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Building productivism in rural China: The case of residential restructuring in Chengdu

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Abstract:

This paper theorizes the rural restructuring in China today as a transition towards productivism – characterized by both a productivist agricultural regime and productivist rural spaces. The rise of the productivist agricultural regime has spearheaded this transition for two decades; now the residential restructuring programs implemented under various policy schemes are also producing spaces of productivism in the new concentrated settlements. This paper, employing Halfacree's three-fold conceptual model of rural space and using the empirical case of residential restructuring in Chengdu, offers the first full analysis of the rise of productivism in all three facets of rural space. It demonstrates both how formal representations and planning practices are building spaces of productivism in a multi-scalar process and how this new spatiality is contested and modified by residents in their everyday lives, creating tensions and contradictions in the emerging productivist rural spatial regime. A key insight from this study is that the productivist transformation of residential space is constitutive of the broader transition to productivism and crucial to the rise of productivist agriculture.

Keywords: Rural restructuring, Productivism, Productivist agriculture, Residential resettlement, Agrarian transition

1. Introduction

Researchers of rural change in China have observed the following in villages across the country: rural households were relocated from scattered hamlets into concentrated settlements, while their old housing sites were either reclaimed into farmland or used for urban development; at the same time, their small plots of farmland were consolidated into large holdings and transferred to agribusinesses, which, together with industrial development, were turning farmers into wage workers employed in either large corporate farms or industrial parks (Chen et al., 2017, Gong and Zhang, 2017, Long et al., 2012, Zhan, 2017). How do we conceptually understand these interconnected processes of rural change? Are these merely a spatial redistribution of objects and activities, or do they also bring deeper changes to the spatial practices of rural localities and the everyday experiences in rural residents' socio-spatial relationships? More broadly, can we understand these and other related changes in rural China as constituting a major qualitative transformation in social structures and practices, and conceptualize it as rural restructuring?

Despite the steady growth of the geography literature on "rural restructuring" in China in the past decade, these questions remain. The mainstream in this literature are studies that use large-scale spatial data, GIS and statistical tools to investigate a wide range of changes under the broad rubric of "rural restructuring" – which has been descriptively defined as "the reshaping of social and economic structures in rural areas … produced by various, interconnected processes of change (Long and Liu, 2016: 387)." Yet, in the pursuit of comprehensively documenting rural changes in China, these studies, while empirically rich and technically sophisticated, remain theoretically underdeveloped and inadequately address three key conceptual issues.

First, "rural restructuring" was used loosely in this literature to describe almost any rural change in China; at best, it was understood in an empiricist way as "a process of optimizing the allocation and management of the material and non-material elements affecting the development of rural areas and accomplishing the structure optimization and the function maximization of rural development system (Long and Liu, 2016: 388)." (See also Long et al. [2016: 395] for a graphic illustration.) Without engaging the "restructuring debate" (Lovering, 1989) in the broader rural geography literature, these studies appeared unaware of the critique of the over-generous use of "restructuring" in describing rural change (e.g. Hoggart and Paniagua, 2001) and have not developed a holistic theoretical account of the multiplicity of causal forces affecting rural restructuring (cf. Marsden, 1995). Compare this to the scholarship on Europe: "rural restructuring" was used specifically as an analytical approach to theorize "a qualitative change from one form of social 'organization' to another (Hoggart and Paniagua, 2001: 42)".

Although various theoretical "start positions" led to divergent interpretations of the societal transformation – for example, from Fordist to post-Fordist production regime (Marsden et al., 1990), from a Keynesian to a neo-liberal state (Van Auken and Rye, 2011), or from landscapes of production to landscapes of consumption (Cloke, 2006) – it was on the basis of an underlying theoretical model that scholars then interpreted restructuring as qualitative change from one societal form to another and differentiated it from normal, on-going change (Hoggart and Paniagua, 2001).

Second, this literature also insufficiently conceptualized space and the spatial dimensions of rural change. For example, the studies of spatial restructuring in a recent 25-article special issue of the *Journal of Rural Studies* (2016, Vol. 47, Part B), devoted to "rural restructuring" in China, only looked at how political and economic processes shape either land use changes or the distribution of rural settlements, showing a surprising degree of "spatial indifference" (Halfacree, 1993: 26) – space is treated as the residue of structures, a static container in which other processes take place, and is reduced to only the distances between objects or land use patterns.

Last, this literature also lacked a clear conceptual understanding of the "rural" in the Chinese context. Based on a descriptive understanding of the rural, these studies were primarily interested in selecting parameters to define the rural and then documenting the changes to it. For example, Li et al. (2015) developed a "rurality index" for all Chinese counties by defining rurality based on a basket of indicators of socioeconomic backwardness, including one about the "percentage of population residing in *rural* areas" – in other words, using what they "already intuitively consider to be rural" (Halfacree, 1993: 24) to define rurality. Similarly, Long et al. (2011) constructed a territorial typology of rural areas in China based on an index of "rural transformation development", which comprises 17 indicators measuring various aspects of "rurality" such as "rural–urban income gap" and "rural consumption level". Under these kitchen-sink approaches, localities as diverse as the highly developed and agriculturally productive Yangtze River Delta and the sparsely populated and under-developed areas in Xinjiang, Tibet and Inner Mongolia ended up with the same low degree of "rurality" (Li et al., 2015: 19) and a high "rural transformation level" (Long et al., 2011: 1100). Without conceptually understanding the ideational representations, material processes and everyday practices that produce rurality, these measures of socioeconomic differences across localities produced statistical artifacts that offered few substantive insights.

In summary, conspicuously missing from these geographical studies of "rural restructuring" in China is the theoretical conceptualization of "rural", space, or "restructuring". Despite the impressive amount of data accumulated on various aspects of rural change in China, without a theoretical model of the rural socio-economic structure and spatial formation, this literature has not offered us a holistic account of the social transformation that rural restructuring has produced in China. While changes in rural China are indeed multifaceted and the processes multi-scalar, the transformation that constitutes rural restructuring becomes visible once we adopt a theoretical perspective that highlights the two primary forces shaping the restructuring – state processes (both local and central) and capitalist market relationships. To address these gaps, this study first brings in a conceptual framework – Halfacree's (2006) three-fold model – for understanding rural space and then, through analysing the political-economic dynamics that give rise to a productivist agricultural regime and productivist spaces, theorizes rural restructuring in China as a transition to productivism.[1]

Some previous studies have similarly used a theoretically informed approach to understand rural change in China. Both Chung (2013) and Lu and Qian (2020), for example, conceptualized rurality in China as consisting of material, ideational and practised dimensions and direct their empirical analysis to, respectively, the persistence of rural practices in spite of urbanization (Chung, 2013) and the material agency of rural architecture in producing social relations and cultural meanings (Lu and Qian, 2020). Similarly drawing from Halfacree's three-fold model of rural space, Hu et al. (2019) proposed a structure of the rural space system that comprises cultural, social and material spaces. Chen et al. (2017: 85), using Bell's (2007) "two-ness" of rural life to conceptualize a "rural plural" comprising both material and ideal moments, identified two "regimes of value" – productivist logics and environmental logics – that motivate state interventions and shape rural changes.

Further extending this theoretical agenda, this paper proposes that the overarching political-economic trend in rural China today is the rise of a productivist regime that both organizes agricultural production and regulates rural spaces to serve the goals of maximizing food production for the state and securing surplus accumulation for capital. This conceptualization of rural restructuring as a transition towards productivism then prompts us to see rural residential resettlement as the construction of productivist spaces. I then use Halfacree's three-fold model of rural space as the analytical device to investigate the transition to productivism as a multi-pronged and contested process that involves changes in ideational representation, material conditions and everyday practices as well as tensions and conflicts between these changes. My empirical data were drawn from the rural residential restructuring programs in Chengdu, the capital city of Sichuan Province in southwest China, where policy concessions granted by the central government after the 2008 earthquake and local institutional innovations had allowed these programs to be carried out across the entire region and to have a transformative impact. The qualitative data used in this study were collected through interviews with government officials and rural residents and observations in the New Rural Communities (NRC) during two field trips to Chengdu, one from April to May 2014, the other in April 2015.

This study contributes to rural geography in three ways: first, extending the framework of (post)-productivism to theorizing rural restructuring in a developing country; second, providing the first empirical case study of a transition towards rural productivism, as the literature on (post)-productivism has only examined the transition to post-productivism in the advanced economies; and third, studying how the restructuring of residential spaces is an integral part of the transition to productivism.

2. Theoretical framework

2.1. Agricultural productivism and the agrarian transition in China

Since the 1990s, a central debate that framed the discussion on rural change has been the transition from "productivist" to "post-productivist" agricultural and rural spaces in advanced economies (Lowe et al., 1993; Ward, 1993; Wilson, 2001). In this lively debate, however, developing countries have been left out, as this postulated transition was largely an experience restricted to Europe and applying post-

[1] This is not to say, however, that rural restructuring in China is exclusively a transition to productivism. As Hoggart and Paniagua (2001: 42) cautioned us, restructuring does not involve the complete transition from one form to another. In China, recent studies have reported cases with post-productivist characteristics, driven by either second-home development or organic food production. The multi-faceted nature of rural restructuring in China will be discussed in the last section.

productivist theory to a developing world context has been highly problematic (Wilson and Rigg, 2003). Lacking such an overarching theoretical framework, the rural geography of developing countries, as the above critique of the rural restructuring literature mentioned and true to Cloke's (1989) criticism, remains relatively atheoretical.

In an insightful discussion, Wilson and Rigg (2003) cautioned of the dangers of transporting the theory of the post-productivist transition in Europe to the developing world, where both the historical experiences and the contemporary socioeconomic and political conditions of rural change can be vastly different. One of the problems they see in applying post-productivism in developing countries is that "the notion of pre-productivism is particularly applicable to the historical (and, in some cases, contemporary) agricultural situation in much of the South", and, partly as a result of this, the incorporation of these countries into the global agro-food system usually results in "their inclusion within broadly *productivist* rather than post-productivist agricultural regimes" (693, italics added). In other words, if we assume there is a (problematic) linearity in rural change, then for developing countries, the more relevant transition is not from productivism to post-productivism, but from pre-productivism to productivism.

Interestingly, while transplanting "post-productivism" to the developing context has been problematic, no study has examined the applicability of a theory of transition to agricultural "productivism" – at least the modern, capitalist variant – in developing countries. In fact, the very concept of productivism was only brought into being with the discussion of the transition to "post-productivism" (primarily in the UK) and thus defined retrospectively from a post-productivist vantage point – as a "mirror image" to the latter (Wilson, 2001: 94). The rise of agricultural productivism, therefore, has neither been studied empirically in the European context nor in the developing context.

The experiences of agricultural development in developing countries – specifically, the stalled agrarian transition in many cases – is probably a key reason behind the absence of studies of agricultural productivism in that context. Despite the gains obtained during the Green Revolution, growth in agricultural productivity under the more recent neoliberal globalization has stagnated and the development of capitalist agriculture – through intensified technology use, agro-industrialization led by agribusinesses, specialization driven by market competition, while aided by strong policy support from the nation states committed to food self-sufficiency – has stalled in most developing countries. As Byres (1995: 509) summarized, there has been "the continued existence in the countryside of poor countries of substantive obstacles to an unleashing of the forces of generating economic development, both inside and outside agriculture." Thus, to put in productivist terminology, a productivist agricultural regime, while being the goal pursued by many developing countries, was stillborn in most cases. Rural change has instead been dominated by a deagrarianization process driven by land dispossession, a decline of agriculture and rural livelihoods, and labour exodus into precarious urban wage (un)employment (Bryceson, 1996). To the extent there is any growth of productivist agriculture, it has mainly been driven by the expansion of transnational agro-capital into these countries that incorporates their agriculture into the productivist global food regime, as mentioned above (Wilson and Rigg, 2003).

Although this stalled agrarian transition may indeed be the majority experience among developing countries, the danger lies in treating it as universal and overlooking the diversity and unevenness that are inherent in the development experiences across countries. Studies have shown that the transition to capitalist agriculture has been unfolding in various countries, albeit in uneven ways (Akram-Lodhi, 2004; Lerche, 2013; Oya, 2007); but nowhere is this more sustained and successful than in China.

If simply understood as state-supported productivity growth in agriculture, then "productivism" may have a long history in Chinese agriculture. Wilson and Rigg (2003), citing examples from Bray (1986), date it to as far back as the Song Dynasty in the 11th century. Such a loose treatment of the term productivism, however, may drain the analytical sharpness out of the concept and inadvertently deny the existence of any "pre-productivist" agriculture. Even looking at the second half of the 20th century, it is still debatable whether we can apply the productivist label to the collective agriculture of the Mao era, when specialization, commercialization, and capitalization all remained low despite the significant increase in agricultural productivity gained through the state's coordinated efforts, or the smallholding agriculture under the Household Responsibility System during the 1980s and 1990s, when the state dialled down its support for agriculture and created a rural crisis through excessive taxation. Our interest here is in the contemporary era, and for that, we know with confidence that a productivist agricultural regime, in its modern and capitalist form and as defined in the Western context as "a commitment to an intensive, industrially driven and expansionist agriculture with state support based primarily on output and increased productivity (Lowe et al., 1993: 221)", finally rose to dominance in the new millennium.

The rise of this new agricultural regime, which the government's official policy calls "agricultural modernization", has been extensively documented in the agrarian studies literature (Zhang and Donaldson, 2008, 2010). Although the term "productivism" has not been used in this discussion, if we go through the long list of dimensions of productivism that Wilson (2001: 80) compiled, except for a few ideological dimensions that are incompatible with the historical background and political tradition, China ticks almost every box. The central hegemonic position of agriculture in rural China today has been repeatedly reaffirmed by the central government's annual No. 1 Policy Document, which sets the political priorities for the country and, for the past two decades, has consistently been exclusively focused on agriculture (Zhang et al., 2015). The central state has increasingly seen the rapid pace of urban and industrial development as a threat to agriculture and to the prosperity and stability in the countryside and has tried to counter that with successive national policy programs such as Building a Socialist New Countryside, Poverty Elimination, and most recently, Rural Vitalization. Keeping its strong commitment to the long-held national strategy of food self-sufficiency in the face of rapid urbanization, the central state has not only set a hard "red line" of 120 million hectares in its national land use Master Plan for farmland preservation, but also employed a "spatial fix" to move agricultural production from developed coastal areas to inland provinces (Zhan and Huang, 2017). The central state's fiscal policies on agriculture went through a radical shift in the 2000s, when it abolished all agricultural taxes nationwide in 2006 and began to pump subsidies and other financial supports into agriculture. Most of these financial supports aim to increase agricultural output by, for example, encouraging the use of farm machines, bio-technology and chemical inputs, and the intensification and scale expansion in production (Gong and Zhang, 2017; Zhang and Zeng, 2021).

Institutional changes were also introduced to facilitate the entry of agribusinesses into agriculture, which the central state believes to be more capable of using technology to boost output and more responsive to policy incentives (Gong and Zhang, 2017; Schneider, 2017a; Yan and Chen, 2015). Land transfer has been pushed by local governments across the country to consolidate the scattered plots contracted to individual rural households into large contiguous tracts, ready for agribusinesses to take over (Trappel, 2015; Ye, 2015). At the same time, as the rapid expansion of agribusinesses is advancing agro-industrialization, smallholding farmers in China are also adapting to the new political-economic context by specializing and commercializing their household production (Huang et al., 2012; Zhang and Donaldson, 2008). These commercial farmers are now also put on the "agricultural treadmill" (Ward, 1993) of the productivist regime; they either need to keep up with the increased technology use and productivity growth of agribusinesses or get pushed out (Huang, 2015; Zhang and Zeng, 2022). Another key characteristic of the productivist regime – environmental externalities produced by the intensified and industrialized agriculture – is also manifesting itself in China (Schneider, 2017b). Finally, outwardly, China has also become deeply integrated into the global productivist food regime through

investment in land and production facilities in other countries, and corporate mergers and acquisitions (McMichael, 2020; Oliveira and Schneider, 2016).

Despite these profound changes in Chinese agriculture, to my knowledge, no geographer studying rural China has yet used the productivist framework to conceptualize this new regime. Instead, guided (or misguided?) by the post-productivist literature in the advanced economies – the dominant narrative in rural geography – researchers have been searching for the emergence of post-productivism in China (Huang et al., 2020; Wu and Gallent, 2021; Xie, 2021), without fully appreciating either the criticism of applying post-productivism beyond the European context (Argent, 2002; Wilson and Rigg, 2003) or the agrarian studies literature on agricultural modernization in China.

2.2. *Rural space: the three-fold architecture and productivism*

The notions of (post)-productivism were originally developed to theorize changes in agricultural development and its regulation (Lowe et al., 1993; Ward, 1993). As agricultural and non-agricultural land uses – under productivism and post-productivism, respectively – are the main venues through which rural spatial change occurs, the agricultural regimes of (post)-productivism also give rise to different rural spaces (Marsden, 1998). The notions of (post)-productivism, therefore, can be extended from conceptualizing agricultural regimes to describing rural spaces.

Halfacree's (2006) seminal essay has probably made the most concerted effort in developing the concepts of (post)-productivist rural spaces. There are two central insights in Halfacree's essay. First, to transcend the materialist and idealist dualism in conceptualizing rural space, Halfacree, borrowing from Lefebvre's (1991) conceptual triad in understanding spatiality, proposed a three-fold architecture of rural space, in which the material and ideational rural spaces intersect in practice. Second, wedding the theory of post-productivist transition to the tripartite model of rural space, Halfacree argued that we can think of two distinctive spatial regimes of productivism and post-productivism, respectively, in which all three dimensions of rural space are differently produced. This second insight in Halfacree's paper has received far less attention than the three-fold model, but it not only extends the notions of (post)-productivism from agricultural regime to rural spaces, but also offers an analytical approach for studying the transition between different rural spaces.

In Halfacree's work, he uses this approach to study the transition from "spaces of productivism" to "spaces of post-productivism" in the UK; this paper will apply this perspective in analysing the processes of producing productivist rural spaces in the residential restructuring programs in China. This approach in studying changing rural space directs our attention to two issues. First, rural space should be treated as a totality that, as the threefold model suggests, consists of 1) the ideational dimension of the formal representation of the rural as conceived space, 2) the material dimension of rural localities, inscribed through spatial practices on one hand and structuring everyday reality and perceptions of space on the other, and 3) the practiced dimension of the everyday lives of the rural, which can both symbolically appropriate or subvert the first and performatively inhabit and modify the second to create vernacular space. This requires researchers to look deeper than the material characteristics of rural localities and only studying rural restructuring through measuring changes in socio-economic variables, as the mainstream in the China literature has been doing (Li et al., 2015; Long et al., 2011). These material aspects – the distribution of rural settlements, construction of new housing, and transfer of land, for example – cannot be understood as given and static, nor in isolation from either the formal representations that have imagined this materiality as their objective expression, or the everyday practices and assemblage of social relations that can reclaim control or alter the meanings of the material fabrics of rural localities.

Second, the three facets of rural space do not always "cohere in a united front within a given place (Halfacree, 2006: 51);" instead, tension and contradiction both between and within the elements of rural space can be prevalent. This incongruity can be particularly salient in the state-led transition towards the productivist rural space, when a new set of formal representations of space, conceived and articulated by state planners, capitalists and academics, unleash new planning, production and consumption practices that restructure the material fabric of rural society and seek to dominate and control the experiences of everyday lives. This processual understanding of the multiple dynamics in rural spatial change alerts us to the indeterminate and emergent nature of transitional outcomes: the three dimensions of rural space can be "congruent and unified" when all cohere smoothly; but they can also be "contradictory and disjointed" or even "chaotic and incoherent" when formal representations are less hegemonic, diverse spatial practices persist or arise, and the everyday lives of the rural are disorderly or subversive (Halfacree, 2006: 52).

Next, the empirical part of this paper will focus on residential restructuring in Chengdu and the tension and contradiction between the three elements in this process of producing a productivist rural space. Two considerations motivate this selective focus on residential restructuring. First, the rise of productivist agriculture, the productivist vision motivating the policy and institutional changes in agricultural land use, as well as farmers' acceptance of or resistance to these logics, have been well-studied (Gong and Zhang, 2017; Ye, 2015; Zhang and Donaldson, 2008), while residential restructuring has not yet been examined as part of the productivist transition. Second, examining productivism in residential space helps to show that productivism is not just an agricultural regime, but a regime of rural space in its totality, only within which a productivist agriculture can be developed to the fullest – a point elaborated later.

3. Policy background

A key program driving residential restructuring in rural China is a policy initiative launched by the central government in 2004, officially known as *zeng jian gua gou* – pegging the increase in urban construction land to the decrease in rural construction land (Long et al., 2012). The thrust behind this policy – hereafter referred to as land-pegging – is to reconcile the conflicting demands on rural land from the growing urbanization on one hand and productivist agriculture on the other. Trying to find a new source of rural land to satisfy the seemingly insatiable urban demand for land while preserving enough farmland for agriculture, central policymakers turned to rural construction land, especially housing land allocated to rural households.[2] The land-pegging scheme gives the green light to local governments to obtain the much-coveted "increase" in urban construction land, which mostly has to come from converting agricultural land to urban use, if they can "decrease" the same amount of rural construction land by reclaiming that into farmland to compensate for the farmland loss.[3]

The reduction in rural construction land can most feasibly come from reducing rural housing land. Nationwide, rural housing land totaled 9.12 million ha in 2005 and accounted for 55 percent of all rural construction land; its size had also increased in the ten years prior to the implementation of the land-pegging policy (Song et al., 2008). Rural housing land has huge potentials for reduction. The rural settlement pattern results in low land-use density and over-construction of houses. For example, an illegal but widespread practice is having multiple

[2] Rural land in China, mostly collectively owned by villages, is divided into *agricultural land* and *construction land*; housing land is a sub-category of construction land, collectively owned but allocated to individual households as an entitlement for housing construction.

[3] Before this, local governments' hands were tied because of strict annual quotas, issued by their respective upper-level governments, on the amount of agricultural land that can be converted to urban uses.

houses for one family. The abandonment of houses due to rural depopulation has further increased the "wastage" in the use of rural housing land (Long et al., 2012). The intention of the land-pegging policy is that residential restructuring – relocating rural households to concentrated settlements and then reclaiming the old housing sites into farmland – can rationalize the use of rural housing land, develop new farmland, and thus allow urban expansion to proceed without threatening agricultural production.

Initially, the central government proceeded with this policy experiment very cautiously, only selecting five pilot provinces, including Sichuan, where Chengdu is located, and giving them a total quota of 49,000 ha for the five-year period from 2006 to 2010, plus imposing other procedural restrictions. Chengdu was first allocated a quota of just 467 ha, which increased to 667 ha in 2007. But an 8.0-magnitude earthquake on 12 May 2008 changed everything for Chengdu. The quake devastated several counties in Chengdu and created an urgent need for massive reconstruction. The then President of the country, Hu Jintao, personally instructed that Chengdu should use the land-pegging scheme to speed up post-disaster reconstruction; the Ministry of Land and Resources then exempted the use of land-pegging in Chengdu from all quotas and other restrictions for the next three years, giving the municipal government a blank check to create as much new urban construction land as needed under this scheme.

This golden opportunity was not wasted: in the three years from June 2008, Chengdu had converted a whopping 26,667 ha of farmland to urban use under the land-pegging scheme, and an even larger amount of rural housing land was reduced through rural restructuring.[4] By the end of 2013, according to the municipal government's own statistics, which I obtained from informants, a total of 1839 New Rural Communities (NRC) – the concentrated settlements to which households from scattered hamlets were relocated – were at various stages of construction, including 1219 already completed, all financed under the land-pegging scheme. These 1839 communities involved a total of 307,064 rural households and 987,496 rural residents. This means that this program relocated over one-fifth of Chengdu's total rural population (4.6 million in 2013) into these new residential communities. This massive residential restructuring, I argue, not only helps to deepen the productivist agricultural regime but also produces a productivist spatiality in rural Chengdu.

4. The productivist representations of the rural

Formal representations of the rural in the Chinese state's official ideological discourse have changed over time (Chung, 2013). During the Mao era, the rural was seen as the root of the Party and the origin of the revolution, a place where the experiences of hardship and oppression had given rise to revolutionary virtues and where urban dwellers could be sent for "re-education". This romantic imagination, however, was damaged during the later years of the Mao era. Once Deng Xiaoping started the Reform, which shifted the priority from class revolution to economic production, the revolutionary glory of the rural was replaced by the harshly negative conception of the rural as characterized by poverty and underdevelopment, which by the end of the century had culminated in a discourse of the *sannong* crisis (the three problems of agriculture, countryside, and farmers) (Chung, 2013).

The new productivist representations that emerged in the 2000s took aim at the conceived backwardness of the pre-productivist rural, succinctly characterized in the three aspects of *zang* (dirty), *luan* (chaotic), and *cha* (inferior) (Chung, 2013), as well as the low *suzhi* (quality) of its inhabitants who lacked the aptitude needed for the modernized agriculture and economy (Chen et al., 2017). In contrast, the Socialist New Countryside (SNC) national campaign, launched in 2006, set five goals for the conceived "new countryside" in a productivist vision: developed production, comfortable lives, civilized culture, clean and tidy villages, and democratic governance. The productivist logic here is palpable: to develop rural "production", the irrationality that permeates the rural space and rural lives – the uncivilized culture, disorderly villages, and chaotic governance – all need to be reformed.

The residential restructuring under the land-pegging scheme is a territorialization of the new productivist imagination of the rural. In Chengdu, it formed an integral part of the municipal government's broader strategy of "three concentrations" – a productivist spatial conception model that aims to concentrate rural population in NRCs, concentrate agricultural land and production in large-scale producers, and concentrate rural industries in industrial parks". Undergirding this model is a belief in large-scale and capital investment as the most effective means to maximize both agricultural output and the economic value of rural land.

The land-pegging scheme also introduces new elements into the state's formal conception of the rural. The state's existing land management system has created a functional abstraction of all rural land, classifying it into two representational categories of either construction or agricultural land. Under this scheme, the "definitional value" of a piece of land – being either construction or agricultural land – is the most important in regulating its use and exchange. Within the same definitional category, all parcels of land become commensurable and exchangeable; yet, the land across the two is not, thus protecting agricultural land from the relentless urban demand for more construction land.

This conceptual divide in the regulatory framework, however, precludes all exchange between the two categories, hinders the further deepening of the commodification of land, and runs counter to the productivist logic. Short of full liberation of land trading, which would threaten the other productivist priority of protecting agriculture production, the land-pegging scheme offers a compromise. It creates a further abstraction of the difference between agricultural and construction land in terms of "land development right" (LDR) and then turning LDR into an exchangeable commodity. Under the existing land classification scheme, the difference between the two types of land can be understood as the allocation of different packages of politically defined "rights": construction land has full land development rights and can be used for all purposes, whereas agricultural land has limited development rights, only usable for agriculture. The land-pegging scheme is basically allowing the LDR to be transferred across land categories and across localities: the rural housing land that is reclaimed into farmland in one place releases its LDR, which is then transferred to a piece of agricultural land in another place, allowing that to be developed for urban uses.[5]

Under this scheme, once LDR becomes a tradable commodity that can be detached from the physical land, then all rural land – construction or agricultural – becomes commensurable in terms of either having or lacking the LDR. The land has undergone a further abstraction, not only stripped of all concrete, place-based characteristics but also definitional differences, and is conceived just in terms of the abstract LDR, measurable in size. The definitional divide between the two categories has now been bridged; so has the spatial divide between two localities, which previously could not trade the immovable physical land, but can now trade the abstracted LDR.

This change in the formal conception of rural space is driven by a productivist logic that tries to maximize the economic value (for urban

[4] The total urban built-up area in Chengdu in 2021 is 142,160 ha, which means nearly one-fifth of that was constructed between 2008 and 2011 under the land-pegging scheme.

[5] There is also a financial side to this: the latter locality (a county for example) pays the former, which then uses the funds, as required by the municipal government, to construct the NRCs and provide public services in them. See Zhang and Wu (2017) for a detailed discussion on land-pegging practices in Chengdu.

capital) as well as fiscal revenue (for local states) that can be generated by urbanizing land use on one hand and protecting agricultural production and ensuring national food self-sufficiency on the other. This same productivist logic of the state also sees the rural settlement pattern and use of housing land as irrational and uneconomical; a problem to be corrected if urban and agricultural productions are to be maximized. This productivist logic, when implemented through the land-pegging scheme in Chengdu, also led to the creation of a network of institutions, as detailed in Zhang and Wu (2017), oriented to facilitating the commodification of land rights and the maximization of the economic value and agricultural output generated from rural land, giving rise to a productivist land regime.

The land-pegging scheme, while allowing the trade of LDR between agricultural and urban land, still maintains a demarcation between the rural and urban, based on agricultural land use and continues the productivist logic in defining the rural as a space reserved for agricultural production: once a piece of farmland is allocated for urban use, it is reclassified as urban. At the same time, for the land that remains rural – agricultural and housing land alike – the productivist representations also unleash new planning, production and consumption practices that restructure the material fabrics of rural localities, which are best observed in the NRCs built under the land-pegging scheme.

5. Productivist spatial practices in the New Rural Communities

The residential restructuring unleashed by the land-pegging scheme involves not only relocating residents to concentrated settlements, but also the production and regulation of space in these new settlements. The spatial practices that created the material reality of these new settlements are guided by a set of planning principles, which Bray (2013) has incisively summarized as “urban planning goes rural”, that are based on the productivist representations of the rural and believed by state officials and planners to be instrumental for achieving the aforementioned five Socialist New Countryside (SNC) development goals.

Wilczak (2017) gives an insightful discussion on how the urban planning visions of Chengdu – officially summarized as the “World Modern Garden City” – is explicitly influenced by Ebenezer Howard’s utopian planning ideals of the “Garden City”, but with a productivist twist when the term “garden” was translated, not as *huayuan* (flower garden) as in Singapore’s case, but as *tianyuan*, which evokes “an agriculturally productive plot” (114). Across the country, despite regional variations in the design and implementation processes, planning visions are highly similar to Chengdu’s, and the newly built settlements share a set of characteristics, including: residential concentration and separation from production, infrastructure provision, formal classification and separation of land uses, regulation or removal of “disorderly” spaces, and construction of new public spaces and public buildings (Bray, 2013; Wilczak, 2017). We will examine here in detail how these planning practices, as well as the production and consumption practices they gave rise to, have “secreted” (Halfacree, 2006: 50) the new productivist space in Chengdu’s NRCs.

5.1. *Residential concentration and spatial separation from work*

The rural settlement pattern in the Chengdu Plain was traditionally highly scattered due to its recent immigration history. Clusters of houses in bamboo- or tree-shaded areas in the middle of farm fields created what is known as the *linpan* (hamlets in the woods) landscape (Fig. 1); a pattern of spatial fragmentation (Abramson and Qi, 2011). A land-pegging project would relocate households from a number of *linpan* into one large settlement, the NRC, creating residential concentration, in which residents live in much greater density in semi-detached houses or even multi-story apartment buildings. At the same time, the relocation also spatially separates households from their farm fields and sever the extensive relations that their old residences used to have with the surrounding environment.

Fig. 1. A traditional *linpan*: a cluster of independent family houses, nestled in the woods, surrounded by farm fields. (Source: Author’s photo.)

While the residential concentration makes the provision of public services easier, the spatial separation of residence from the site of production, however, has implications on agricultural practices. Big Bend Village[6] is located in the urban fringe area – Pujiang County – to the southwest of the city centre. Family farming using household labour and allocated land used to be the dominant form of agricultural production. Ten years ago, an agribusiness company started to build a production base for kiwi fruits through leasing farmland from rural households across villages in the township. By April 2014, a quarter of the 300 ha of the village’s farmland, all located in the flat valley, had been leased to the company, which hires wage workers in its large-scale operations. The rest, mostly slope land, is still used in family farming by individual households, many of whom have shifted to growing kiwi fruits as well.

The village has also constructed a NRC by participating in a land-pegging project. The NRC comprises both independent single-family houses and four-story apartment buildings (Fig. 2). But among the over 400 households in the village, so far only about half have moved into the NRC, most of whom are families who used to be rice farmers living in the valley that had leased out their farmland to the company. Their old houses had been demolished and the housing land reclaimed into farmland. In most of these families, the wives now stay in the village and work as wage workers at the company’s kiwi farm, while their husbands find other wage jobs in nearby towns or Chengdu city. For these families, moving into the NRC brought improvements in living

Fig. 2. Multi-story apartment buildings in the Big Bend NRC. (Source: Author’s photo.)

[6] All names of villages and people in the paper are pseudonyms.

conditions and access to better public services while posing no difficulties to their work. The women simply walk or bicycle to the company's production base, while the men ride motorcycles to work. Living in multi-story apartment buildings poses few problems for them. No longer operating their own family farms, as wage workers they do not need extra space to house farm tools, raise animals, or store the harvest. In this case, agribusiness-led large-scale agriculture, wage workers, and modernized urban dwellings all fit nicely into the productivist vision of the modern countryside.

The other two hundred or so households can be divided into two groups: some are located in the valley and continue operating small-scale pig farms; the rest are located on slopes, where they both grow kiwi trees and operate even smaller-scale backyard pig farms. For both, relocation to the NRC would alter the spatial relationships with their farmland and farming operations and present challenges to their agricultural production.

These families have built their small-scale pig farms directly on their housing land or on adjacent farmland. As pig farming requires close supervision, the spatial proximity of their residence to the pigsties is essential (Fig. 3). Their housing land, therefore, serves more functions than simply providing family housing; it also provides the space for building the pigsties, storage sheds for feeds, and biogas and sceptic tanks. Their agricultural practices created but are also dependent on two spatial properties of the residence: proximity to production and functional flexibility. Neither of these, however, can be met in the NRC, which, as shown above, was designed for a different type of agriculture. In Big Bend Village, therefore, there are two types of agricultural practices – non-productivist and productivist – producing two residential spatialities.

5.2. Uni-functional land-use regulation and the removal of "disorderly" spaces

Now we zoom in on the NRCs. In appearance, these residential communities, with their brand-new houses, clean landscape, paved roads and abundance of public facilities, contrast sharply with the traditional hamlets and their rural dirtiness, chaos and inferiority (perceived or real). The space within these NRCs, however, is socially more sterile, characterized by both a rigid division between various land uses and a narrow conception of rural life. Just like productivist agriculture is foremost defined by specialization – and in its extreme form, mono-cropping – while non-productivist agriculture stresses multi-functionality (Wilson, 2001), the productivist vision of space is also based on the principles of rational classification, functional specialization, and regulated uni-functional uses. In proclaiming "clean and tidy villages" as a development goal, the SNC campaign treats unregulated or functionally flexible spaces as "impure" and "disorderly" and dirtiness as offensive – as the anthropologist Mary Douglas (2003: 2) summarized, "Dirt offends against order. Eliminating it … is a positive effort to organise the environment." Furthermore, the two goals of "civilized culture" and "clean and tidy villages" are closely intertwined, as in the productivist vision of the SNC, the dirty and disorderly village space and the low *suzhi* (quality) and lack of civility of its inhabitants are co-produced and mutually reinforcing. NRCs are designed to eliminate both.

In the traditional hamlets, there is neither a clear separation between residence and production in the residential space, nor a rigid delineation of functions in the communal space. Just as the rural household is simultaneously a social unit and an economic unit of family-based petty commodity production, the rural residence is also multi-functional. It contains within a courtyard, which is either walled or not, a cluster of structures – houses, sheds, out-buildings – where the family (sometimes multiple units of an extended family) live, store their possessions, raise domestic animals, and engage in petty commodity production. The boundary between inside and outside is also blurred in the courtyard, where socialization with non-family members take place.

In the NRCs, in contrast, public and private spaces are clearly delineated. All public spaces have been assigned specific uses, either as sites of public facilities such as the community centre, village office, and kindergarten, or as landscaped greenery. For the private residences, their boundaries are also clearly delineated – not only conceptually in the land deeds and housing ownership certificates, but also often physically marked with fences (Fig. 4). The space that surrounds the houses – the front and back yards, for example – while privately owned, is subjected to tight regulations by the community authority and restricted to non-productive and non-commercial uses, a restriction that is frequently contested in residents' everyday lives, as detailed later.

5.3. Infrastructure provision

Apart from the community level, changes also take place at the household level. Within the newly constructed family residences, rural residents also encounter a new materiality inscribed by the urban-planning spatial practices and conceived in the new productivist imagination of the rural. This new materiality now powerfully shapes their production and consumption practices. A major selling point of the NRCs to rural residents is the much-improved infrastructure in these communities, which in Chengdu's case was funded by LDR trading revenues. However, the "modernized" infrastructure in the NRCs also reshapes residents' consumption and production practices as well as their relationships with the physical environment.

Green View Village is located in a northwestern suburb of Chengdu in Pi County. The village's newly built NRC is divided into two halves by a major four-lane road connecting to the city centre. Both sections are

Fig. 3. A family-run pig farm, with a row of pigsties in front of the two-story family residence. (Source: Author's photo.)

Fig. 4. Family houses in a NRC: the narrow strip of private yard, reserved for landscaping use, is separated by a fence or a curb from the public driveway and sidewalk. (Source: Author's photo.)

accessible from the main road but separated from the road by farm fields. The 12 hamlets previously under the administration village have been merged into nine "neighborhoods" – four in the eastern half and five in the western half (Fig. 5).

All houses in the NRC are connected to the municipal infrastructure system and served with electricity, running water, cooking gas, digital broadband, sewerage, and garbage collection services. These modern amenities are a radical change from the traditional rural way of life. By using the services provided by the city's utility companies, rural residents in the NRC are finally brought "into the grid" and turned into modern consumers. In the interviews, while praising the convenience of these modern amenities, many residents also recalled their surprise when receiving utility bills for water, electricity and cooking gas. But the price they pay for becoming modern consumers goes beyond utility bills – it also involves the termination of the self-provisioning practices that used to connect them to the physical environment and natural resources. To put it simply, for a new item of *consumption* added into the house, often an old practice of *production* was taken out of their lives. Cooking gas is now piped in, but the houses have been lifted out of the woods and the collection and use of firewood is no longer necessary, nor is it possible (Fig. 6). Running water is provided, but open water bodies that could be used to wash laundry, produce, and tools have been removed from the NRC. Flushing toilets now send waste into sewage pipes, but so goes the night soil that used to replenish the fertility of small farmers' fields, a practice that is too labour-intensive, dirty, and backward for modern agriculture.

Mr. Ou rents a pond from the village and grows lotus. When it's time to harvest the lotus roots, he drains the pond and then pulls out and cuts off the lotus roots. The mud-covered lotus roots are cleaned before they are sent to markets. Mr. Ou used to wash the lotus roots at his old home with groundwater from his own well. But having relocated to the Green View NRC, where there is no open water body or ground well, he can only wash the lotus roots at home with tap water, for which he has to pay (Fig. 7). The residential homes in the NRC are built as a site for consumptions, with all the modern infrastructures there to provide a "comfortable life" – another of the five developmental goals of the SNC; they are not for production, which in their modernized, productivist form is expected to take place at a large scale in either farm fields or industrial parks.

6. Everyday lives under productivism

When residents move into the NRCs and the productivist spatial order there imposed by planners, they bring with them a different, non-productivist conception of space that sees it as flexible and multifunctional, as well as a set of spatial practices, formed in a different spatio-temporal context, often incongruent with the prescribed uses of space in the NRCs. In their everyday lives then, rural residents exert their agency and reclaim at least some of the control of the spatial transition through creating, inhabiting, experimenting, and modifying the material fabric of the NRCs. The materialities created by the planning spatial practices outlined above should be seen as not possessing immanent and stable properties, but are multiple and emergent, subject to the re-interpretation, re-casting and re-invention by actors "on the ground" (Lu and Qian, 2020; Wilson and Burton, 2015).

The earlier example of Mr. Ou showed how residents had to adjust their productive activities within the confines of the new space; but residents also tried to either circumvent or openly violate the NRCs' tight spatial regulations. Mr. Chen is an independent contractor engaged in housing construction and renovation. Once the family of three moved into a two-story house in Green View, they soon discovered that the

Fig. 6. A firewood pile outside a traditional house. (Source: Author's photo.)

Fig. 7. The back entrance of Mr. Ou's two-story house; lotus roots were transported back in the tricycle, then washed clean in the half drum next to it. (Source: Author's photo.)

Fig. 5. An aerial view of the Green View NRC (delineated by the white line). (Source: Compiled by the author, satellite image from Google Earth). (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

formal classification and rigid separation of land uses in the NRC works against their economic interests. As a contractor, Mr. Chen has bulky equipment – stone crushers and cement mixers – and construction materials that need storage. In the past, he simply dumped them in the front yard of their former residence and in unregulated public spaces around the house. But in Green View, their house has a very small front yard that can only accommodate several household items. Right in front of the house, separated by a paved driveway, is a grassy patch that is part of the community's public green. While this space appears just as empty as the unregulated space that surrounded the Chens' former house, it is now regulated by a different spatial logic that restricts it only for landscaping use – or, as Mr. Chen puts it, "wasted" for no use. Mr. Chen has been reprimanded several times by the community authority for depositing his unsightly business equipment and materials on the public green, sometimes even obstructing the driveway (Fig. 8). While Mr. Chen continues to defy the authority and annoy his neighbors, he has also had to compromise by storing some less-often used materials on his farmland, both a hindrance to his business operation and a loss of agricultural production value.

This practice of reclaiming control over space by residents is widely found in the NRCs. The most prevalent practice is using every piece of "idle" land for vegetable farming. For those living in multi-story buildings, this means "usurping" public space such as roadside greens (Fig. 9). For those with front yards, instead of keeping the landscaped lawns as planned, they have "re-ruralized" the urbanized landscape by turning them into vegetable gardens, where chickens also roam (Fig. 10).

Most NRCs only set aside space for a convenience store that sells packaged foods, but not fresh produce. The relocation, however, created new demands for retail services that had not been planned or provided space for. Rural households traditionally self-supplied most of the vegetables and meats they consume, but the reduction of space for vegetable farming and near elimination of backyard animal husbandry in the NRCs has made residents more dependent on commoditized exchange among neighbors or commercial food retail. Thus, makeshift "markets" have sprung up in many NRCs, typically occupying driveways and public squares (Fig. 11). Social life in Chengdu traditionally revolved around teahouses; in these NRCs, there are also residents who have opened up commercial teahouses-cum-mahjong parlours in their residences, which, although in clear violation of the proper planned use of private living space, quickly became hubs for social activities.

7. Discussion: from productivist agriculture to productivist rural space

The above analysis of the three facets of rural space produced in Chengdu's residential restructuring shows how productivism has extended beyond agricultural production and is reshaping the rural in its totality. Tensions and contradictions existed between elements of productivist space, as residents' non-productivist practices in their everyday lives imbricated non-productivist properties and relations into the planned productivist space. Overall, however, in the rural areas that

Fig. 8. Mr. Chen's construction equipment and materials on the public green. (Source: Author's photo.) (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

Fig. 9. Vegetables grown in roadside greens, in front of the multi-story apartments. (Source: Author's photo.)

Fig. 10. Front-yard lawns, ringed by white picket fence, turned into vegetable gardens. (Source: Author's photo.)

Fig. 11. Elderly residents selling fresh produce in Green View, right outside the convenience store. (Source: Author's photo.) (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

have been restructured by the land-pegging scheme, a productivist coherence has taken hold.

Productivist agriculture both produces and is reproduced by the productivist rural space (Halfacree, 2006). By shifting the focus from agricultural production to residential space, this study intends to show how the pathway to productivist rural space also involves the transformation of residential space. The interconnectedness between agricultural change and residential restructuring is probably more salient in the transition to productivism than in other transitions (to post-productivism, for example). Productivist agriculture requires, first, disembedding agricultural production from both the family as the unit of production and the non-productivist, multifunctional rural space on the local scale, so that both labour and land become commodities, and then, re-embedding it, in specialized, intensified and scaled-up forms, in an industrial-commercial commodity chain operating on a much larger spatial scale.[7] The smallholding family farming traditionally practiced in rural China, as the antithesis to productivist agriculture, exemplifies the embeddedness of non-productivist agricultural production in the local socio-spatial context. It utilizes two key spatial properties of the family residence: first, the proximity – or, a small farming radius – that allows easy supervision, especially for labour-intensive and time-sensitive crops such as vegetables and livestock; and second, the functional flexibility that allows residential space to be used for both living and production, so that living quarters, pigsties, cow sheds, chicken coops, storage sheds for farming tools, fodder, and harvest, and even handicraft workshops can all be housed together. The residential space – both its location and multifunctionality – therefore plays an integral part in sustaining non-productivist agriculture.

The growth of productivist agriculture needs both land and labour, which in China's case must be disembedded and released from smallholding family farming. Short of outright land dispossession, which the collective land ownership in China has made difficult for agricultural purposes (Zhang and Donaldson, 2013), to undermine family farming, among other changes, small farmers' residential space must be transformed. The residential restructuring discussed above achieves just that. When relocating to the NRC, even when a family receives a piece of land of equivalent size and a house far better equipped with modern infrastructure, the two most important spatial properties of the residence – proximity to production and multifunctionality – are lacking. As "the spatial properties of matter are a crucial part of its use value (Halfacree, 1993: 27)," when losing these two spatial properties, the residential space loses its use value as a means of production in family farming. In this sense, the relocation and the restructuring of residential space deprive family farmers of this means of production and constitutes a dispossession. This dispossession often leads to the termination of family-based independent production, which then releases the farmland and labour and facilitates the transition to productivist agriculture.

A study of two villages in Chongzhou – a *peri*-urban county in Chengdu – that had relocated to NRCs finds that 70 percent of relocated households rented out their farmland to agribusiness firms (Huang et al., 2013). In one NRC, 30 percent of residents have exited family farming altogether and become wage workers. For those who continue with family farming, the study also found that the increase of farming radius was regarded as the most burdensome change. For many rural residents, the spatial relocation was also a social transition from petty commodity production to wage work. Our analysis of Big Bend also showed that the residential relocation to the NRC is closely connected with changes in the mode of agricultural production. Residents who had leased out their land and ceased family farming found the NRC more acceptable and relocated. But once relocated, those who wanted to continue with family farming or other businesses, as in the Chen family's case in Green View, found it increasingly difficult to sustain independent production in the productivist space of the NRCs.

In sum, while in existing studies of productivist rural spaces the focus is mostly on agricultural production and related land uses, this paper proposes that to make productivist space in the countryside, it also requires concomitant changes in the use of residential land and restructuring of residential settlements. Such changes prepare both the material conditions (chiefly, commodification of land and consolidation of land ready for large-scale production) and social conditions (the commodification of wage labour, undermining of the social reproduction of independent smallholding farmers, and creation of consumers for commodities) that are indispensable to productivist agriculture.

This finding echoes those from studies that showed the importance of residential space in the transition from productivism to post-productivism. One key process in the making of the post-productivist countryside revolves around changing the perception and use of rural space from production to consumption, including building consumption-oriented residential space that caters to the in-migration driven by counter-urbanization (Halfacree, 2006; Van Auken and Rye, 2011; Wu and Gallent, 2021). The role that residential space plays is, of course, different in these two types of restructuring. For the post-productivist transition, the restructuring of residential space is to create attractive landscapes for tourists, migrants and seasonal homeowners through the development of seasonal homes, amenities, and commercial properties. For the productivist transition, as shown above, residential space is instead restructured to prepare conditions conducive to productivist agriculture and industries.

8. Conclusion

This paper argues that rural restructuring in China can be conceptually understood as a transition to productivism. Although works in agrarian studies have documented in detail the rise of agrarian capitalism in China, this paper is the first to conceptualize this change in the (post)-productivist framework and argue that China now has a productivist agricultural regime. Furthermore, the residential restructuring programs that are implemented under land-pegging and other similar schemes are also extending the productivist transition to the entire rural space.

A key contribution of this paper to rural geography is demonstrating how a productivist transformation of the residential space is constitutive of the broader transition to productivist rural space and crucial to the rise of productivist agriculture. Two types of changes take place during residential restructuring that help to advance productivist agriculture. First, at the community level, when rural settlements are changed from scattered to concentrated, the housing land that used to be "irrationally wasted" in the extensive use by scattered settlements is reclaimed into farmland, made available for large-scale agriculture; the LDR attached to the land is then released and transferred elsewhere under the land-pegging scheme to allow urban expansion and maximum revenue generation from the land. Second, at the household level, when families are relocated to NRCs, the two key spatial properties of their residential space that used to undergird their family-based independent production – proximity to production and multifunctionality – are removed, depriving the residence of the use values as a means of production. Family-based independent production is thus further undermined; more land and labour that used to be employed in family farming are released to join productivist agriculture.

In the empirical analysis, this paper, employing Halfacree's three-fold model of rural space, also offers the first full analysis of the rise of productivism in all three facets of rural space, highlighting how the formal representations and planning practices are building spaces of productivism in a multi-scalar process at both the regional and community levels, as well as how this new spatiality is contested and modified by residents in their everyday lives at a granular level, creating tensions and contradictions in the emerging productivist rural spatial regime. Using the three-fold model in analysing the rise of productivism

[7] In this sense, the transition to productivist agriculture can be understood as a dialectical process of (de)territorialization (Kong et al., 2020).

in China, this study contributes to the scholarship on (post)-productivism by addressing Wilson's (2001: 78) two critiques of the literature – the domination of the structuralist approach over an actor-oriented, behaviourally ground approach and the exclusive focus on the Northern context.

The scholarship on the transition to post-productivism has shown that the change in agricultural regime is not a discrete or unidirectional process and the diversity of actors and driving forces involved typically create multiple pathways of transition. China is no different. While productivism has indeed risen as the dominant agricultural regime, other alternatives have emerged as well. For example, recent studies have found incidences of post-productivism, driven by either organic farming (Xie, 2021), consumption of rural spaces through second homes (Wu and Gallent, 2021), or multifunctional place-making (Huang et al., 2020). Pre-productivism most certainly still survives in isolated pockets as well, while super-productivism – the "further intensification and agricultural industrialization of spaces that already were productivist in the past" (Wilson and Burton, 2015: 55) – is also emerging, especially in the pig farming sector, where family-owned large-scale farms are being taken over by super-scale corporate feedlots (Zhang and Zeng, 2022). In this sense, the co-existence of a productivist regime at the national level with localised non-productivist alternatives suggests that the notion of a "multifunctional agricultural regime" (Wilson, 2001) may also be useful in capturing the non-linearity and spatial heterogeneity in agricultural and rural changes in China, a topic that calls for future research.

CRediT authorship contribution statement

Qian Forrest Zhang: Conceptualization, Data collection, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Visualization, Writing - original draft, review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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