Aide à la Décision Économique, 2022, p.9). Ultimately, the discourse fails to align the gendered 'problems' with the solution.

6. Conclusion

Through Carol Bucchi's WPR framework and FPE, this dissertation has sought to understand how WFP and UN Women problematise gender in Jordan through their BB-Oases blockchain initiative. Deconstructing the 'problem' presented by WFP and UN Women reveals discrepancies and tensions between the two-pronged approach which claims to both organisational reform and empowering Syrian refugee women. The 'problem' of gender is constructed around a homogenous group that can be transformed through the neoliberal market-orientated logic of unleashing women's entrepreneurial potential. Whilst the Oases programme in isolation promotes a more comprehensive vision of empowerment, WFP and UN Women largely perpetuate an assumption centred on refugee women as vulnerable mothers with blockchain resulting in FI, entrepreneurship and women's empowerment by default. In turn, this amplifies how the rise of blockchain has rendered gendered refugee 'problems' to the detriment of other perspectives. Ultimately, the BB-Oases programme promotes a utopian assumption that blockchain offers considerable financial tools to equip refugees to empower themselves with the insertion of entrepreneurship without challenging the underlying structures that subordinate them.

Analysing what is left unproblematised by WFP and UN Women reveals how the BB-Oases programme fails to integrate a holistic and dynamic understanding of how gender is shaped by individual aspirations, market conditions, masculinity and religion. The findings reveal a much more nuanced understanding of individual aspirations and empowerment within Zaatari and Azraq as Syrian refugee women demonstrate a strong affiliation with Islamic concepts such as Baraka over Western conceptions of economic empowerment. Moreover, WFP and UN Women render Syrian refugee men invisible which overlooks the multifaceted ways in which they could hinder or promote women's FI and empowerment. Zaatari and Azraq remain discursive spaces where culture, religion, history and socio-economic inequalities converge. This analysis highlights how the discourse surrounding BB-Oases fails to outline how the techno infrastructure of blockchain addresses these complexities, particularly considering the shifting of gender roles, social reproduction and responsiblisation of gender created by FI. Hence BB-Oases and its use of blockchain has been integrated with

vague justifications, raising questions about its necessity and potential effectiveness. A significant silence remains around what Syrian refugee women perceive to be the problem in which BB-Oases and blockchain address. In parallel, BB-Oases is driven by a strategic objective to enhance UN Women and WFP's reputational advantage within the humanitarian marketplace as innovators at the forefront of blockchain technology. Accordingly, the agenda for emancipating Syrian refugee women and the pursuit of blockchain innovation are congruent with neoliberal rationalities.

There remain considerable uncertainties, complexities and tensions within the field of blockchain, but as humanitarian actors increasingly consider its application for refugee identity management, there is further scope for FPE engagement. Policymakers must consider the gendered implications related to accountability, privacy, consent, and socio-economic inequalities, prioritising a refugee-centric design. To aid this, existing programmes beyond WFP and UN Women should actively seek to evaluate and publicly share how these initiatives are impacting gender. Whilst the insights and discourse presented in this dissertation from UN Women and WFP are insufficient alone, this research serves as an impetus to publish transparent programme evaluations surrounding blockchain to share key lessons for other humanitarian actors. Additionally, future research must integrate an intersectional lens to understand the experiences of blockchain between and beyond women. Whilst blockchain innovation may become necessary to overcome the increasing challenges associated with forced displacement, it is imperative that humanitarian actors integrate a systemic analysis of the underlying gendered 'problems' in the solution.

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