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Formalization and Collective Appropriation of Space on Forest Frontiers: Comparing Communal and Individual Property Systems in the Peruvian and Ecuadoran Amazon

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This article compares and contrasts communal and individual properties to examine the relationship between state efforts to formalize property rights and tenure security. The article draws on a study of four landscape mosaics in the Peruvian and Ecuadoran Amazon, selected to represent dynamic forest frontiers. Though Hernando de Soto and other theorists from the property rights school emphasize private individual behavior and land allocation in many collective communities, this research also found collective behavior and land allocation in many individualized communities. The importance of the collective and social relations for both types of properties was particularly salient in the sources of tenure security identified. Though title was one important source, this was insufficient, and often formalization was found to be impermanent. Both groups also emphasized social networks and community relations, on the one hand, and demonstrated use, which further establishes the legitimacy of claims with neighbors, on the other.

Keywords Amazon, collective action, collective rights, common property, Ecuador, land tenure, Peru, property rights

The formalization of property rights in the Amazon is intended to improve tenure security and promote diverse, and sometime divergent, objectives ranging from improved livelihoods, economic development, and conservation. Over time, formalization efforts have shifted emphasis between collective or individual titling depending on the stakeholders involved, grass-roots demands made, and state capacity and willingness to respond. Regardless of the type of property, interest in formalizing rights has often emerged from conflict over multiple overlapping claims, and competition for land and resources that threatens livelihoods. As local people demand more secure access to property and associated resources, at the same time, governments aim to maintain their authority (see Sikor and Lund 2009), commodify land, and promote economic development. These processes raise several questions: How does the

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appropriation or allocation of space vary between communal and individual properties in the Amazon? How is land tenure security understood across these different groups? How does formalization of different types of rights influence views of tenure security?

This article compares the nature of both collective and individual processes for establishing property rights across 21 indigenous and mestizo communities in Napo, Ecuador, and Huánuco and Ucayali, Peru. The research explored how local people defined their property, how these perceptions matched formal concepts, and how formalization influenced land tenure security. Contrary to expectations, and in spite of important differences, the research found significant similarities among the various groups. Although formal rights are distinct, residents of both types of property use collective processes and concepts to establish shared norms and define acceptable behavior for allocating natural resources. Within communal properties, residents implement a variety of arrangements based on customary norms and practices to allocate individual access rights to forest lands formally owned by the collective (see also Bremner and Lu 2006). In a similar process, groups moving into forest frontiers for spontaneous settlement adopt collective concepts and practices to claim and subdivide space, especially where the presence of state institutions is weak. In such cases collective action is usually seen as a means toward individual ends, though at times, even after formal individual rights are granted, collective rules and concepts persist and help define the legitimacy of property claims.

For both types of property, residents reported strikingly similar sources of land tenure security. Formal recognition of rights was an ideal condition but was not always unambiguous or sufficient to provide security alone. Collective titles provide protection against incursion, but not completely. The research found that formal title in individual properties, while important in theory, is more important symbolically, as what may be formal or official at one moment could in practice slip into informality shortly thereafter. However, occupation and demonstrated use, usually by clearing land for agriculture, was also extremely important and one of the most salient practices for manifesting a claim seen as legitimate. Finally, perhaps the most important factor in providing security was the web of social relations in which individuals were embedded and that serves to enforce collective norms.

This article is organized as follows. The next section discusses land formalization in the Amazon, the claims of the “property rights school,” and the concept of tenure security. The third section presents the methodology of this study. The fourth section presents and discusses the findings, and the final section concludes.

Collective and Individual Property in the Amazon: It May Not Be Avatar, but Is It a Private Property Paradise?

Formalization of land rights for rural people in the Amazon has taken different forms and spurred debate about how best to ensure the security needed for productive livelihoods. Since at least the mid-20th century, tenure reform in the Amazon for smallholders or communities¹ favored the granting of individual titles to colonist settlers under agrarian reform policies (Plant and Hvalkof 2001). In many countries, however, constitutional and other legal reforms, particularly in the 1970s and 1980s, shifted priority to the recognition of indigenous rights and, often, the right to collective lands (Plant and Hvalkof 2001; Roldán 2004a). As a result, throughout the

Amazon, the two prevalent reform models have emphasized distinct approaches to formalization for these rural populations:

- Titling of individual properties, primarily granted to colonist farmers and ranchers.
- Titling (or similar forms of legal recognition) of communal properties, primarily granted to indigenous communities, as well as other traditionally forest dependent people such as rubber tappers and Brazil nut gatherers.

Discussion of formalization and titling requires a short introduction to concepts of tenure. Tenure rights refer to the social relations and institutions governing access to and use of land and resources (von Benda-Beckmann, von Benda-Beckmann, and Wiber 2006). Land tenure refers to the institutional arrangements that determine how individuals or groups gain access to land and resources, who can use the resources, for how long and under what conditions (U.S. Agency for International Development [USAID] 2008). While tenure includes both statutory and customary law, titling involves formal sanctioning of rights by state entities. As we see in the following, in regions where state presence is weak, as is the case in parts of the Amazon, the expected dichotomy between individual and collective models blurs because individuals continue to rely on collective behavior to defend their rights.

Historically, individual land titling in the Amazon has been driven by state agencies and planners promoting development and investment, often in response to grass-roots pressure from peasant farmers. In the 1970s and early 1980s, state-directed colonization programs throughout the Latin America (see Schmink and Wood 1984; Jones 1990) attempted to initiate orderly transitions in which displaced and landless people could be resettled in areas considered unpopulated and underutilized, such as the Amazon. However, an orderly colonization process proved to be a greater challenge than expected, as the region was already inhabited, and the infrastructure associated with development plans and the promised investments set off new tides of migration and spontaneous settlement. Much of the migration and settlement in the Ecuadorean Amazon had occurred spontaneously following the opening of the frontier for oil exploration in the 1960s and 1970s (Uquillas 1984), and similar uncontrolled occupation of land has been observed in Peru (Loker 1993). Throughout the region the incursion of migrants also set off conflicts with indigenous people and other traditionally forest-dependent populations already living there, most iconically with the rubber tappers movement in Brazil (Schmink and Wood 1992).

In the two countries covered in this study, the collective property model has progressed in fits and starts and focused from an early date on indigenous peoples. In Ecuador, for example, the laws permitting collective titling from 1937 until the ratification of the 1998 Constitution required communities to form cooperatives, “centros,” or associations—forms of organization foreign to indigenous people (Roldán 2004b). In Peru, a 1974 law (Law of Native Communities and Promotion of Agriculture in the Lower and Upper Rainforests) established the conditions for collective titling of indigenous lands. Later, in 1975, the Forestry and Wildlife Law defined forests as public property and no longer permitted titling of forest land but still allowed usufruct right (*cesión en uso*). Subsequently, the Peruvian government has taken actions to move away from communal titling and undercut existing collective properties. The 1993 Constitution and the 1997 Law of Titling of Peasant Community Lands were passed to facilitate the individualization of collective areas (del Castillo 1997), and collective titling of indigenous lands has stalled since 2008 (Defensoria del Pueblo 2014).

In both countries, while settlement and land allocation have been occurring for decades, resource conflicts and uncertainty are still prevalent. In response, recent efforts to provide order and security to promote regional development through land titling have emphasized the formalization of individual property rights.

Hernando de Soto and property theorists with similar market capitalist ideologies, known commonly as the property rights school, have been leading proponents of individual over collective land titling (de Soto 2000). In particular, de Soto has emphasized the similarities between indigenous and nonindigenous populations to defend his arguments. De Soto argues that indigenous people are, or want to be, fully engaged with the market economy, but are held back by the lack of “legal tools to control their property and businesses” (de Soto 2011, 84). De Soto bases this argument on his research in the Peruvian Amazon, where he found that “virtually every community” of 200 visited provides “certificates of private possession” over homes, farms, and hunting areas (85). That is, he found that important features of individual rights are apparent in the indigenous communities he visited. In his view, then, the solution (to poverty and development) is formalization, in particular the “massive” documentation of individual private property and the generation of “unambiguous titles” (88).

De Soto’s perspective on formalization has been influential globally, and particularly in his native Peru (Kerekes and Williamson 2010). The theory of development arising from this so-called private property school is well known: An individual land title provides tenure security, and permits the owner to obtain credit and invest in production, with competition leading to efficiency in land allocation, and further investment. In practice, this school of thought assumes that private titling can be massive, accurate, and unambiguous, and will guarantee tenure security.

The premises and promises of this theory, and their application in “third-world” settings or complex customary systems, have been thoroughly questioned, especially by theorists of common, customary, and “extralegal” property regimes. Cousins et al. (2005, 2) summarize the critiques of de Soto, particularly: He presents a simplistic view of the informal economy and parallel property systems, fails to explain why so many titling programs have failed and even disadvantage the poor, and fails to address the absence of a land market and recognize that “other types of tenure . . . remain more secure and certain for the poor.” In Peru, Kerekes and Williamson (2010) found that land title in the Amazon does not provide sufficient collateral to guarantee a loan, as public institutions do not provide sufficient enforcement authority, and as a result, residents rely on informal, local enforcement mechanisms.

Insights from common property scholars provide some foundation for understanding the importance of collective action for legitimacy of property claims. According to Ostrom (2005), shared rules, norms, and strategies constitute the institutions that govern collective action and structure interaction. Though intended for studying management of common pool resources, these collective norms help explain the behavior of smallholders in our field sites, who need to navigate the allocation and use of land and resources, as well as create mechanisms to mediate conflict often on their own with minimal support from external authorities. Rudel (1995) identified similar behavior among colonists in Ecuador: Cooperation in the construction of community infrastructure “forged bonds of friendship and mutual aid” and “prompted the emergence of informal social controls,” including respect for their neighbors’ land claims.

In a different context, Katz (2001) observed that “where significant social capital exists among natural resource users, it fosters a sense of ownership and respect for

boundaries,” even outside of collective regimes and in the absence of clearly defined property rights. Other authors have made similar points about the importance of social relations and networks for defining and enforcing property rights: how membership in “communities and villages and clans and neighborhoods” provides security (Bromley 2008, 26), or how complex relationships and combinations of rights and obligations allow groups to maintain their claims to land (von Benda-Beckmann and von Benda-Beckmann 1999). These views call into question the assumption that title alone is sufficient to provide tenure security.

Tenure security refers to the degree to which an individual or group believes its relationship to land and other resources is safe, rather than in jeopardy (Poffenberger 1990). For Meinzen-Dick and Mwangi (2009, 310), security reflects “the ability of an individual to appropriate resources on a continuous basis, free from imposition, dispute or approbation from outside sources, as well as the ability to claim returns from investment in the resource.” These two definitions emphasize, respectively, the perception and the practice of tenure security. A title may or may not increase one’s sense of secure possession. For example, to be meaningful, the right of possession established by a title must be protected and defended by the state if it is threatened. Not all states are functional or fair, and not all people necessarily have the same access to state protection. Hence, though in many cases titles can grant security, in others they may undermine it. Several authors have demonstrated that those who have greater access to the legal system, through wealth or manipulation, have won out in tenure battles even if other, poorer actors have legal title and/or legitimate prior claims (Nygren 2004; Broegaard 2009). Cousins et al. (2005) argue that titles can increase insecurity for the poorest sectors by facilitating dispossession. Titling can create opportunities for elite capture (Meinzen-Dick and Mwangi 2009). Also, security in traditional property systems is embedded in social relations, and these relations are altered by the issuance of title. “The offer of formal titles to the poor presents them with the need to decide whether to exchange their embeddedness in one community for an uncertain embeddedness in another community”; rather, group membership is key to security (Bromley 2008, 26). Hence, in some cases informal or customary relations are more important—and more secure—than formal titles (Cousins et al. 2005).

This article explores these issues further by comparing local perceptions of property and the resulting tenure security in indigenous and nonindigenous communities in the Amazon. There is no doubt that the vast majority of the smallholders and indigenous people interviewed see titling and/or formalization as desirable and as a key element of secure tenure. However, it was only one factor. Though, like de Soto, we found individual (household) subdivisions in most indigenous communities, we also identified collective behavior in nonindigenous communities that claim individual rights. In fact, with regard to tenure security, the research suggests that both indigenous communities with collective rights and smallholder communities with individually held lands depend on collective institutions and social relations for land rights to be seen as legitimate and secure.

Methods

To examine the nature and variation of property rights as perceived by local people, we sampled multiple indigenous and mestizo communities and households within four polygons in the Peruvian and Ecuadorean Amazon. The polygons were located in the Ecuadoran province of Napo and in the Peruvian departments of Ucayali and

Huánuco. The polygons, covering approximately 80,000 hectares each, were defined by the research team and partners to encompass diverse landscape mosaics that supported a variety of stakeholders with both collective and individual property rights. We attempted to capture multiple ethnic groups and variation in access, forest cover, and age of settlement. We also wanted polygons to reflect landscape variation typical of agricultural frontiers in a finite geographic area but also needed to take into account the interests of partners and the relationships required to gain access to the communities.² To the extent possible in each country, we attempted to place one polygon in a more settled “old frontier” area, and the other in a more active “new frontier,” to account for settlement age.

We named the polygons after the local administrative unit that occupied most of the targeted area. In Ecuador the polygons were named Cotundo and Chontapunta for the principal parishes (see Figure 1). In Peru the polygons were named Honoria

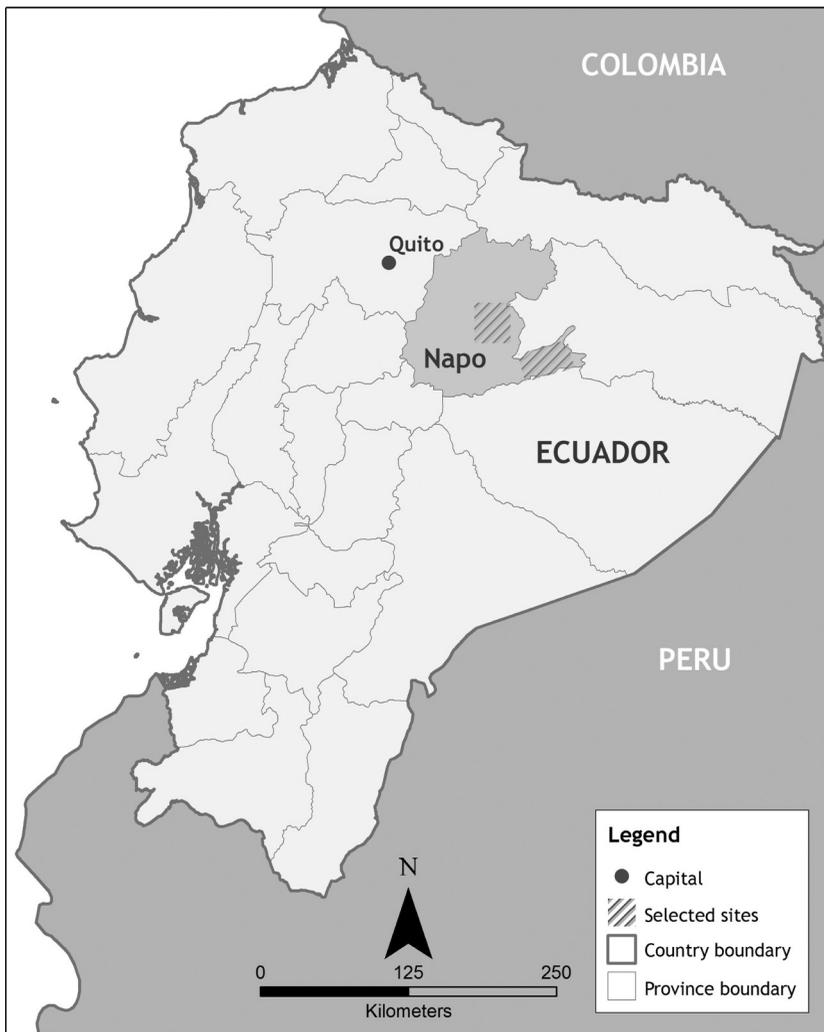


Figure 1. Research sites in Ecuador.



Figure 2. Research sites in Peru.

and Codo de Pozuzo for the main districts in those areas (see Figure 2). These sites were not intended to be representative of the Amazon as a whole but only to illustrate property dynamics.

The Cotundo polygon was considered an older frontier site. It is centered near the intersection of the Baeza–Tena highway and the Hollín–Loreto highway north of the provincial capital Tena. Portions of the polygon include the protected areas Reserva Ecológica Antisana and Parque Nacional Sumaco Napo Galeras. The stakeholder groups identified in Cotundo included indigenous Kichwa communities with collectively titled lands, and both Kichwa and Mestizo communities with lands held or titled individually. The Kichwa collectively titled properties included

multicommunity territories and single-community territories. Three multicommunity territories were partially within the polygon, with 16 communities (out of 26) falling within the polygon. There also were 12 individual Kichwa communities with a collective title. Among the communities with individualized property rights there were 20 Kichwa and 7 mestizo communities. For focus-group interviews, four Kichwa communities with collective rights were selected and one mestizo community with individual rights was selected.

The Chontapunta polygon was considered the newer frontier site. It is located east of the provincial capital, Tena, and is transected west to east by the Napo River and the Tena–Chontapunta road. There were 43 communities in the polygon. Of these, 18 were Kichwa communities with collective titles and 4 were from a Waorani collectively titled territory. There were also 7 Kichwa and 14 Mestizo communities where residents had individual property rights. Focus groups were held in two communities with collective rights, one Kichwa and one Waorani, and in one Kichwa and one Mestizo community with individual rights.

In Peru, the Honoria polygon was considered an older frontier. It is located 76 km from Pucallpa, the capital of Ucayali, near the intersection of the Pachitea and Ucayali rivers. The southern edge of the polygon included portions of the buffer zone of the El Sira National Protected Area (an indigenous co-management area). There were seven Shipibo indigenous communities fully or partially within the polygon, six with collective rights and one with a request for collective property that was pending. We selected three communities, including the one without title. In addition, there were 27 mestizo communities where residents claimed individual property rights. We selected four of these communities.

The Codo de Pozuzo polygon was considered a newer frontier. It is located north of Oxapampa and Pozuzo and mostly between the Pozuzo and the Súngaryacu Rivers. In Codo de Pozuzo there were two collectively titled Cacataibo indigenous communities partially within the polygon. In addition, there are 14 mestizo communities where residents claim individual properties. We selected one Cacataibo community and four mestizo communities for our sample Table 1.

For each polygon, key informants and partners mapped out population centers and described the general characteristics of the population in terms of official property type (e.g., collective or individual), ethnicity, and accessibility. Once a rough categorization of the population was completed, we purposefully selected communities to

Table 1. Sample distribution by polygon and property type

Polygon	Key informants	Property type				Total HH interviews
		Collective		Individual		
		Focus groups	HH interviews	Focus groups	HH interviews	
Cotundo	18	4	74	1	33	107
Chonta Punta	8	2	37	2	38	75
Honoria	12	3	29	4	40	69
Codo de Pozuzo	8	1	15	4	38	53
Totals	46	10	155	11	149	304

represent the defined groups and to distribute sites geographically to ensure variation in accessibility and age of settlement. In selected communities, after introductions to community leaders, we invited them and other available residents (male and female) to participate in focus-group discussions of the community's history, composition, and patterns of land use and access rights to resources. Most communities easily agreed to participate in the interviews, although some Kichwa communities in Contundo were initially hesitant and required additional explanation, to assure them that field teams were not associated with oil prospectors. In addition, some communities in one of the Peruvian polygons were excluded due to the reported presence of coca production and consequent suspicion of outsiders.

Focu-group interviews involved two activities: (1) tracing the history of the group and identifying key moments of change, including changes in land use; and (2) discussing land and forest use, the distribution of rights, and nature of tenure security. We completed 21 focus group interviews with 273 total participants (35% female). After the focus-group interviews, we randomly selected households for interview (households that could not be contacted during the visit were replaced by randomly selected alternates drawn from information provided by community leaders). We conducted a total of 304 household interviews that focused on land and forest use, property rights, and perceptions of tenure security.

In this research, we were interested in local people's perceptions of their property and its characteristics. We wanted to know what land families claimed, how they used this land, and, importantly, how they justified their claim.³ Beyond the ideal formal classifications, we wanted to capture, to the extent possible, the informal views and concepts used by different groups of residents to define their property. To that end, in the focus groups and household surveys we asked informants to prepare a sketch map of the areas and resources they used. Then, using the maps as a guide, we asked informants about ownership and control of each area (including who could make decisions about the area, and who else used the area). For each area, we asked them the basis for claiming it as property. Finally, for each area we asked them if they felt their ability to access or use of each area was secure and to describe why or why not.

Results and Discussion

In this section we discuss the configuration of property for groups with collective and individual rights in turn, then follow with a discussion of tenure security.

Collective Properties

In Ecuador and Peru relatively large collective properties were demarcated and titled for indigenous people. In general, the demarcation process attempted to respond to indigenous petitions for recognition of land rights, with the size and configuration of the properties based on assessments of their cultural and livelihoods needs. In Ecuador, several of the more recent collective properties were formed by groups of families that left older collective properties in search of additional land. In Peru, most of the sampled communities had pending petitions to the government for expansion of their territories. One Shipibo community in the Honoria polygon was still struggling to gain recognition of its land claim, as mestizo settlers have occupied a portion of their territory and government officials refuse to intervene in the dispute.

For these communal properties, the title demarcated the outer edge only. Internally, access and governance institutions were left to the customary practices of residents. Therefore, inside the polygon the customary systems for allocating rights to resources resulted in complex nested systems with mosaics of both collective and individual institutions, as observed in other communal lands (Ankersen and Barnes 2004). In these systems, communal governance bodies granted households individual rights over areas for agricultural uses. In Ecuador's multicommunity properties, there was another tier of governance: In these cases the allocation of individual parcels took place at the community level, while multicommunity governance entities focused on higher level organizational concerns.

In the observed communities, not all of the land was allocated to individuals; rather, in most cases some areas were held collectively, particularly forestlands. In Peru forests are officially state property and should be held as reserves. In both countries, commercial use of forest resources requires official authorization, but in practice few households comply. Typically, informants reported that the communal forest area was maintained as a reserve—not as a protected area for forest conservation but for future allocation to individual households for agriculture. One Ecuadorean community had enrolled some of its forest in the Socio Bosque program, a payment for ecosystem services (PES)-like program that pays indigenous people and communities to set aside forest lands for conservation (see <http://sociobosque.ambiente.gob.ec/>). None of the sampled indigenous communities in Peru participated in similar initiatives.

The smallest units in these nested systems were areas allocated to individual households for productive purposes. In each community, member households were allocated parcels of land to cultivate. Households had exclusive access to these areas, with variation in terms of intensity (i.e., how explicitly boundaries were defined) and permanence (i.e., how long the individual right persisted). This appears at least partially due to population pressure within landholdings. In some of the Kichwa communities most community land was allocated to individual households in parcels that gave exclusion rights over cultivated areas but also secondary fallows and some remnant forest patches. The individual rights to the land, although not recognized by formal law, could be inherited by the owner's children. Clear, permanent boundaries were sometimes demarcated between parcels, with trees, bushes, and other vegetation forming living fences. In older communities, internal informal boundaries followed natural features of the landscape. However, informants in some newer collective properties reported that household parcels were divided symmetrically, demonstrating the influence of the agrarian reform agency. In less densely settled areas, as observed in some Shipibo communities in Peru, the exclusive rights covered cultivated land and forest fallows, but old-growth forests around and between parcels were collectively owned and accessed as part of the general forest reserve and could be claimed or assigned to families in need of land. The least intensive or permanent system was observed among the Waorani in Ecuador, where individual families claimed several small parcels to cultivate for a few years but once abandoned made no further claim to the area, at which point it was considered to return to the commons.

Individual Properties

In both countries the selected communities with formal individual rights all originated from spontaneous settlement rather than government-directed colonization

projects. In general, the origins of these settlements followed similar patterns in which migrant groups occupied land they viewed as unoccupied, organized to demarcate boundaries, and later sought official recognition for their plots. The occupation could be quite opportunistic, with the group coalescing around collective agreement on boundaries later, or could be highly organized from the start. For example, in Ecuador during the 1970s and 1980s many spontaneous settlements were formed by groups of families that created “precooperatives” as they occupied land, deforested it, and then petitioned the IERAC (Instituto Ecuatoriano de Reforma Agraria y Colonización) for individual title (Uquillas 1984, 277). In this process, settler families attempted to configure properties the size and shape they expected the government to accept (i.e., rectangular lots about 50 hectares or less in most cases) and began clearing land for cultivation to demonstrate use.

Once established, families petitioned local government for authorization to occupy their land, usually the first step in applying for title. Typically, after settlement the families pooled resources and contracted surveyors to document the boundaries between their plots, and in several cases residents reportedly sold timber to cover costs. Families often used winding roads or watercourses as the starting point for demarcated lots, but irregular frontage mean that lots were not always rectangular. When surveyors later measured boundaries, they usually reconfigured holdings to make straighter boundaries. However, these changes were not always accepted, leading to conflict and interesting innovations between neighbors, such as purchasing small portions to adapt to the new borders or maintaining the original ones through informal agreements. The process of occupying land would be repeated as community members claimed additional areas beyond their established lots for expansion to provide land for the younger generation (similar to the indigenous reserves discussed previously) or to accommodate migrants that are more recent.

While the individual rights claimed by households appear relatively simple compared to the complex nested mosaics in communal lands, we observed significant variation in the nature and composition of rights. Although title is the ideal goal, many did not have title or were in the process of formalization. Titles did not always cover what smallholders considered to be their entire property (we return to this point later). Many claims were locally legitimate but informal. This includes lands that had been formally titled but then transferred without officially registering new owners.

Titles were not the only type of official documentation reported by informants to justify their property claim. Households often held “authorizations to occupy” permits (*constancias de posesión*) issued by local government authorities to recognize families homesteading at a given location. These types of documents are intended to be an initial step in the titling process. For a number of reasons (including factors outside their control, like government inertia) some households did not pursue additional steps. Thus, they are left with a kind of “imperfect title” that officially does not provide full legal property rights. In practice, however, local people often considered this to be sufficient official recognition of legitimacy of their property claims.

In some cases, landowners received title but then transferred rights or modified the holding without formalizing the change. Sometimes they sold the land but the new owner did not transfer the title to his or her name, reporting that the cost in capital and time was prohibitive. In this situation, they rely on the bill of sale and recognition by neighbors to justify their ownership, at least temporarily. Sometimes

families occupied land they had received through inheritance, such as areas divided among siblings. This tendency was observed in Ecuador by Bilsborrow, Barbieri, and Pan (2004), who noted a decline in households with full legal title from 50% to only 34% from 1990 to 1999 (Bilsborrow, Barbieri, and Pan 2004). Households often maintained the original title that was not in their name because they did not have the means or did not see the need to change it.

The properties smallholders claimed were not always fully recognized by the state. In Peru, the government does not title forest, so that frequently smallholders found that they could only receive title to deforested areas in use or recently put in fallow. This created an incentive to clear more forest. Even though forest remnants were excluded from formally titled land, families still retained claims to these areas and neighbors saw this as legitimate. However, some expressed concern that outsiders would see forest as unoccupied land and would try to settle there.

Because the spontaneous settlements occurred in places perceived to be unoccupied or unclaimed, which usually meant forestland, the subsequent land claims sometimes overlapped (or were wholly superimposed on) existing properties from neighboring communities, large landholdings, or protected areas. The new settlers are frequently unaware of existing titles or land classifications, and when they petition the state to request title they learn that the overlapping area will not be included. Though they cannot get title, this does not mean they stop using the land. For example, communities bordering the El Sira buffer zone had old fields and fallows located in the area and continued to return to these areas to harvest fruit and other produce. In Ecuador, one community that had formed near the Reserva Ecológica Antisana could not receive title because of the protected status of the area.

Along Amazonian river systems, the changing landscape influences property holdings. In both countries residents of communities near rivers cultivated the rich alluvial soils of beaches and islands that appeared seasonally. Such areas fell outside of formally titled lands but were claimed as a type of temporary property. Once a household cultivated such areas, neighbors respected the claims while that household worked the land. However, there is always a level of uncertainty because no one knows where the islands will appear each year or how big they will be.

Another problem faced by smallholders with properties bordering rivers was that rivers eroded formal boundaries and changed course. Traditionally, before formal land allocation, families could shift in response, but formal boundaries make this more difficult.

Sources of Tenure Security

When discussing the nature of tenure security with informants from these different groups, we observed little difference between the sources of security in collective and individualized properties. Informants from all groups reported that land title was one important way to ensure secure tenure, but title alone was also seen as insufficient for a variety of reasons. For example, some informants expressed a lack of confidence that government authorities would defend this right. In these cases, residents relied on similar institutions and concepts to defend claims to land, allowing them to feel secure in their property rights even though there was variation in the formality of their rights, and in spite of occasional conflicts.

Although title was often seen as ideal, there was also some confusion over what formalization meant. In Peru, indigenous people seemed to assume that their title

gave them ownership of their forest, even though technically it remained state property that they were allowed to use. For individual properties, occupancy permits were often seen as sufficiently formal to provide security. In other cases, the fact that land had a title was sufficient even if rights had been transferred to another. Informal recognition of transfer made transferred rights formal enough.

A second essential factor for perceived security was shared group identity and membership in social networks, or some collective recognition of belonging. Informants in collective indigenous groups cited ethnic identity as a fundamental justification for claiming and using land, which is not surprising. Households with individual holdings also referred to community membership as a factor ensuring that neighbors respected boundaries and recognized rights. Informants also cited long-term historical ties with their neighbors and other community members. Community members and neighbors invested in collective labor to demarcate boundaries, in communities with both collective and individual property rights. This labor not only defined mutually agreed boundaries, but also reinforced collective processes of governance.

Finally, the third factor mentioned by respondents to secure and maintain access to property is the occupation and use of land. Occupation was usually demonstrated through forest clearing. Residents of both collective and individual properties cited this, though less in Kichwa collective properties where household land was permanently assigned. Nevertheless, in general, occupying and using land is the first step in claiming a formal right to land in the Amazon, and continued use and occupation is tied to local legitimacy.

Residents criticized neighbors not living on or actively cultivating the land. In collective areas this was considered grounds for reassigning the land to another family. Surprisingly, some informants from communities with individualized private properties reported that such land could be transferred to others, even if the owner held legal, individual title. In Peru, some informants used this logic to justify claims to portions of their holding that fell on land titled to large agro-industrial enterprises. In their view, they were putting the land to use while the company was not.

Conclusions

Although emphasis on land formalization efforts has shifted between apparently distinct collective and individual rights over time, in the four sampled polygons there was not always a clear dichotomy between the two. Rather, we observed mosaics of rights with properties that included collective and individual characteristics and overlapping combinations of rights that blurred distinctions. Though theorists from the property rights school emphasize the importance of the individual, this research emphasizes the importance of the collective. That is, not only is there private individual behavior and land allocation in many collective research communities, but there is also collective behavior and land allocation in many individualized communities.

The study finds that residents of both types of property use collective processes and concepts to establish shared norms and define acceptable behavior for allocating natural resources. Within communal properties, residents implement a variety of arrangements based on customary norms and practices to allocate access rights to forestlands formally owned by the collective. In a similar process, groups moving into forest frontiers adopt collective concepts and practices to claim and subdivide space. In such cases collective action is usually seen as a means toward individual

ends, though at times, even after formal individual rights are granted, collective rules and concepts persist and help define the legitimacy of property claims.

In communally titled areas, although there were formal external boundaries defining a collective right, internally we observed mosaics of nested communal and individual rights. Customary institutions provided a basis for households to hold individual rights over areas used for cultivation, and such systems predominated across productive activities. These customary systems assigned individual rights that were anchored within shared rules, common understanding, and social networks, and were more permanent in some indigenous groups, and more temporary in others. In more densely populated areas with more permanent divisions, families invested in collective labor to demarcate these unofficial individualized boundaries. Common forested areas were held primarily for distribution to future generations. Although property tended to become more intensely defined and permanent over time and as population increased, the informal rights based on collective consensus gave flexibility to respond to change and to mediate conflict.

In areas of formal individual property, it appeared that while spontaneous settlement was taking place, residents relied on informal collective institutions and shared sets of rules and frameworks to mediate conflict, establish boundaries, and legitimize occupancy claims. Particularly in the absence of state agencies, community organizations maintained some collective authority to govern property institutions. Many of these communities defined and maintained common areas for schools, plazas, or sports fields. Both collective and individual rights coexist and are used by residents in combination to assign access, to mediate conflict, and to defend shared interests. Neighbors defined boundaries together, and if conflicts resulted, as in the collective properties discussed earlier, they were mediated by the community. The legitimacy of claims depends on community consensus, even in some cases after formal titling takes place.

Also in individualized areas, in Peru, forest areas for future allocation were identified as a kind of commons—for future generations and new migrants. These areas were not recognized by the state until later, when occupied and divided by residents (however, this also meant that the state could, in the meantime, allocate that land to others, thus generating conflict). In Ecuador we did not observe this, at least partly because there was a dearth of “unoccupied” areas in the two polygons that could have been claimed for settlement.

Another observation is that formalization was not permanent. Formalization tends to be seen as the endpoint in land reform efforts, a situation where uncertainty is resolved and agencies responsible for tenure can move on to other “informal” areas. However, where states are weak or lack the capacity to monitor change and authorize transactions or where rules are inflexible and do not respond to local needs, the formalized right can slip back into informal states (through a process of informalization). For example, landowners frequently sell or transfer their land to others but there is no formal transfer of rights to the new owner. Usually this is because of the high cost or complications related to this bureaucratic transfer process. The new owner relies on proof of purchase, and recognition of neighbors, as sufficient to justify the claim. It is also common for people to inherit land or have a property split among siblings without these changed configurations being documented officially. It is not that these people are apathetic; it is that the process to transfer title is not facilitated by governmental agencies. The legitimacy of individual rights depends on community consensus, and sometimes that consensus sees informal rights as legitimate or even formal rights as illegitimate.

The importance of the collective and social relations for both types of properties was particularly salient in the sources of tenure security identified by the different groups. Though all groups identified title as one source of security, this was almost always considered insufficient. All of the groups interviewed referred to three main sources of security: title, or more accurately, some kind of formal recognition; social networks and community relations; and demonstrated use, which further establishes the legitimacy of claims with neighbors.

Though the property rights school assumes that titling can be massive, accurate, and unambiguous and will guarantee tenure security, practice demonstrates otherwise. Both indigenous and mestizo residents in these study sites look optimistically on formalization, but they are also aware that it rarely provides the expected benefits. Given the effort and funds put into titling, it is somewhat surprising that rural people still depend mostly on customary networks and relations to defend their property rights.

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Notes

1. See Kelly and Peluso (2015), however, for many examples of property rights formalization that do not favor local people.
2. The quality of the research often depends on access granted based on trust through prior relationships, especially in indigenous communities. In Ecuador, GIZ (German Agency for International Cooperation) had been working closely with the provincial government of Napo and had important ties to both indigenous and nonindigenous leaders who could facilitate the entry into communities. In Peru, IBC (Instituto de Bien Común) had done prior research in Huánuco and was supporting indigenous communities in their land claims.
3. We did not ask directly whether the informants had land titles but only recorded this if volunteered. We wanted to know about all the land they used, not just the land over which they held official rights. Also, given the short visits of field teams, we expected questions of official documentation to land would make some informants uncomfortable (e.g., in Ecuador new land taxes were being debated at the time of our research).

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