Debt space: from temporalities to topologies and ecologies

Abstract

When theorised, dDebt is widely conceived as inherently temporal - present consumption bought with future labour. This paper advances conceptualisations of debt by incorporating the active role space plays in creating, maintaining, and undermining debt relations. Debts are topological binds – a particular kind of spatial and temporal connection, which are entangled with topographic spaces, to produce debt ecologies. This argument is developed by tracing the creation, maintenance and/or destruction of spatial connections between different people, communities, institutions and sites in the Palestinian conurbation of Ramallah – Al Bireh. Attending to the spatiality of debt offers not simply a better understanding of debt itself, but also directs our attention to a more extensive range of time-spaces that co-constitute specific debt ecologies. These entanglements of power require a methodological approach that moves beyond statistical representations of debt. Thinking debt topologically also responds to postcolonial concerns about the locatedness of theory, while envisioning an extensive geography that is more than a mosaic of contexts or variegated capitalism.

[Situate argument within literatures].

Keywords

Debt, Topology, Ecology, TemporalityFinancialization,, Palestine, Ramallah

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1. Introduction

In this paper I argue that we need to understand debt as a spatial, as much as temporal relation. Anthropological research has longMost current understandings of debt, underpinned by anthropological research, prioritize time. Debt is conceived of debt as inherently temporal - present consumption bought with future labour. In such studies space is not absent, but with a few exceptions it is rendered conceptually passive and secondary to time. Working with the exceptions to the critical consensus, I seek to develop a theory of debt that recognises the active role space plays in creating, maintaining, and undermining debt relations. I argue that debts are topological binds – a particular kind of spatial connection. Topological space is the subject of renewed interest in Geography (Allen 2011a, Martin and Secor 2014), while economic geographers have persuasively argued that relational forms of space are an important co-constituent of financial markets, technologies, subjects and money (Pike & Pollard 2010, French et al 2011, Christophers 2013). This paper extends relational approaches to finance by using topology to move beyond a financial network imaginary (Langley 2008, Pike & Pollard 2010). If the concept of network maps connections between separate points, topology is a relational spacing that dissolves divisions between here and there, creating ecologies where institutions, subjects, practices and spaces can only be disentangled or unfolded heuristically (Allen & Cochrane 2014).

Topologies of debt are also always entangled with topographic spaces. Therefore any geography of debt must necessarily examine entanglements of topological and topographic space, or what I will term debt ecologies. This concept draws on, and extends work on financial ecologies (see Leyshon et al 2004, French et al 2011). While the concept of ecologies captures the dynamic and generative interrelations of topological and topographic space, debt ecologies are simultaneously financial AND geopolitical, social and cultural. Consequently, the paper builds on arguments for a more-than-economic geography attuned to ordinariness, contingency and diversity (Lee 2006, Gibson-Graham 2014). This is an approach that pays attention to how the world co-constitutes economics practices, as much as how economics shapes the world (Christophers 2013: 11). In this paper, the 'worlds' of family (AUTHOR & COAUTHOR 2014) and geopolitics (e.g. Dittmer & Sharp 2014) are also prominently foregrounded, and thus this work contributes to geographical analyses in these areas, where debt is otherwise hardly discussed.

Methodologically the paper uses primary data generated through ethnographic research in the Ramallah-Al Bireh conurbation [hereafter Ramallah] in centre of the Occupied West Bank. This research was conducted with the assistance of Dareen Sayyad and Reema Shebeitah between 2010 and 2015. During this period I lived in the Al Bireh neighbourhood of Um al Sharayet for a number of periods totalling twelve months. Using Dareen and Reema's social networks, we recruited a number of families and individuals to participate in a series of repeat interviews that were held in participants' homes and workplaces every two weeks over the six-month period in the spring, summer and autumn of 2013. The

repetitive nature of our visits and discussions not only generated detailed data about participants' lives, but also enabled stronger relations of trust to be established. This is crucial in a context where a British researcher embodies the legacy of a former colonial power, and when the research seeks to explore sensitive topics such as personal finances and indebtedness (James 2015).

Twenty-five of the thirty-two participant families and individuals initially recruited continued to participate in interviews for the entire six months. These participants also took part in follow up interviews in 2014 to discuss initial research findings. Research with residents of Um al-Sharayet was complemented by expert interviews with Palestinian policy makers, bank employees, activists and academics in 2014 and 2015.

Ethnography is well suited to examining the wide array of social relations that impact 'diverse economies' (Gibson-Graham 2014: S151), precisely because the ethnographer begins amidst the messy entanglements of everyday life (i.e. ecologies) where the boundaries between the economic/financial and the geopolitical, social and cultural are far from clear (Elyachar 2005, James 2015, Bear 2015). The place this research was conducted in, and from which subsequent theorisation has emerged, is also crucial for the arguments advanced. Since little has been written about the growth of debt in Palestine, the following sub-section is necessarily detailed, so the reader has a clearer understanding of the context.

1.1 The Expansion of Debt in Ramallah

As in many other parts of the world, being indebted in Ramallah increasingly means being bound to a bank. However, borrowing money from a bank is still a relatively novel practice in Palestine, in part because Israel largely prevented Arab-owned banks from operating in the Occupied Territories between 1967 and 1993. Even after the Oslo Accords were signed in 1993 and Palestinians obtained limited autonomy (see Said 2000), levels of bank debt did not increase rapidly until 2008. Since then, the total amount of private credit borrowed from banks has more than tripled, increasing from US\$1.296 billion in 2008 to US\$ 4.319 billion in 2015 (PMA 2015a). By comparison, in the previous 8 years during the second Palestinian *intifada* [uprising], public and private debt *combined* rose by just under US\$500 million (from US\$1.346 billion in 2000 to US\$1.829 billion in 2008).

Private debt has grown rapidly since 2008 because this was the year when a national credit registry was launched and legislation was passed that restricted the proportion of deposits banks could move outside Palestine. These changes both enabled and forced banks to create new credit markets within the Occupied Territories. However, rising demand or need for debt can be traced to problems, such as rising living costs, low salaries and the geographic concentration of the Palestinian economy in the Ramallah conurbation (AUTHOR 2014), which have been largely caused by the Israeli Occupation. Since occupying the West Bank, Gaza Strip and East Jerusalem in 1967, Israel has prevented Palestinian economic development, or practiced what Roy (1999) terms de-development. Such practices continued after the Oslo Accords in 1993 as Israel retained control of all external borders (and thus the movement of goods and people in

and out of the Occupied Territories). However, the Accords outsourced administration of the Palestinian population to the Palestinians themselves (in the form of the Palestinian Authority¹), forcing Palestinians to become more economically dependent on not just Israel, but also the international community (Said 2000, Turner & Shweiki 2014).

Dependency and de-development have literally taken place through the fragmentation of Palestinian space (Gregory 2004). The Oslo Accords separated the West Bank and Gaza Strip from each other and from the territories Israel captured in 1948. Sixty percent of the West Bank – demarcated as area C in the Accords – remained under complete Israeli military and administrative control. Palestinian cities and towns in the West Bank, designated areas A and B in the Accords, were to be nominally under Palestinian Authority administrative control. However, in practice these territorial islands remain under Israeli control, since their borders, subsurface (i.e. water aquifers) and the sky above them remain occupied (Weizman 2007), and since 2000 the Israeli military forces have entered these areas at will.

This post-Oslo spatial fragmentation helps us understand why two thirds of all debt in Palestine is owed to banks in the Ramallah governorate (PMA 2015b). Public debt - money owed by the Palestinian Authority (PA) - is heavily concentrated in Ramallah because every PA ministry bar one is located in the conurbation. This concentration occurred because Israel prevented the PA from

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 $^{^{1}}$ The PA was created as part of the Oslo Accords, to act as an interim self-government body. Like other Oslo institutions, it continues to function in this limbo state.

locating itself in East Jerusalem, the intended capital of a future Palestinian homeland. Levels of private debt are also much higher in Ramallah than elsewhere in the Occupied Territories because banks prefer to lend to salaried employees, which in Palestine means public sector workers in most cases. Public sector jobs currently account for 25% of all employment in an economy where unemployment was almost 27% in 2014 (PMA 2015c: vi). Occupation related movement restrictions within the West Bank, which intensified during the second *intifada* (2000-2007), forced many public sector workers to live close to their place of work (i.e. in and around Ramallah) rather than commute. High levels of migration to Ramallah from other cities and villages have increased demand for housing and consequently, increased house prices.

Another factor driving demand for debt is the failure of the PA to realise

Palestinian aspirations for an independent national homeland, and increasing
levels of inequality. These changes have resulted in the emergence of what

Taraki (2008a: 62) describes as 'a new globalized and modernist urban middleclass ethos... reflected in the sensibilities, dispositions, life projects, and practices
of wide sections of the urban middle strata'. One of the key aspects underpinning
this ethos is consumption of goods, educational and cultural services. In

Palestine, far more private debt is borrowed for consumption spending
(US\$1.697 billion of housing, cars and personal loans in 2014) than activities
such as business, consumer and general services (US\$840 million) that are
conventionally thought to constitute productive investment (PMA 2015d). The
rapid expansion of the banking sector has supported this consumption-driven
economy. The number of banks and bank branches in Palestine has increased

from seven banks with thirty-three branches in 1994 to sixteen banks with two hundred and fifty seven branches by the beginning of 2016 (PMA 2011: 85; PMA 2015e: 68; HSBC 2015). As in other contexts, this expansion has been augmented by efforts to create financial subjects who are 'included' in the financial sector (Langley 2008, James 2015, Kear 2016). The Palestinian Monetary Authority (PMA)² has developed a National Strategy for Financial Inclusion (PMA 2014: 78-80), based on the G20 Principles for Innovative Financial Inclusion. There have also been a series of 'banking awareness campaigns', such as an 'Annual Child and Youth Banking Week', the promotion of e-banking, increasing awareness about consumer rights and a campaign 'urging the public to restrict their financial and banking activities to PMA-supervised financial institutions' (PMA 2014: 77).

Residents of Um al Sharayet are keenly aware of the growth of bank debt, and frequently made statements like:

One year ago, official statistics indicated that over 80% of people had borrowed from banks... I guess now it's more than 90%-95%.

(Abu Omar, 12th September 2013)

While many residents echoed Abu Omar's sentiments, PMA figures show that as of July 2014, only 4% of the working age population, or 9% of the actually working population in Palestine were in fact indebted to banks and microcredit

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² The PMA was created as part of the Oslo Accords, as a Palestinian central bank in waiting. It continues to function in this limbo state.

institutions. Frequently heard assertions that everyone is indebted therefore seem exaggerated. However, they may register and reflect the much more extensive nature of debt relations beyond banks. In addition to loans taken from banks, participants owed money to family members, friends, work colleagues, employers in the form of salary advances or via company loan schemes, traders in the form of post-dated cheques, and building owners in the form of instalment payments for an apartment. These relations do not show up in the PMA's statistics, which consequently fail to register the full extent of what I will term debt topologies that are currently emerging in Ramallah. This invisibility is important because these other kinds of debt are important not only in their own right, but also because they are often intertwined with bank debt. Indeed, research in other contexts suggests that increasing debts to financial institutions multiply other debt ties (James 2015).

This density of debt relations also demands a theoretical account of debt that can account for the messy entanglements of financial, social and political life. Debt topologies in Ramallah cannot be understood without reference to multiple, geographically specific processes, most notably ongoing Israeli settler-colonialism. Restrictive lending criteria reflect concerns about residents' ability to repay loans, due to dependency and de-development. More broadly, it still remains the case that the majority of the Palestinian population in the Occupied Territories don't use banks, which may be connected with the history of losing access to money in banks in 1948 (Mitter 2014), and there is relatively little outside investment in Palestine, because of the lack of stability.

The conceptual framework I develop to examine these entanglements is also attentive to what (Pollard et al 2009) term postcolonial scrutiny (see also Pollard et al 2011). Exploring debt through the global South offers more than just empirical difference (Robinson 2006). As Shipton (2007: x) notes, while '[l]ending over long distances... weaves webs of obligation between places that hitherto had few common ties... that does not mean that everyone, everywhere, understands borrowing and lending in the same way'. In other words, geography shapes theorisations of debt. The specific theory of debt's spatiality offered here is informed by the understandings of debt, obligation and mutuality that have circulated for long durations in Palestine. Such The paper begins with a brief overview of the ways in which space has been incorporated in extensive scholarship on debt that now exists across the social sciences. Then I extend existing temporal conceptualisations by arguing that debts are also topological binds - a particular kind of spatial (and temporal) connection. These topologies of debt are always entangled with topographic spaces. Therefore any geography of debt must necessarily engage entanglements of topological and topographic space, or what I term in conversation with Leyshon et al (2004) debt ecologies. This argument is developed by tracing the creation, maintenance and/or destruction of spatial connections between different people, communities, institutions and sites in the Palestinian conurbation of Ramallah - Al Bireh (hereafter Ramallah). In conclusion I argue that attending to the spatiality of debt offers not simply a better understanding, but also directs our attention to a more extensive range of time-spaces through which specific debt ecologies emerge. These are entanglements of power, which require a methodological approach that moves beyond statistical representations of debt.

The theoretical argument of this paper is situated in ethnographic research I conducted with Dareen Sayyad and Reema Shebeitah in the Occupied Palestinian Territories (hereafter Palestine), between 2010 and 2015. In Palestine, understandings of debt that are tied have become entangled withto discourses about debt promoted bythe growth of banks, which in turn are have begun to circulate much more extensively since 2008. These understandings are in turn shaped by discourses and policy practices that weave through many organisations (including the IMF, the World Bank, the UN and universities) and states. The spatial theory of debt I advance in this paper maps on to the extensiveness of these different circulations (Munn 1986),. In other words, this paper offerings a theory that is itself geographically specific, but extends beyond Palestine. As Shipton (2007: x) reminds us, while '[l]ending over long distances... weaves webs of obligation between places that hitherto had few common ties... that does not mean that everyone, everywhere, understands borrowing and lending in the same way'. The specific theory of debt's spatiality offered here is informed by the other understandings of debt, obligation and mutuality that circulate (albeit less extensively) in Palestine. One implication of this approach to theorisation is that there are multiple (spatial) theories of debt, which must be developed through research in other places.

The next section introduces the key argument of this paper - that debt is spatial - by reviewing how space is currently treated in the extensive social scientific scholarship on debt. This sets up the thesis that debts are topological spaces, entangled with topographic spaces. This thesis is detailed in the third section,

which then outlines how such entanglements produce debt ecologies. The fourth section of the paper provides evidence for this argument by tracing the creation, maintenance and/or destruction of debt topologies and ecologies in Ramallah. The fifth section explores the ways in which debt ecologies are much broader than financial ecologies. In conclusion I argue that attending to the spatiality of debt offers not simply a better understanding, but also directs our attention to a more extensive range of time-spaces through which specific debt ecologies emerge. These are entanglements of power, which require a methodological approach that moves beyond statistical representations of debt.

2. Theorising dDebt, temporality and spacetialities

In his review of anthropologies of credit/debt, Peebles (2010: 226) states that 'the crucial defining feature of credit/debt is its ability to link the present to the past and the future'. Debt is conventionally understood as a temporal relation: present consumption bought with the promise of future labour (Mauss 1954, Bourdieu 1977, Derrida 1992, Peebles 2010). Credit is the opposite: a method of lending resources in the present and demanding (or hoping for) a return in the future (Peebles 2010). Once a credit/debt relation is established, it also conjoins a past moment with the future. As Peebles (2010) shows in his extensive survey of relevant literature, this temporal understanding of debt builds on a vast body of anthropological scholarship stretching back to Mauss' (1954) study of gift exchange. Other key interventions include Bourdieu's (1977) *Outline of the Theory of Practice*, which stresses the importance of timing for understanding the gift as an improvised practice rather than a rule-bound structure, and Derrida's (1992: 39) *Given Time: 1. Counterfeit Money*, which argues time is 'the

guardrail against the madness of the gift', ensuring its reciprocation and thus circuits of giving. More recently, the subtitle of Graeber's (2011) recent popular account, *Debt*: *The First 5000 Years* again stresses a temporal frame, while Lazzarato (2015: 70) tells usstates that '[t]he question of time, of duration, is at the heart of debt. Not only labour time, or "life time", but also time as possibility, as future. Debt bridges the present and the future, it anticipates and pre-empts the future'.

This temporal understanding of debt is prominentunderpins research in many academic disciplines, although the actual temporal dynamics are rarely studied³. This includes political-economic research that contextualises growing levels of debt in relation to the restructuring of welfare states in Euro-America since the 1980s (Montgomerie 2013, Roberts & Soederberg 2014, Searle & Köppe 20165), scholarship examining the role played by debt in the 2008 'global' financial crisis (Blyth 2013, Langley 2014, Lazzarato 2012, 2015, Mian & Sufi 2014), and studies of over-indebtedness: impoverishment due to debt that includes material loss, downward social mobility, extreme dependency, shame and/or humiliation (Guerin et al 2014: 2; Marron 2012, Hickel 2015). If much of this contemporary scholarship builds on a temporal conceptualisation of debt, this does not mean it ignores space as either a conceptual or empirical concern. Following Peebles (2010), I want to suggest that existing work on debt has drawn on and advanced (at least) four geographical concepts: mobility, place, distribution and boundaries.

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³ I am grateful to one of the anonymous reviewers for making this point.

First, research has shown that debt shapes the movement of bodies through space. Munn (1986) argues that initially it appears that becoming a creditor enables a more expansive range of movement, while constraining the mobility of debtors. However, in her study in Gawa, this spatial (and temporal) extension is enabled by an expectation of reciprocity in another time and place, where roles are reversed (creating what she terms a dialectical system). Gawans are only able to extend their 'names' through hosting others, because they will visit and become indebted to those people in turn. In other contexts, such reciprocal systems do not exist, and the movement of debtors becomes heavily constrained; the most extreme examples being the debtors' prison (Peebles 2012) and the incarcerated slave (Graeber 2011).

Second, debt plays a key role in making place through the construction of consistent transactional pathways and networks, such as those associated with remittances, international development programs, debt-bondage and saving schemes that link financial markets with middle class suburbs (Mauss 1954, Corbridge 1993, Mitchell 2002, Elyachar 2005, Shipton 2007, Langley 2008). For instance, Graeber (2011: 150) argues that the slave trade triangle between Europe, Africa and the Americas was 'a gigantic network of credit arrangements'. An increasing number of places have been created through the purchase of objects – particularly homes – with credit/debt (Maurer 2006, Langley 2008, Montgomerie 2013, Searle & Köppe 20165). Deville's (2015) recent UK based study demonstrates how debt can transform not only the materiality, but also the emotional experience of place. His research outlines how cCredit-collection

practices, primarily letters and phone calls in the UK context, transform the debtor's home into a place of anxiety and conflict.

Third, authors have explicitly examined the spatial distribution (Walks 2013) and growing global influence of debt (Cooper 2008, Lazzarato 2012, 2015). Corbridge (1993) provides an effective summary of this growth during the 20th century through the lens of the so-called debt crisis (or banking crisis) in the 1980s. The different theoretical approaches he surveys suggest changes in financial markets, financial (de)regulation and geopolitical conflict were responsible for the rapid growth of credit/debt flows between Europe, the US, and 'developing countries' from the 1970s onwards. Writing after the 2008 financial crisis, when high levels of debt had become a significant cause for concern much ofin Europe and the US was now dealing with high levels of debt, Lazzarato (2012: 122) draws on Marxist and poststructuralist theory to argue that because of the massive increases in sovereign debt, 'indebted man may end up becoming the most widespread economic-existential condition in the world' (p.122), occupying 'the totality of public space' (p.38). While in places his argument implicates the entire world, at other points Lazzarato specifies that the transformations he is describing affect 'Western societies' (p.35). Working at a variety of scales within the nation, Walks (2013) maps levels of indebtedness between and within Canadian cities. His study demonstrates that debt-related risk is associated with high and rising real estate values, particularly within Canada's larger cities. Smaller cities are more dominated by unsecured forms of consumer debt. His multi-scale analysis also shows how new communities at the

urban fringe generally reveal the highest levels of household debt, as the need to commute via automobile exacerbates indebtedness at the local scale (Ibid. 180).

Fourth, debt relations create boundaries such as the spatial limits of regulatory bodies (state and non-state) or common bonds of trust (Peebles 2012, Stasavage 2013, Flaherty & Banks 2013). Peebles' (2012) study of whitewashing and legbailing in the UK provides an exemplary illustration. Leg-bailing refers to the 19th century practice of leaving for a foreign jurisdiction in order to evade debts at 'home' (Ibid: 430). This practice led to the growth of debtors' prisons, a spatial technology designed specifically to counteract the threat of debtors absconding by fixing their bodies in a specific jurisdictional space. 'Whitewashing', or legal debt forgiveness, developed as an alternative spatial-legal technology 'for repatriating people back from the exile of the prison, or alternatively, enticing them to stay inside the nation and abandon the temptations of leg-bail and foreign exile' (Ibid: 433). Peebles shows how debt relations, and particularly the problem of ensuring repayment, created the spaces of the debtor's prison and debtor's court, which in turn reproduced the legal boundaries of the nation-state.

In all of the studies cited in this section, space is an important analytical category. Different spaces are created and shaped by debt, as are the bodies and practices that co-constitute places. However, conceptually space is largely treated as an outcome or effect of debt. Rarely is space considered as actively co-constituting debt. Peebles' (2012) research on leg-bailing and whitewashing is one of the few exceptions. He clearly illustrates how the boundaries of nation-state determine where debt contracts and repayment can be legally enforced.

Another example of research that examines the active role space plays is

Stasavage's (2013) study of the historical emergence of public credit/debt in

European city-states. He argues that

[0]n one level it was the intensive form of political representation within city-states that was the key to their success in gaining access to credit. However, this form of political representation was itself dependent on two underlying factors: compact geography and merchant dominance (Ibid: 7-8).

Stasavage contends that one of the key factors for the growth of debt in city-states was their relatively small territorial size. This meant they were able to maintain representative assemblies – a crucial mechanism for ensuring governments or rulers serviced their debts – without the high transport and communication costs faced by larger territories. Like Peebles (2012), Stasavage's research offers an account of space's power to actively co-constitute and transform debt. Stasavage is also careful not fetishize space, drawing attention to other factors that co-constitute debt, such as the dominance of merchants.

In addition to these accounts that examine the active role of space explicitly, it is possible to read existing studies for further evidence of spaces' role in coconstituting debt relations, even if such studies do not explicitly foreground the work space is doing. For instance, Graeber's (2011) history of debt could be read as arguing that the *spaces* of modern nation-states are key for facilitating the growth of financial forms of debt (c.f. Dodd 2014). Flaherty & Banks' (2013)

study of debt in poor households in Teesside, UK, shows that it is the intimate and familiar social spaces of the home and neighbourhood that governs choices about whether and how families become indebted. Building on these studies, in the next section I want to outline a conceptual vocabulary for thinking about the spatiality of debt.

3. Theorising debt as topology

The people are taking loans from the banks so they are dominated by the banks. They can't live a free life. They have to work and to pay off their debts.

(Abu Tariq⁴, 15th September 2013)

All debts are promises to pay in the future. But, as Abu Tarig's quote evokes, they are also binds that connect debtors with creditors. Being bound to a creditor like a bank is clearly not a physical connection. Banks do not incarcerate people. Rather, the sense of capture Abu Tariq evokes is more like an invisible bit of string, which ties debtors to people and institutions that have lent them money. By invisible, I mean to suggest that these binds are real, but immaterial; the invisible bit of string can stretch quite far, and its extensiveness depends on who exactly is bound to whom. For instance in the context of my research Ramallah, while a debt to a bank can only be enforced within the jurisdictional space of the Occupied Palestinian Territories (an entanglement I return to later), a debt to a

 $^{^4}$ Empirical data is drawn from repeat interviews with 25 families and individuals living in Ramallah, conducted in 2013 and 2014. Participants have been assigned pseudonyms, and some personal details have been redacted to ensure confidentiality. Interviews were conducted in Arabic, and translated to English by Dareen Sayyad and Reema Shebeitah.

family member may endure wherever the two parties are in the world (although it may be harder to enforce repayment the further apart those family members are). These spatial binds are topologies.

As Martin and Secor (2014: 420) note, '[t]opology... is everywhere'. Rather than an ontological statement, this is a reflection on the extensive literature that has recently emerged on the concept of topology (e.g. Allen 2011, Lury et al 2012, Secor 2013, AUTHOR 2014, Lata & Minca 2016, McFarlane forthcoming, Lata & Minca forthcoming). Topology offers 'a way of thinking about relationality, space, and movement beyond metrics, mapping, and calculation' (Martin and Secor 2014: 420). Elsewhere Secor (2013: 431) clarifies:

[T]opology focuses on the qualitative properties of space (as opposed to the geometric). Topologically speaking, a space is not defined by the distances between points that characterize it when it is in a fixed state, but rather by the characteristics that it maintains in the process of distortion and transformation (bending, stretching, squeezing, but not breaking). Topology deals with surfaces and their properties, their boundedness, orientability, decomposition, and connectivity – that is, sets of properties that retain their relationships under processes of transformation.

Thus "topology directs us to consider relationality itself and to question how relations are formed and then endure despite conditions of continual change" (Martin and Secor 2014: 431). Allen (2011a: 284) suggests something similar

when he describes topology as a particular kind of relational space in which 'the gap between "here" and "there" is measured less by miles or kilometres and more by the social relationships, exchanges and interactions involved'.

I argue that dDebt is a topological spacing. What distinguishes it from other topologies is that the binds (i.e. intensive relations) created are made through promises quantified using money (Graeber 2011). Such a claim does not seek to replace temporal understandings of debt (as a present-future relation). Rather it seeks to augment them, so that debt is conceived as a fully spatial-temporal relation. Munn's (1986: 10) insistence on spacetime in her discussion of the creation of value is useful here:

A given type of act or practice forms a spatiotemporal process, a particular *mode* of spacetime. Defined abstractly, the specifically spatiotemporal features of this process consist of relations, such as those of distance, location (including geographical domains of space), and directionality; duration or continuance, succession, timing (including temporal coordination and relative speed of activities).

However, rather than an object which bodies and practices extend, in what follows I want to think about spacetimes as active performances that shape acts and bodies in turn (Harvey 1996, Massey 2004, Thrift 2006). My approach is also much more specific about what kind of space debt is.

[Need to link this paragraph with rationale for paper] Debt topologies by their very nature are not isolated objects, but rather entangled with other topologicales and topographic spaces. If debt topologies are like an invisible piece of string, multiple topologies are like a cat's cradle, the game in which a piece of string becomes twisted in increasingly complex figurations. On the one hand each strand retains its specificity. On the other hand, the interaction between different topological relations can transform those relations, creating stronger connections, disconnections, substitutions and separations. These spatial entanglements also bring debt topologies into proximity with other topological and topographic relations. As a topology, debt doesn't possess a tangible materiality in the same way that many topological figures are materially impossible in topographic space (Lury et al 2012). However, topologies are coconstituted and become embedded within topographic landscapes (including bodies). As Martin & Secor (2014) note, topologies and topographies are mutually generative. [Link with rationale of paper. Debt transformed by sociospatial. Not just military take over. This augments current cult eco arguments]. I explore this co-constitution in the context of Ramallah later in the paper. Here I want to introduce the concept of debt ecologies to think about these topological and topographical entanglements.

The concept of debt ecologies draws on a substantial body of work that think advances relational geographies of money and finance relationally (see for example Leyshon & Thrift 1997, Langley 2008, French et al 2009, Pike & Pollard 2010, Christophers 2013), and particularly Leyshon's concept of financial ecologies (Leyshon et al 2004, French et al 2011). Financial ecologies are:

[A]rrangements that emerge and that are more or less reproduceable over time. These processes unfold across space and evolve in relation to geographical difference so that distinctive ecologies of financial knowledge, practices and subjectivities emerge in different places. An ecological approach is not an alternative to a network approach, but constitutive of it, in that the topology of networks is uneven in their connectivity and material outcomes. Thus, some places are better connected to networks than others, while networks differ in their length and durability (French et al 2011: 812).

In contrast to approaches in which 'geography can all too often be subordinated to the status of mere empirical surface upon which processes of financialization are enacted and inscribed, or abstract, spatial container of socio-economic relations' (Ibid: 808), ecology thinks place and network simultaneously. In other words, it takes account of different practices whose extent varies from local to urban to national to international. These arrangements are dynamic and constantly being reconstituted and/or changed. Ecology thus closely resembles the concept of assemblage that has been used to understand 'processual, relational and generative' nature of social formations (Anderson et al 2012) and cities (McFarlane 2011). In such work, assemblage is a verb (formations) rather than a noun (forms). Similarly scholarship on financial ecologies stresses a processual understanding. The concept of debt ecologies thinks topological and topographical entanglements as arrangements that are always, already in process. Moving from financial ecologies to debt ecologies emphasizes that debts

are never just financial, and forms oftopologies between banks and individuals and families debt are entangled with other non-financialized forms of obligation, mutuality and sharing (Shipton 2007, James 2015). This argument supports Gibson-Graham's (2014) claim that a wide array of social relations co-constitute the diverse economies present in the world (see also Lee 2006).

As noted earlier, tThis conceptual framework is fleshed out in the rest of the paper throughseeks to apprehend the indebted geographies I encountered during empirical research in Ramallah. To develop the framework further, I turn to this empirical research more directly now to examine howI begin by contextualising the creation of particular debt topologies – those with banks – are created and maintained amidst other socio-spatial-temporal processes. I focus on bank debt because it has increased rapidly in the Palestinian context since 2008, and in so doing has captured the popular imagination. Furthermore, the governance of bank debt by the Palestinian Monetary Authority (PMA)⁵ renders it more visible as an empirical 'object' than other kinds of debt relations in Ramallah, which are more disaggregated and diffuse (c.f. Bayat 2010). However, these other relations become more visible through the data generated by ethnographic research.

4. Creating debt topologies in Ramallah

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⁵ The PMA was created as part of the Oslo Accords, as a Palestinian central bank in waiting. It continues to function in this limbo state.

You must go to the bank. Because you won't meet anyone who can give you \$40,000. No one can give you this amount of money. Your only choice is the bank. The solution is the bank, not the people.

(Nasser, 27th August 2013)

In the Al Bireh neighbourhood of Um al Sharayet, part of the broader Ramallah conurbation where I have conducted research since 2010, being indebted increasingly means being bound to a bank. Borrowing money from a bank is still a relatively novel practice in Palestine, in part because Israel largely prevented Arab-owned banks from operating in the Occupied Territories between 1967 and 1993. Even after the Oslo Accords were signed in 1993 and Palestinians obtained limited autonomy, levels of bank debt did not increase rapidly until 2008. Since then, the total amount of private credit borrowed from banks more than tripled, increasing from US\$1.296 billion in 2008 to US\$ 4.319 billion in 2015 (PMA 2015a). By comparison, in the previous 8 years during the second Palestinian *intifada* [uprising], public and private debt *combined* rose by just under US\$500 million (from US\$1.346 billion in 2000 to US\$1.829 billion in 2008).

Private debt has grown rapidly since 2008 because this was the year when a national credit registry was launched and legislation was passed that restricted the proportion of deposits banks could move outside Palestine. These changes both enabled and forced banks to create new credit markets within the Occupied Territories. However, rising demand or need for debt can be traced to problems, such as rising living costs, low salaries and the geographic concentration of the

Palestinian economy in the Ramallah conurbation (AUTHOR 2014), which have been largely caused by the Israeli Occupation. Since occupying the West Bank, Gaza Strip and East Jerusalem in 1967, Israel has prevented Palestinian economic development, or practiced what Roy (1999) terms de-development. Such practices continued after the Oslo Accords in 1993 as Israel retained control of all external borders (and thus the movement of goods and people in and out of the Occupied Territories). However, the Accords outsourced administration of the Palestinian population to the Palestinians themselves (in the form of the Palestinian Authority⁶), forcing Palestinians to become more economically dependent on not just Israel, but also the international community (Said 2000, Turner & Shweiki 2014).

Dependency and de-development have been co-constituted by the fragmentation of Palestinian space (Gregory 2004). The Oslo Accords separated the West Bank and Gaza Strip from each other and from the territories Israel captured in 1948. Sixty percent of the West Bank – demarcated as area C in the Accords – remained under complete Israeli military and administrative control. Palestinian cities and towns in the West Bank, designated areas A and B in the Accords, were to be nominally under Palestinian Authority administrative control. However, in practice these territorial islands remain under Israeli control, since their borders, subsurface (i.e. water aquifers) and the sky above them remain occupied (Weizman 2007), and since 2000 the Israeli military forces have entered these areas at will.

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⁶ The PA was created as part of the Oslo Accords, to act as an interim self-government body. Like other Oslo institutions, it continues to function in this limbo state.

This post-Oslo spatial fragmentation helps us understand why two thirds of all debt in Palestine is owed to banks in the Ramallah governorate (PMA 2015b). Public debt - money owed by the Palestinian Authority (PA) - is heavily concentrated in Ramallah because every PA ministry bar one is located in the conurbation. This concentration occurred because Israel prevented the PA from locating itself in East Jerusalem, the intended capital of a future Palestinian homeland. Levels of private debt are also much higher in Ramallah than elsewhere in the Occupied Territories because banks prefer to lend to salaried employees, which in Palestine means public sector workers in most cases. Public sector jobs account for 25% of all employment in an economy where unemployment was almost 27% in 2014 (PMA 2015c: vi). Occupation related movement restrictions within the West Bank, which intensified during the second intifada (2000-2007), forced many public sector workers to live close to their place of work (i.e. in and around Ramallah) rather than commute. High levels of migration to Ramallah from other cities and villages have increased demand for housing and consequently, increased house prices.

Another factor driving demand for debt is the failure of the PA to realise

Palestinian aspirations for an independent national homeland, and increasing
levels of inequality. These changes have resulted in the emergence of what

Taraki (2008a: 62) describes as 'a new globalized and modernist urban middleclass ethos... reflected in the sensibilities, dispositions, life projects, and practices
of wide sections of the urban middle strata'. One of the key aspects underpinning
this ethos is consumption of goods, educational and cultural services. In

Palestine, far more private debt is borrowed for consumption spending (US\$1.697 billion of housing, cars and personal loans in 2014) than activities such as business, consumer and general services (US\$840 million) that are conventionally thought to constitute productive investment (PMA 2015d). The rapid expansion of the banking sector has supported this consumption-driven economy. The number of banks and bank branches in Palestine has increased from seven banks with thirty-three branches in 1994 to sixteen banks with two hundred and fifty seven branches by the beginning of 2016 (PMA 2011: 85; PMA 2015e: 68; HSBC 2015). This expansion has been augmented by efforts to create financial subjects who are 'included' in the financial sector. The PMA has developed a National Strategy for Financial Inclusion (PMA 2014: 78-80), based on the G20 Principles for Innovative Financial Inclusion. There have also been a series of 'banking awareness campaigns', such as an 'Annual Child and Youth Banking Week', the promotion of e-banking, increasing awareness about consumer rights and a campaign 'urging the public to restrict their financial and banking activities to PMA-supervised financial institutions' (PMA 2014: 77).

Residents of Um al Sharayet are keenly aware of the growth of bank debt, and frequently made statements like:

One year ago, official statistics indicated that over 80% of people had borrowed from banks... I guess now it's more than 90%-95%.

(Abu Omar, 12th September 2013)

While many residents echoed Abu Omar's sentiments, PMA figures show that as of July 2014, only 4% of the working age population, or 9% of the actually working population in Palestine were in fact indebted to banks and microcredit institutions. Frequently heard assertions that everyone is indebted therefore seem exaggerated. However, they may register and reflect the much more extensive nature of debt relations beyond banks. In addition to loans taken from banks, participants owed money to family members, friends, work colleagues, employers in the form of salary advances or via company loan schemes, traders in the form of post-dated cheques, and building owners in the form of instalment payments for an apartment. These relations do not show up in the PMA's statistics, which consequently fail to register the full extent of the debt topologies that are currently emerging in Ramallah. This invisibility is important because these other kinds of debt are important not only in their own right, but also because they are often intertwined with bank debt as I show in the next section. Indeed, research in other contexts suggests that increasing debts to financial institutions multiply other debt ties (James 2015).

IfAs noted in the introduction, debt topologies have been able to expand in Ramallah because a range of geopolitical and economic factors has collectively impoverished the majority of people living in Palestine. Nevertheless, the debt topologies themselves must be actively made. One way in which this is done is through personal visits. Participants reported bank employees visiting them at their place of work and calling them at home to encourage them to take on debt. Such visits mirrored social visits by family members and friends where requests for loans were made. There are also a series of technologies, such as advertising,

which encourage and seduce families to purchase housing, cars and consumer goods on credit (see figure 1).

[INSERT FIGURE 1 HERE]

Deville (2015) develops the concept of 'lure for feeling', which describes the means through which debtors are cajoled into maintaining an affective connection with their unpaid debts. In a Palestinian context, advertising might be thought about as a lure for feeling that is designed to generate a connection between people and the promise of a 'good life' (Berlant 2012). In Palestine, this 'good life' has increasingly been defined in terms of consumerism rather than national liberation (Taraki 2008a). This promise in turn needs to be understood in relation to the draining, long term experience of living under Israeli Occupation, and the failure of the Oslo Accords to end it. The way in which people are invited to connect to this 'good life' is through bank debt.

Once established, debt topologies need to be practically maintained too. Moral discourse about honouring ones debts, and various technologies of securing debtors' income are key to accomplishing this in Ramallah. In the case of debts to banks, once a debt relation has been established, it is maintained through an automatic repayment system. As part of the debt contract, borrowers are required to allow banks to transfer up to 50% of their monthly salary to the bank, as soon as their salary is deposited in their account. If a debtor doesn't have a regular salaried job, they must name a guarantor who does in order for the debt relation to be established (Rami, 6th August 2015). Unlike accounts of

financial networks that emphasize the power of subjects and institutions to act at a distance, debt topologies with banks in Ramallah are powerful because they are tightly sutured to people through the salary payment agreement. This dissolves, rather than bridges, any distance between bank and borrower (Allen 2011a). This connection is not simply spatial either. The salary transfer agreement negates the future possibility of people refusing to pay, while the technical apparatus that transfers salaries into bank accounts ensures there is no moment or present tense in which people can act. The ties binding people to their debts are also maintained through a national credit registry, which banks, universities, car rental firms and telecommunications companies contribute to and access (c.f. Deville 2015). While at the time of the research there was no evidence of residents self-governing to maintain their credit rating (c.f. Lazzarato 2012, Kear 2016), the credit registry ensures creditors can know whether people have (or have had) bank debts.

Reminders to pay and moral discourses about honouring one's obligations maintain debt topologies with family members and friends. Frequently these moral discourses (about what is the 'right' thing to do) are articulated as self-imposed social pressures, such as the claim that '[a]lthough my brother will forgive me if I don't pay him back, I can't just let him suffer' (Abu Tariq, 31st August 2013). Self-imposed pressures stem from a broader set of social understandings about expected forms of behaviour, as Shadi explains: 'In the social rules, it's considered failing, it's depressing for the person.' (Shadi, 26th August 2013). In cases where participants were indebted to individuals who were neither kin nor friends, threats are used to ensure debts are honoured. For

instance, Abu Samir signed what amounts to a hire-purchase agreement with the owner of the apartment in which he lives. He told us '[i]f I don't pay two payments the owner will take the apartment and it will be considered rented [only]. The owner then will give me back my money within 2 years.' (Abu Samir, 1st September 2013). These moral discourses and practices exist amidst a broader discursive sphere where renting property is considered highly insecure, but many people, particularly older residents, judge becoming indebted to be wrong. As Abu Samir's mother-in-law put it: 'It's better to cook the meal without salt than to borrow it from others' (Abu Samir, 1st May 2013). Hence, while residents of Um al Sharayet are acutely aware of the difficulties presented by the high cost of living, many are not necessarily sympathetic towards debtors.

The diversity of practices through which debt topologies are created and maintained in Ramallah illustrates the diversity of debt topologies themselves. In the next section I return to the point noted earlier that these multiple types of debt do not simply sit alongside each other, but are entangled with each other, with other topologies and topographies to create specific debt ecologies. These debt ecologies are generative, transforming the relations that constitute them.

5. Entanglements of debt

The interaction between different topological relations can transform those relations, creating stronger connections, disconnections, substitutions and separations. For instance, Ziad's brothers loaned him money so he could pay his university tuition and get married. Ziad suggests that this financial debt affirmed and intensified the social bonds with his brothers.

Ziad: When I told my brothers about this debt, they all supported me.

...

Dareen: So you depended on the social relationships to solve your financial obligations?

Ziad: Yes, I trusted them. They can't leave me alone.

(Ziad, 26th September 2013)

Other topological entanglements pull subjects in different directions. Enforced loan repayments to his bank mean Mohammad's remaining salary is not enough to meet his monthly expenses. In order to cope he borrows money from friends, but this may create social conflict with them.

I have to pay the [bank] loan and because of that I have to take money from my friends. In addition problems might occur before I take the money, when I ask my friend to give my money and he says no. That creates a problem between us.

(Mohammad, 25th August 2013)

He also provided another example of the ways in which different topologies can be antagonistically related.

I am talking about personal loan guarantors, and when the person who takes the loan doesn't pay the bank, it will be taken from the guarantor's salary, and the problems will begin between them.

These examples illustrate how bank debt can weaken and sever other relations. However, in contrast to other accounts that emphasize the power of topological relations to act at a distance (Allen 2011a), in Ramallah bank debt is able to transform other relations because it is so tightly sutured to people through the salary payment agreement. This topological connection is not simply spatial, but also temporal. The salary transfer agreement negates the future possibility of people refusing to pay, while the technical apparatus that transfers salaries into bank accounts ensures there is no moment or present tense in which people can act.

In other situations, one topological relation maybe substituted for another. Ali borrowed money from his friend to get married so he wouldn't have to borrow from his father. He suggested this not only strengthened his friendship, but also allowed him to establish his independence from his father.

I did not want anyone in my family to tell me that I need to pay him back his money! I wanted to avoid family conflicts. I was very young and they expected me not to succeed in my marriage. I wanted to prove to them that I will not fail and that things will be ok.

(Ali, 28th August 2013)

In this case, the substitution of one bind for another was a means of loosening Ali's bond with his father. Borrowing money from someone he worked with,

rather than the family he lived with, was mirrored by Ali's move out of his family home to his own apartment when he got married. As with Ziad above, Ali's relations with his friends strengthened as a result of this debt. However, Ali continues to have a good relationship with his father. Fadi told another story of substitution in which an existing social tie took the place of a debt topology with a bank.

My sister helped me with 70,000NIS for repairing the house and for the wedding. Also, I tried to borrow from the bank, but they refused... So I took money from my sister again.

(Fadi, 17th April 2013)

There were also various instances where residents sought to keep debt topologies separate from other relations.

We don't borrow from friends or relatives. It's better not to borrow from them to avoid conflicts.

(Im Tariq, 11th June 2013)

As Im Tariq notes, separation is often practiced because residents are fully aware of the effect debt ties may have on other relations.

5.1 Debt ecologies in Ramallah: topological and topographic entanglements
I have argued that debt topologies are entangled with topographic spaces to
create debt ecologies. Examples of intensification, disconnection, substitution

and separation illustrate the dis/entanglement of relations that are simultaneously economic, social, temporal and spatial. The geographies of connection (including disconnection) implied in these relations become clearer when we examine how debt topologies entangle topographic spaces to create specific debt ecologies. This section unpacks this latter term by exploring the ways in which topologies and topographies interrelate, beginnings with the constitution of the topological by the topographic. I argue tThere are at least three types of topographic spaces that co-constitute and transform debt topologies: topographies that govern possibility of debt; those that create demand for debt; and topographic spaces in which debt topologies are created.

In Palestine, the possibility of becoming indebted to a bank is governed in part by the jurisdictional boundaries of the PA, particularly through practices of law and policing (c.f. Harvey 1982). Both these practices instantiate and maintain territorial boundaries that demarcate where contracts are enforceable and who will enforce them (Graeber 2011, Christophers 2013, Lazzarato 2015). In the context of Palestine, these boundaries are largely determined by the Israeli Occupation, particularly through the division of territory and jurisdiction in the Oslo Accords and the construction of the Occupation wall. Since the Oslo Accords granted the Palestinian Authority civil jurisdiction in what were defined as areas A and B, these are the only areas where banks based in Palestine will make mortgage loans. This is not simply so they have recourse to (quasi-)state jurisdiction, but also because of the risk of property destruction in area C, which

is under complete Israeli control.⁷ Furthermore, even within areas A and B, banks will usually only offer mortgage loans when the property is registered with the *Tabo*, the land registration agency. The topographic spaces created by the Oslo Accords also demarcate the area in which the PMA can regulate (e.g. through enforceable banking laws) and ensure the smooth functioning of the debt economy (e.g. through its credit registry).

Other debt topologies are not governed by these topographies in quite the same way. Familial, community and work relations determine whether and how debt topologies are created, maintained and ended between individuals and families. For instance, Im Ghassan borrowed 1000 JD from her brother in Jordan, something she wouldn't be able to do from a Jordanian bank. This loan was taken to solve what she described as her family's 'financial crisis', caused by high interest repayments on a loan her husband took from a bank in Palestine. Im Ghassan also told us that while she borrowed money from her brother, her husband's relatives who live in the West Bank don't lend them money (Im Ghassan, 31st August 2013). Even though they share the same topographic space as her husband's family (although this depends on whether Israeli checkpoints that restrict movement in the West Bank are operating), this does not govern the production of debt topologies as it might for bank loans.

Commodities (i.e. topographic objects) such as housing, cars and household items, create the demand or (in the case of housing) need for debt in Ramallah.

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⁷ In 2015 the PMA incentivized bank lending to Palestinians living in East Jerusalem by discounting those loans from the bank's capital requirements (Abu Jazar 2015). East Jerusalem was separate from the rest of the West Bank during the Oslo Accords. Although inhabited by Palestinians and claimed as the site of a future Palestinian capital, it is fully controlled by Israel.

Today an apartment costs 100, 120, 150,000 dollars. And the middle classes just have \$20,000. And the poor just have their salaries.

(Abu Mahmoud, 28th August 2013)

It is only for the house. I oppose taking loans for marginal needs. I needed to buy a house and I got this house. I can't take loans for other things.

(Abu Samir, 1st September 2013)

As noted earlier, this is part of a more extensive set of geopolitical and economic processes of colonisation. Taraki (2008a) argues that the emerging landscape of Ramallah also embodies and reflects a desire for a 'modern' lifestyle (see also Abourahme 2009). Sometimes this modernity has the character of a necessity or a demand too.

You see, 10 years ago, social obligations weren't that big. Today if one of my relatives gets married, it will cost me between 1000-2000 NIS, besides what I have to buy for my family. When I go to my village I have to buy clothes for 5000NIS, for the wedding and Eid. Ten years ago, people weren't like today, where they observe what you wear.

(Mohammad, 25th August 2013)

Third, topographic spaces are sites in which debt topologies are formed. Bank branches, work places and homes are all sites where residents of Um al Sharayet have become indebted. Abu Omar decided to move to Ramallah, which led to him

become indebted, during the second *intifada*. This decision was made in a wedding hall. during the second *intifada*.

We were invited to a wedding party held in Ramallah, and we endured a lot of the checkpoints. Reaching the city was very complicated, and when we arrived we were very late and totally exhausted... We started thinking of returning to [village name omitted] the moment we arrived! I thought the solution was that we have to move to Ramallah as soon as possible! We took the decision then and there.

(Abu Omar, 30th May 2013)

Abu Omar subsequently borrowed money from his two son-in-laws to build a house. Hence while he did not actually become indebted in a wedding hall, his story illustrates the diversity of topographic spaces in which people can potentially become-indebted.

If various topographies govern the possibility of, and create demand for debt, as well as becoming sites in which debt topologies are established, then debt topologies also constitute and produce particular topographic spaces in turn. In the Ramallah conurbation, topographies of residence, urban space and mobility are increasingly being produced through debt topologies.

Debt makes owner-occupation possible for many residents of Ramallah, and debt is also used to fill those homes with televisions, tablets, power tools, kitchen utilities and various other commodities. As such debt has become a key means

for enabling some residents to live 'modern' lives (Taraki 2008a). For migrants who have moved from other parts of the West Bank, the 'modern' is most clearly articulated in relation to village of origin.

When I come back home, my mum keeps telling me stories about people lives and activities, and that X did that, and Y wants to do this. In Ramallah, you don't see these things. People don't interfere in your personal life. I can do and say whatever I want... Life in a city is better than living in a village. The services are better for sure. Education, medical treatment, entertainment all of these things are better.

(Dina, 5th May 2013)

While research participants rarely used the term modernity, Ramallah is widely understood as a distinctive space because of its cultural heterogeneity, the relatively superior provision of services and infrastructure, and greater personal freedoms. These characteristics of the urban environment are all partially enabled by topologies of debt that enable migrants to buy otherwise unaffordable housing in Ramallah, and furnish those homes with what are considered the appropriate or necessary accourtements.

Debt topologies also affect topographic mobilities. Some residents of Um al Sharayet suggest they are not able to visit their families as often as they would like because of reduced income tied to debt servicing (c.f. AUTHOR 2014b). For instance, Nasser, who has a large mortgage for his apartment and smaller debts to friends, visits his hometown very infrequently now. This has affected his

children's mobility, which in turn has transformed their social connections relationships with their extended family.

[O]n Saturday, I visited Tubas, my town, in order to see my brothers, my mother and my sisters. I spent one day there, but my sons didn't go with me. This plays a critical role in educating them that the obligations will be less for them. Not for me, for them. Because they are thinking in a different way, the new generation. They think that the obligations of life are becoming too hard. It's difficult. For this reason, they are not taking care of these obligations, as before. For this reason, the obligations will become less, for them. But for me, no. I think it's still the same.

(Nasser, 10th September 2013)

Nasser's account also illustrates how the debt ecology he is part of, whichies entangles financial forms of debt and non-financial forms of obligation, is. Such entanglements are continually in motion, and generative. They are It is changing his children's social obligations ory relations.

6. From financial ecologies to debt ecologies

Debt ecologies are generative, transforming the relations that co-constitute them. In some cases this leads to financialisation, understood as 'the growing power of money and finance in contemporary processes of economic, political and social change' (French et al 2011:814), and the creation of financial subjects (REF). This 'growing power' can often be damaging or destructive. For instance,

enforced loan repayments to his bank mean Mohammad's remaining salary is not enough to meet his monthly expenses. In order to cope he borrows money from friends, but this can create social conflict with them.

I have to pay the [bank] loan and because of that I have to take money from my friends. In addition problems might occur before I take the money, when I ask my friend to give my money and he says no. That creates a problem between us.

(Mohammad, 25th August 2013)

Mohammad also provided another example of the ways in which a debt topology tying a person to the bank and a social relationship with a guarantor can be antagonistically related (c.f. Mann 2002, Kear 2016).

I am talking about personal loan guarantors, and when the person who takes the loan doesn't pay the bank, it will be taken from the guarantor's salary, and the problems will begin between them.

(Mohammad, 25th August 2013)

However, in some cases financialisation may secure and strengthen social relationships rather than weaken them. Ziad's brothers loaned him money so he could pay his university tuition and get married. Ziad suggests that this debt affirmed and intensified his social bonds with his brothers.

Ziad: When I told my brothers about this debt, they all supported me.

...

Dareen: So you depended on the social relationships to solve your financial obligations?

Ziad: Yes, I trusted them. They can't leave me alone.

(Ziad, 26th September 2013)

While these examples illustrate the power of debt ecologies to shape other types of social, economic and political change, this is a contingent rather than necessary outcome. In other cases, debt ecologies are reworked and even subsumed by other obligations, commitments, and desires. For instance, Fadi told us about a situation where a financial debt was, through necessity replaced with a non-bank debt topology.

My sister helped me with 70,000NIS for repairing the house and for the wedding. Also, I tried to borrow from the bank, but they refused... So I took money from my sister again.

(Fadi, 17th April 2013)

However, other residents actively refused to create debt topologies because of moral beliefs (such as Abu Samir's mother-in-law, quoted earlier in the paper), or to ensure the endurance of good social relationships.

We don't borrow from friends or relatives. It's better not to borrow from them to avoid conflicts.

(Im Tariq, 11th June 2013)

6. Conclusion: what difference does it make to think debt spatially? This paper has argued that debt is a topological spacing, which connects different people, communities, institutions and sites. These debt topologiescal spaces are entangled with other topological in and topographic spaces to create what I have termed debt ecologies. These debt ecologies are dynamic processes that are themselves generative, as the interaction of different topologies and topographies transforms those relations. The broader goal of this argument has been to emphasize the active role space plays in co-constituting debt. The constitutive force of debt space includes not only things like territorial banking regulations, laws and policing (Christophers 2013, Dodd 2014), but also the generative intensities of home, family, neighbourhood and migratory mobilities. I have developed this argument through empirical research Empirical research in Ramallah, avoiding spatial fetishism by outlining how debt ecologies arehas illustrated how debt ecologies are further not simply financial, but also entangled with other geopolitical, economic and cultural histories and geographiesprocesses.

Allen (2011b) argues identifying certain spaces or processes as topological is inadequate on its own. Rather we must ask what difference thinking something topologically makes. Martin and Secor (2014: 435) suggest something similar when they urge enquiries into the rules of connection, disconnection, and transformation governing specific topologies. In this concluding section, I want to further draw out the methodological, political and theoretical implications of thinking debt topologies and ecologiescally.

Methodologically, Since, by definition, topological space cannot be measured geometrically, topologies but must be gauged as and through intensities (see Stewart 2007, Jacobs 2012, Simone 2014, AUTHOR 2014b, McFarlane forthcoming). In other words, while statistics about debt are useful for giving some sense of the extent of debt topologies with banks and other financial institutions, other practices and types of measurement such as ethnography are needed to fully account for the breadth, diversity and complexity of debt ecologies in Ramallah and elsewhere (c.f. Kear 2016 on credit scoring and measuring creditworthiness). In this paper I have done this by using qualitative ethnographic research to augment statistical accounts of debt. This approach brings into view a far greater number of debt topologies, and consequently enables an appreciation of the complexity of debt ecologies. For instance, Im Ghassan's debt to her brother in Amman, extends the debt ecology her family are entangled in well beyond both their bank in Palestine and the topographic boundaries of the Occupied Palestinian Territories. PMA statistics register neither of these spatial-temporal relations. This methodological shift expansion also has political implications. Employing an expanded methodological approach would enhance critically inclined scholarship that seeks to assist efforts to challenge, undo and prevent the harm caused by debt. For instance, pPolicy makers and bankers in Palestine frequently use PMA statistics to not only describe and delimit but also to downplay the full extent of debt. In so doing, they fail to appreciate the hardship and violence many debt topologies cause. The problems Mohammad faces borrowing money from friends and colleagues, which are themselves a result of his bank loans, are a good example of this

invisibility and ignorance. Ethnographic research also draws attention to lively practices that co-constitute, albeit unequally, the geographies in which Um al Sharayet's residents are entangled. While anthropological studies of debt begin with such practices (Bear 2015, James 2015), geographies of finance at best rarely acknowledged, and at worst actively effaced such practices (although see Morris 2016).

A second implication of thinking debt topologically is how we think about the power of debt and the ways it operates spatially. Allen (2011: 292) argues that thinking topologically brings to light '

Power-topologies, as a concept, is an attempt to come to grips with... crosscutting arrangements of power; one which draws attention to the diversity of registers in which power is practised by institutions and actors alike to make their presence felt..., as emphasized, through relations of proximity and reach.' As such, the mutable geometry involved is less concerned with the shape and size of an actor's capabilities, or their inscribed position, and more interested in what works, say, to hold authority in place despite being stretched globally or the kind of relationships that enable domination to be exercised close up at a distance, and how, for example, some campaigning groups are able to exert an influence and reach way beyond their means and resources. (Allen 2011: 292).

The salary transfer agreement, which enables banks to ensure they are repaid, is one example of power being 'exercised topologically, by dissolving rather than bridging the distance between here and there (or between bank and

borrower)close up at a distance' (Ibid). Thinking debt topologically brings to light the ways in which debt relations contribute to the shaping of space, by acting as a means of dis/connection. In the P

Gregory (2004: 135) provides another relevant example in his discussion of the ways in which Palestinians and Palestinian land are included in, and excluded from, Israel:

Israel has redistributed the splinters of Palestine into a series of abstract categories located in a purely topological imaginary. These redistributions – or "spacings," since they have performative force – possess such consistency and systematicity that they amount to a concerted project to fold the sacralisation of the land of Israel – and particularly of "Judea" and "Samaria" – into the reduction of the Palestinian people to so many homines sacri.

Examining debt topologies helps us understand power relations within

Palestinian context,e. mMuch has been written about the fragmented nature of
space in the Occupied Territories (Halper 2000, Gregory 2004)., and Rrecent
work on Ramallah uses metaphors like Bantustan, bubble and prison to describe
the city and name the topographies of inequality that have developed between
different spatial fragments within Palestine (Taraki 2008b, Abourahme 2009).
However, more work is required to tease out thedebt topologies reveal the
attendant topologies of inequality, particular in terms of the unequal connections
between different places. For instance, mMany debt ecologies in Ramallah
entangleindebted residents are internal migrants who have moved to live in Um
al Sharayet, while maintaining strong connections with their families elsewhere.

Stories like Nasser's provideThere is evidence that some of these family connections relationships are waning. TheseSuch topological forms of disconnections are different from, but intertwined with, the topographies that make Ramallah a prison or bubble. For instance, topographic barriers like checkpoints that prevent physical movement become entangled with limited finances, waning family and social relationships. However, many participants' commitment to maintaining their family relations and their desire for green space (of which there is very little in Ramallah), actively work against the topographic limits to their mobility. Ramallah's reputation (or 'fame', see Munn 1986) as affluent, something that debt has partially enabled, is another topology that can have other negative consequences for connects migrant families who have moved towith relatives in other the places, sometimes with city.negative consequences.

Of course, they think I have a lot of money. That's the first thing. Because it's not easy to buy a US\$ 100,000 apartment to live in, when the average salary for an employee is \$1000 or less.... The maximum is \$1000. The average is \$700 or \$800. Maybe even \$600 or \$700, on average, for employees. So the first thing they think is that you have a lot of money. So they start to borrow money.

(Waleed, 5th May 2013)

As this discussion demonstrates, debt ecologies draw attention to the embodied, intensive heterogeneities (Simone 2014, AUTHOR 2014b, McFarlane forthcoming) that animate life in places like the West Bank,

which are so often effaced by homogeneous geopolitical representations of place (AUTHOR 2011).

Third, there are broader theoretical implications for the geography of debt theory. In this paper a theorisation of debt's spatiality has been embedded in and explicated through research in Palestine. This is not a 'general theory' of debt's geography (c.f. Lazzarato 2012, 2015). Rather, the mode of theorisation I have employed responds to postcolonial concerns about the locatedness of Theory (Robinson 2006), and the need to generate more theory from and through Southern contexts. This approach recognises how differently extensive spacings of debt become entangled and embedded within topographic landscapes to create specific debt ecologies. While I have not had the space to explore the ways in which international banking standards and the conditionality of foreign aid have impacted the work of the PMA and PA, the conceptual argument I have made can account for how particular, financial ways of thinking about and 'practicing' debt have become increasingly extensive, without assuming that those more extensive connections and practices are all encompassing. Further empirical research is necessary to trace the mobility of these rationalities and practices, the ways they are translated and transduced rather than diffused and implanted (Jacobs 2012), and the policy and institutional practices that they become embedded in (c.f. Collier 2011). However, similar attention needs to be paid to less extensive debt topologies, and non-financial practices such as the social relationships that are crucial for understanding debt in Ramallah and elsewhere. Only paying attention to more extensive debt topologies and prominent sites, such as banks and other financial institutions in financial

centres, risks identifying what is general across a range of cases without examining how specific sites are ensembles of multiple processes, producing distinct debt ecologies through their recombination (c.f. Collier 2011). These ecologies are financial, but also, simultaneously, social, cultural, historical and geographical. TWorking with the Palestine case emphasizes the entanglement of bank debts with other kinds of debts and obligations. This is something that is rarely examined in existing geographies of debt and finance, which are primarily conducted in global North contexts. Theorising from Palestine thus opens up questions for future research about the role obligations and mutuality play elsewhere in the world.

Finally, while examining particular topographies is vital for generating different conceptualisations of debt (Shipton 2007), thinking debt topologically also envisions an extensive geography that is more than a mosaic of contexts. While I have not had the space to explore the ways in which international banking standards and the conditionality of foreign aid have impacted the work of the PMA and PA, the conceptual argument I have made can account for how particular, financial ways of thinking about debt have become increasingly extensive across the world, without assuming that those more extensive connections are all encompassing. Further empirical research is necessary to trace the mobility of these rationalities, and the policy and institutional practices that they become embedded in (c.f. Collier 2011). Thinking debt topologically provides a language for describing how differently extensive spacings of debt become entangled and embedded within topographic landscapes to create specific debt ecologies. This is not an argument for variegated debt: a singular

topological-relational type being extended and having 'variegated' effects or assuming 'different' local forms (Peck & Theodore 2007, Pike & Pollard 2010). Debt ecologies are multiple, not singular. Precisely because debt ecologies are generative and processual, they are translated and transduced, rather than diffused and implanted (Jacobs 2012). Furthermore, only paying attention to more extensive debt topologies risks identifying what is general across a range of cases without examining how specific sites are ensembles of multiple processes, that produce distinct forms through their recombination.

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