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When female leaders believe that men make better leaders: Empowerment in community-based water management in rural Namibia

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ABSTRACT

Decentralization of water management in Namibia follows a community-based co-management approach, emphasizing the inclusion of women in local leadership. Building on a random sample of 32 water point chairpersons, 17 female and 15 male, and 384 villagers in rural northern Namibia, we document that women are equally represented as chairpersons and that they are significantly more educated and younger than their male counterparts. However, most of the female leaders come from the family of the traditional leader. We then show that opinions about the role of a leader (such as the belief that ‘men make better leaders’ or ‘it is sometimes acceptable to take a bribe’) do not differ between male and female leaders. However, their opinions differ significantly from those of the average villager. Thus, our assessment reveals that although men and women are equally represented in numbers, it has not necessarily led to the adoption of new ideas about and conceptions of leadership and gender roles in practice so far. We discuss how some aspects of the democratic blueprint are accepted while others are rejected, adapted, or transformed to fit local specificities.

1. Introduction

Community-based natural resource management (CBNRM) in Namibia and elsewhere is considered to be an important cornerstone for conservation and sustainable development. Since Namibian independence in 1990, such policies have gradually enabled communities to manage their natural resources and to utilize them for both community benefits and the improvement of individual livelihoods. In addition to conservancies and community forests, which were formalized under the Nature Conservation Amendment Act of 1996, a network of water point committees throughout the country was established to manage the provision and use of water at local levels. Both conservancies and water point committees started off as male-dominated organizations, training game guards for conservancies and caretakers for the water infrastructure. The later empowerment of women in CBNRM was in part a response to the gender policies proposed as a cross-cutting development issue for participating local institutions (Rodrik, 2000); it also emerged through the realizations that women are more susceptible to human-wildlife conflicts in conservancies and that they are actually responsible for the provision of water in homesteads (and thus have a strong interest in ensuring that children have access to safe drinking

water). Evidence from India and Indonesia confirms that female leaders prioritize drinking water more than men due to the greater vulnerability of women (Chattopadhyay and Duflo, 2004; Olken, 2010) and achieve better conservation outcomes when included in local governance (Agarwal, 2009). Such stronger preferences for clean drinking water and poverty reduction over other policies are also widely expressed by female participants in the Afrobarometer survey of nineteen countries in Sub-Saharan Africa (Gottlieb et al., 2018). However, there seems often to be a gap between women’s motivation and ability to participate in water management (Das, 2014; Meinzen-Dick and Zwarteveen, 1998). The gap can be explained by the intersectionality of socio-economic status and gender in societies which shapes the tasks and positions of its female members. Young girls and women in rural settings are often kept away from school due to time consuming household chores (Crow and Sultana, 2002) and already disadvantaged women cannot afford to take on the additional workload of a leadership position (Maskey et al., 2006). In addition, they lack female role models in these positions (Mandara et al., 2017), self-confidence and connections to participate (Khandker et al., 2020). Their underrepresentation in decision making is worrying, especially if women have different preferences for policies. Then gender quotas can bring about better outcomes for marginalized

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and resource-dependent groups in society as well as propel equality through their function as multipliers (Kongolo and Bamgose, 2002).

Namibia has made great progress in gender representation; in fact, the country currently ranks 15th globally and fourth on the African continent for the proportion of women in parliament (IPU, 2020). According to a representative survey among Namibians, support for a gender quota is high (about 70 per cent) among both men and women, and even higher in rural areas (Shejavali, 2018). Encouraging women's participation in CBNRM and especially in (piped) water management leadership positions has become a focus of the Directorate of Rural Water Supply of the Ministry of Agriculture, Water and Forestry, which is responsible for the co-management of the rural water infrastructure (Schneegg and Linke, 2016). Water from borehole water points is mostly used for livestock farming, a male activity. Therefore, we focus on piped water which is more likely to be for domestic use (drinking, washing, cooking) – a domain that predominantly falls in the responsibility of women in the study site. Every village is required to establish a Water Point Association (WPA), which elects a Water Point Committee (WPC) and a Water Point Leader (WPL). Members of the WPC should be regular users of the water resource to be familiar with its users and the diverse needs they have. The WPC is encouraged to use seasonal water supplies for livestock, keep the livestock carrying capacity in mind and draft rotational grazing schemes between different water points to make the best use of the scarce water resources. Decentralized policies such as CBNRM policies for wildlife and water thus seek not only to increase efficiency, but also to challenge the influence of elites and to change existing traditional leadership styles and gender roles in communities where women often have little or no voice in the public arena (Persha and Andersson, 2014).

However, in everyday rural life, gender roles and ideas of leadership are inevitably intertwined with cultural values, norms, and practices. Evidence suggests a male bias in community based organizations due to these societal gender roles (Mudege et al., 2015). In addition, and while development policies intent to lift the extreme marginalization of women, the women themselves might not acknowledge the appointment as WPC as a chance for gaining more power, but might consider it to be outside their gender identity (see Goffman, 1994). Recommendations from or even conditions imposed by outside agencies on the implementation of elections and the achievement of greater representation of women in decision making – when not directly contested by ruling elites – might result in very different outcomes than those expected even when the goals are met. In order to maintain their power, elites such as traditional leaders may encourage their wives and relatives or women who are more likely to adhere to traditional norms to serve on the local council. Additionally, it is not self-evident that women are generally in favour of challenging the existing power structure. Literature on the intersection of class and gender in Africa suggests rather to acknowledge also individual female strategies with which they successfully manoeuvre through structural constraints (Stichter and Parpart, 1988). Although female leaders may have a greater stake in water issues, the scarce evidence on political preferences in Africa indicates that women may also be less in favour of democracy overall, as they are more averse to conflict and also bear higher costs of conflict than men (García-Peñalosa and Konte, 2014). Thus, to maintain social stability, women may hold even more conservative beliefs than men; this makes it unlikely that gender quotas will automatically be the vehicle for encompassing structural change in patriarchal societies that some proponents of quotas and democratic principles hope for.

Our article seeks to describe some of the social realities resulting from the implementation of the CBNRM blueprints for female empowerment and democratic elections in water management in rural areas of Namibia vis-à-vis certain expectations expressed by governmental and non-governmental policy guidelines. We discuss the discrepancy between the expected and the observed in terms of the path dependency of institutions inherent to theories of institutional bricolage (Clever, 2002; Lund, 2006) and the concept of 'travelling blueprints'

(Bierschenk, 2014). These theories offer explanations for our observation that although the blueprint constitution for WPAs emphasizes secret elections and limited terms in office for leaders, these prescriptions are not necessarily put into practice. Women who abide by the informal rules of leadership enforced by the ruling elites might have a higher likelihood of being proposed as candidates and succeeding in the elections. As a result, ruling women might not act much differently than men. The main contribution of our study is the quantitative assessment of the prevalence of the abovementioned phenomena in 32 villages through a description of the election process and a comparison of the socio-economic attributes, values, and performance of elected male and female WPLs. We measure the performance of leaders in two distinct ways: First, by assessing villagers' average satisfaction with their leaders, and second, by carrying out an incentivized behavioral task in which leaders act as norm enforcers and can punish norm violations that are believed to be crucial for group cooperation (Fehr and Gächter, 2000; Kosfeld and Rustagi, 2015). In this case we use the economic experiment as a measurement tool in a controlled and anonymous decision context but do not specific test treatment effects. Therefore, we use from now on the term "behavioral/punishment task". The punishment task is intended to shed light on a leadership skill that is otherwise difficult to observe or prone to demand effects and hypothetical bias when directly asked about in a survey. Hence, we think it is crucial to combine heterodox theories of institutional development and surveys to enrich the results from the punishment task. Such a combination of methods can provide evidence that goes beyond potential efficiency gains of gender quotas in natural resource management.

We study 32 randomly selected villages in the Ohangwena region of northern Namibia. Although 31 of these villages are led by a traditional male headman,¹ only 15 have elected a male WPL. Thus, we find equal representation of men and women in these positions, in line with previous results from South Africa where single-purpose village committees are also gender balanced (Vollan, 2012). The results from our small random sample highlight the region's accomplishments in meeting the numerical targets of the gender quota. Additionally, we find that female WPLs are better educated and younger than their male counterparts. Thus, at first glance, these policies are a success story, having elevated young, educated women to a leadership position. However, the attitudes, values, and practices of female leaders (such as their positions on accepting bribes, favouring family and friends, or believing that women can be good leaders) are just as important to the quality of local leadership as the observed differences in age and education. Consequently, our descriptive results focus on such ideological beliefs about leadership, comparing the beliefs of elected male and female WPLs to those of villagers. Intriguingly, female WPLs express ideologies similar to those of male WPLs and traditional headmen; these shared beliefs are, however, quite distinct from the beliefs of villagers. Many villagers feel that it is unacceptable for leaders to accept bribes or favour their friends, whereas a significant share of leaders – including female WPLs – think that such practices can sometimes be justified. A large proportion of female WPLs even state that men are better leaders than women, a belief that is not shared by the average female villager. Thus, the inclusion of women in leadership in democratic CBNRM institutions does not seem to have revolutionized leadership styles, nor has it transformed the structural roots of gender inequality. Indeed, female WPLs often seem to be cherry-picked by traditional elites to run for office or are supported by villagers out of respect for traditional leaders and their families: Of the 17 female WPLs in our sample, 10 are related to the traditional leader, and these individuals also come from more affluent households. Their election thus stabilizes existing power relationships within the communities. Interestingly, both male and female villagers are just as

¹ These are the lowest-level traditional authorities in the Oukwanyama Kingdom, situated in the northern part of Namibia and southern Angola. They either inherit their position or are appointed by the Oukwanyama Queen.

satisfied with the work of female WPLs as with that of male WPLs. Thus, although CBNRM does lead to formal recognition of gender equality, our case study does not provide evidence for the notion that democratic elections and female representation in CBNRM leadership have the potential to transform gender roles and leadership styles beyond the increased visibility of women, at least in the short term.

2. Study site

The present study was conducted in the Ohangwena region of northern Namibia (Fig. 1), which is among the poorest areas in the country. The data collection took about three months during the dry-season between July and September 2014, almost 20 years after the CBNRM process started. Most inhabitants dwell in rural communities, and subsistence farming still represents the main source of income for most households, followed by pensions, remittances and wage jobs (Namibian Statistics agency, 2016). In our sample, about one-third of respondents mainly live off of agriculture and livestock production at subsistence level, but almost every household is engaged in agriculture or farming. Consequently, access to and the quality of water and land resources are of the utmost importance for local livelihoods. The villages in our sample are all located within a 10 km radius from the main paved road and are only accessible on dirt roads. The size of the villages ranges from 30 to 90 households, with 11 people per household on average. Villagers have access to primary schools and churches; however, health facilities and secondary schools are only found in the region's larger towns. The Namibia Water Corporation Ltd. (NamWater) supplies water to villages through pipelines from the Kunene River, which forms the border between Namibia and Angola. We chose piped water points instead of borehole water points, as the water is more likely used for household consumption. Borehole water points are usually further away from households, and the water is most likely used for livestock, a predominantly male activity. Local leadership institutions play a key role in managing infrastructure and resources. Each village has a WPA, an institution established in the course of the Namibian decentralization reforms in the late 1990s. These self-organized WPAs are headed by a chairperson, the WPL. WPA members should be regular users of the water point, so they are familiar with its users and their water needs to be able to efficiently manage the scarce water resources. As women are regular users, they should be represented in the WPA. WPLs, who are supposed to be democratically elected by the water point users (in effect, the respective villagers), are responsible for the day-to-day management of the water infrastructure, the regulation of access to water, and the collection of water user fees (Falk et al., 2009). Importantly, they are also empowered to enforce user compliance with water management regulations through penalties. The Namibian government provides blueprint guidelines for the management plans of the water points, but the final decision on the plan remains in the hands of the local WPA (RoN, 2001). However, apart from variations in how user fees are determined (for example, a proportional cost-sharing compared to a flat-rate payment scheme, see Schnegg (2016) for more details), most WPAs follow the guidelines provided by the government.

3. Data and Methodology

Our study is an extensive quantitative assessment of WPL performance based on the observed behavior and stated attitudes of leaders as well as villagers' satisfaction with the WPL in their community. Thus, this article cannot offer a detailed ethnographic account of specific mechanisms within selected villages, but we believe it reveals an interesting pattern with regard to democratic governance and female representation in CBNRM programs that can be viewed as more or less representative within the Ohangwena region. We selected villages from three constituencies in the region: Ohangwena, Endola, and Oshikango. Based on a list of 95 existing villages in these constituencies, we randomly chose 32 villages and eight backup villages. Three villages

could not be included in our sample due to the leader's lack of availability; these were replaced with the first three villages on our backup list.

Within each village, a local assistant helped us to contact the traditional leaders and WPLs. Additionally, we randomly selected twelve villagers on a door-to-door basis: Skipping every two consecutive houses on a given street, our local assistant approached the third house and invited the household to send one of its members over 18 who could read and write to the upcoming workshop. We did not allow more than one subject from the same household to participate. No participants, including the leaders, knew the exact purpose of the study; we invited them to take part in a 'workshop on decision making'. In total, 32 WPLs, 32 traditional authorities, and 384 villagers participated in our study.

The workshops consisted of four parts: three behavioral tasks² and an extensive survey that we administered at the end of the session. Incentivized behavioral tasks are controlled interactions among individuals based on game-theoretic predictions. The use of monetary or other material incentives and the assurance of anonymity make such tasks less prone to hypothetical or social-desirability biases than surveys or choice experiments (Murphy et al., 2005). The main virtue of this method is the control in the decision context, which allows researchers to observe leaders in the same situation with similar incentives – a scenario that would be impossible in real life. The complementary survey is an important tool for better understanding the local context in which the decisions in the experimental workshop are taken. For the villagers, we focused the survey on personal characteristics, local governance structures, and general opinions about leadership and democratic principles. The leaders additionally answered questions on their election or appointment to office and on their official functions, personality traits, and social involvement in local councils.

We held the sessions with villagers outdoors and they took their decisions in private inside a pickup truck. The leaders, separated from the villagers, completed the behavioral tasks and survey simultaneously in their homes. We translated the instructions (see Appendix) and surveys from English into the local language, Oshivambo, and back into English. We avoided value-laden words such as 'trust' and 'punishment'. To ensure that participants understood the instructions, our assistants explained to them in detail the possible choices and consequences of their decisions with the help of visual aids. After presenting the instructions, all subjects had to pass a test of comprehension. The surveys were completed by the participants with pen and paper, and our local assistants provided help when participants had any questions or problems.³

To address wealth and spill-over effects, we did not inform subjects about the tasks they were about to complete ahead of time, and no feedback was provided between the tasks. At the end of the session, to make the decisions fully anonymous and to ensure that it would be impossible to trace back leaders' choices, we paid out the sum of all earnings from the behavioral tasks, including a show-up fee of 30N\$. Across all tasks and including the show-up fee, villagers earned about 90N\$ ±12N\$ (\$16 PPP adjusted in 2014) and leaders about 165N\$ ±42N\$ (\$29 PPP adjusted) on average. These earnings represent a substantial amount of money for our participants, as the average self-reported monthly cash income in our sample is about 280N\$ for villagers and 890N\$ for leaders. Such valuable financial incentives are intended to ensure honest choices in the behavioral tasks that represent the true underlying preferences of the participants, as they face trade-offs with real monetary consequences.

² Results from two experimental tasks studying leaders procedural fairness and nepotism are published in Vollan et al. (2020).

³ In some cases, our assistants had to fill out survey forms for very old participants who could not write very well.

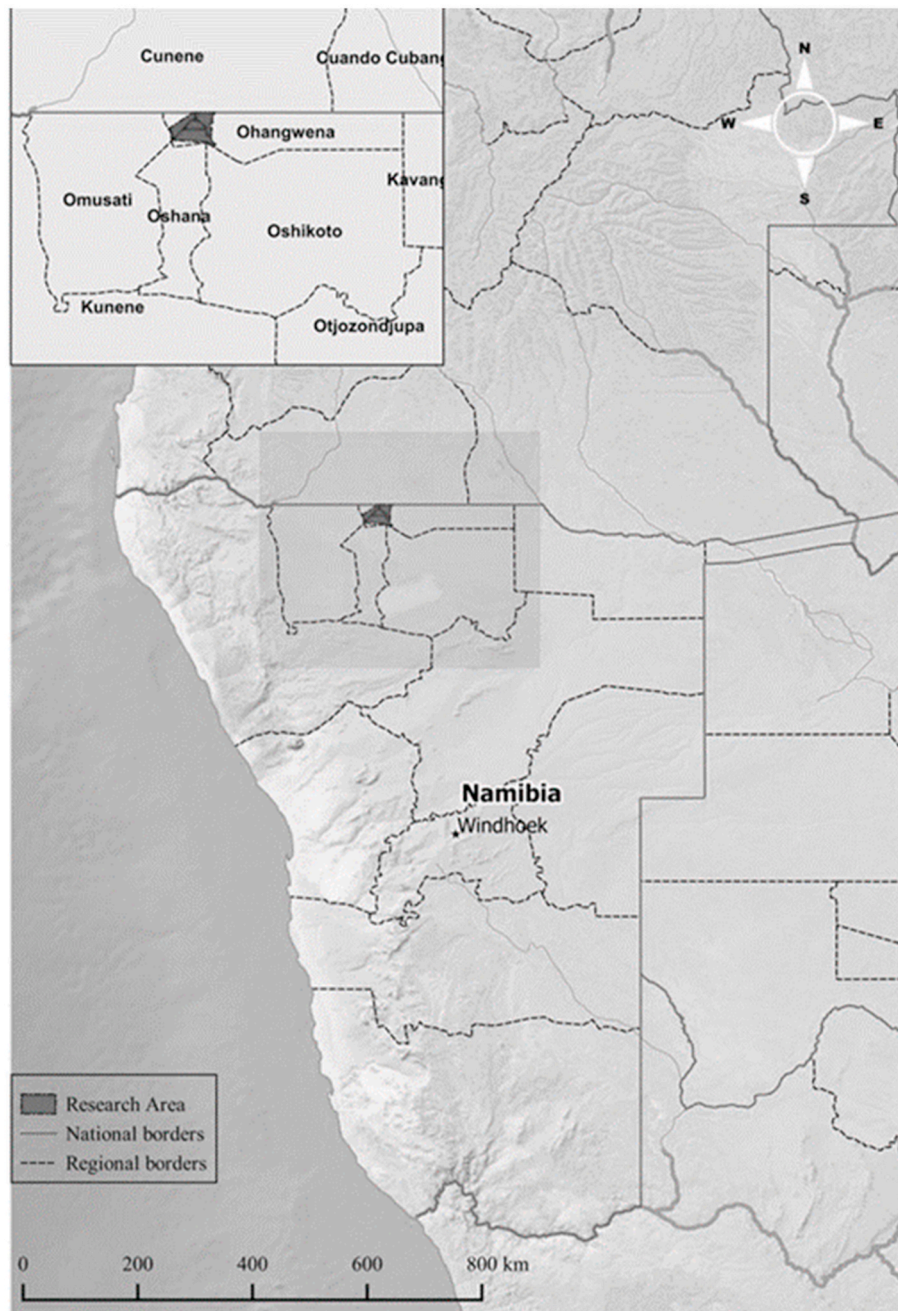


Fig. 1. Map of study area in Namibia. Notes: Own creation in QGIS.

3.1. Lab-in-the-field experiment: trust game

The behavioral task reported in this article is based on a one-shot Trust Game (Hoff et al., 2011; Vollan, 2011). In the game (Fig. 2), Villager 1 has the option of playing ‘right’, yielding a payoff of 10\$ for both players. However, if Villager 1 decides to play ‘down’, she is trusting Villager 2 to make a fair distribution of a larger sum of money. Villager 2 can instead play ‘right’ and keep 35\$ for herself and only

allocate 5\$ to Villager 1. Alternatively, Villager 2 can play ‘down’, and both will receive 20\$.

Within this basic set-up, we allowed the WPLs to engage in costly third-party punishment for the decisions of Villager 2. This form of punishment has been referred to as ‘altruistic punishment’, as the punisher bears monetary costs but no monetary benefits from punishment (Bernhard et al., 2006).⁴ To elicit the leader’s willingness to punish, we used the strategy method (see Fig. 2). Leaders made their conditional

⁴ Because punishment is costly and entails no material rewards for the leader, the conventional assumption of purely self-interested individuals implies the unique subgame perfect Nash equilibrium in which the leader never punishes (and Villager 1 chooses ‘right’). However, evidence abounds that people deviate from this strategy and engage in costly punishment (Bernhard et al., 2006; 2006b). We expect that real-life leaders are no exception in this regard.

Table 1
Socio-demographics.

Variable	Male WPL	Female WPL	Male Villager	Female Villager	Mean differences			
	(1)	(2)	(3)	(4)	(1)–(2)	(1)–(3)	(2)–(4)	(3)–(4)
	Mean [SD]	Mean [SD]	Mean [SD]	Mean [SD]				
Age in years	62.13 [12.48]	44.47 [11.80]	37.31 [17.24]	41.18 [16.28]	17.66***	24.82***	3.29	–3.87**
Years of education	6.21 [3.60]	8.24 [2.56]	7.84 [3.31]	7.26 [3.37]	–2.02*	–1.63*	0.97	0.58
Share of lifetime spent in the village	0.79 [0.24]	0.70 [0.32]	0.88 [0.26]	0.79 [0.31]	0.09	–0.08	–0.09	0.08***
Related to traditional authority (=1)	0.33 [0.49]	0.59 [0.51]	0.23 [0.42]	0.23 [0.42]	–0.25	0.10	0.36***	0.00
Monthly household income in N\$	2210.71 [3023.64]	1036.67 [1143.69]	971.98 [2049.31]	522.74 [899.84]	1174.05	1238.74**	513.92**	449.23***
Relative wealth: Compared to others I am better off (=1)	0.20 [0.41]	0.06 [0.24]	0.26 [0.44]	0.20 [0.40]	0.14	–0.06	–0.14	0.06
N	15	17	147	237				
F-test of joint significance (F-stat)					4.70***	6.19***	2.99***	3.09***
F-test, number of observations					28	157	244	373

Notes: For continuous variables (age, education, the share of lifetime spent in the village, and income), we used Mann-Whitney U tests to determine significant differences; proportion tests were used for binary variables (relation, relative wealth). The results do not change if we use standard t-tests. The F-test reports the F-statistics from a test for joint orthogonality. Standard errors: ***p < 0.01, **p < 0.05, *p < 0.1.

choice for each possible strategy of Villager 2 ('right' or 'down') without learning the actual decisions of the villagers. When leaders punish cooperative play ('down') by Villager 2, we refer to this as anti-social punishment (ASP); when they sanction defectors ('right'), we regard it as pro-social punishment (PSP). We interpret PSP as an indication of a leader's willingness to enforce cooperation norms.

To ensure anonymity, we individually informed villagers about their role in the experiment (Villager 1 or Villager 2), their (unknown) interaction partner's family relationship to the leader, and the name of the leader they were matched with (the WPL). To avoid wealth effects and hedging, leaders received an independent endowment of 40N\$ for each pair. In the end, we chose one of the three pairs randomly for payment, which was common knowledge. In this paper, we only focus on leader's punishment where two neutral villagers were matched together to play the trust game.

4. Results

Our empirical analysis focuses on who becomes a WPL, how the WPL

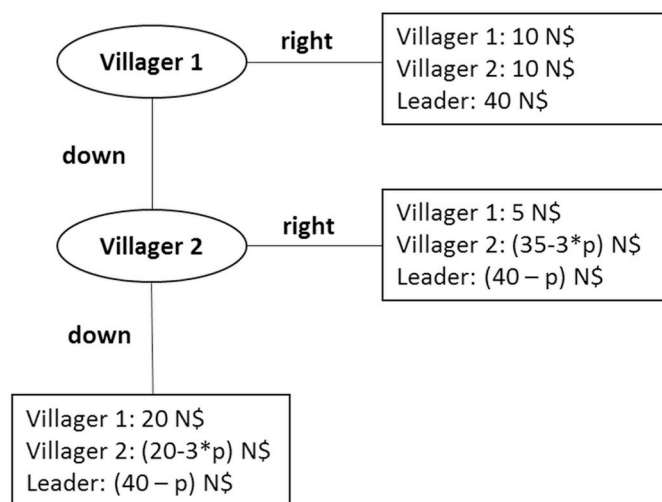


Fig. 2. Game tree. Notes: WPLs receive 40N\$ as an endowment that they could spend on punishing Villager 2. Every dollar spent on punishment (p) by WPLs reduces the second villager's earnings by three times as much, but not below zero. The income of the first villager remains unaltered.

position was acquired, and why villagers do or do not support their leaders. We start with a descriptive analysis of who attains office by comparing the socio-demographics of WPLs to those of average villagers. We then scrutinize how the WPLs in our sample attained their position by examining not only their statements but also villagers' perceptions of the most recent election. Furthermore, we investigate whether WPLs adapt leadership values and practices from the co-existing and omnipresent traditional authorities; in other words, does the inclusion of women lead to new perspectives? Finally, we attempt to identify the determinants of villagers' satisfaction with their WPLs using regression analysis. We focus on leaders' demographic characteristics, incentivized punishment, and values.

4.1. Who gets elected to office?

Over 20 years after the local WPAs were established, we study whether the introduction of democratic elections has led to any dissolution of existing social structures and the empowerment of women or not. We compare socio-demographic characteristics between elected leaders and villagers, focusing in particular on gender differences; greater representation of marginalized groups, such as women and the poor, is promoted by the UN as one of the core principles of good governance (Graham et al., 2003). Table 1 provides a comparison of socio-demographics across the following four groups: male WPLs, female WPLs, male villagers, and female villagers. It becomes clear that women are significantly better represented in leadership positions in the WPA compared to traditional institutions, which are predominantly led by men. We find that in 17 out of the 32 villages, women acquired the WPL position. Female WPLs are on average about 18 years younger than the male WPLs (44 vs. 62 years; Mann-Whitney U, z = 3.27, p < 0.01, n = 32) and are also slightly better educated, having two years more of schooling (Mann-Whitney U, z = –1.78, p = 0.075, n = 31). Overall, leaders are not better educated than average villagers. Male WPLs are even slightly less educated than average male villagers (Mann-Whitney U, z = –1.97, p = 0.049, n = 161).

Additionally, we find that people who attain the WPL position are from wealthier families and more often related to the traditional authority (village headman): Of the 17 female WPLs, 10 are relatives of the village headmen. These findings show how influential families still have a strong impact on recently established democratic institutions. Although the CBNRM approach leads to the inclusion of more women in an important decision-making position, the women elected still

predominantly come from the more powerful and wealthy families in the community and do not represent the status of an average villager.

Finding 1: More than 50 per cent of the WPLs in our sample are female. Female WPLs are better educated and younger than male WPLs, but not than average villagers. Overall, leaders still come from the powerful families within a community, especially female WPLs.

4.2. Adapting democratic principles and values to local customs

As a next step, we analyse how leaders attain their position. How are democratic blueprint rules adopted in small rural villages? For example, a key feature of democracy is the re-election incentive that holds leaders accountable (Besley, 2005). Villagers need to be able to filter out bad leaders through private elections. The adaptation of democratic rules is complicated in Sub-Saharan Africa, as traditional authorities who enjoy high popularity among their constituents co-exist with democratic institutions (Logan, 2013). Thus, it is almost inevitable that the new democratic rules will be blended with existing traditional ones, especially as certain aspects of democratic governance (such as term limits and secret elections) are not universally valued. Consequently, adherence to democratic blueprints can vary widely between villages, and local practices will not necessarily implement the rules introduced from

Table 2
How did WPLs attain office, and for how long?

Variable	Male WPL		Female WPL		Total	
	N	Mean [SD]	N	Mean [SD]	N	Mean [SD]
Competition (=1)	15	0.73 [0.46]	17	0.71 [0.47]	32	0.72 [0.46]
Voter turnout	15	0.57 [0.16]	17	0.59 [0.19]	32	0.58 [0.17]
Elected (=1)	15	0.87 [0.35]	17	1.00 [0.00]	32	0.94 [0.25]
Private elections (=1)	15	0.20 [0.41]	16	0.06 [0.25]	31	0.13 [0.34]
Fixed office term (=1)	15	0.33 [0.49]	17	0.53 [0.51]	32	0.44 [0.50]
Years in office	15	8.40 [5.40]	17	8.47 [5.58]	32	8.44 [5.41]
Part of the WPA before?	13	0.23 [0.44]	17	0.41 [0.51]	30	0.33 [0.48]
Time spent on activities as WPL in a typical week (hours)	10	23.30 [18.97]	14	19.21 [14.42]	24	20.92 [16.21]
Would you run for another term?	12	0.92 [0.29]	15	0.87 [0.35]	27	0.89 [0.32]

Notes: Competition, elected, private elections, fixed office term, and part of the WPA before are dummy variables. Voter turnout denotes the share of respondents within a village who took part in the most recent WPL election, a measure of in-sample voter participation.

the top down.

Overall, we observe no significant differences between male and female WPLs for any of the variables concerning the procedures of elections that are reported in Table 2. We find that over 70 per cent of elected leaders faced at least one other candidate in their election to office. Villagers directly elected 30 out of the 32 WPLs; the remaining two leaders reported being selected by the WPC members. Within our sample, we see that only 60 per cent of potential voters turned out for the most recent WPC election. The voting mechanism varies across villages, but secret elections do not seem to be the norm in our study region: Only four WPLs reported having been elected completely anonymously (for example, through secret ballot voting). It is much more common for villagers to elect WPLs in public through the raising of hands, a practice that is observable by all and potentially prone to peer

pressure. However, only 3 per cent of villagers who participated in the most recent WPL election felt pressured to vote for a certain candidate, independent of the gender of the WPC who ultimately attained office (see Figure A1 in the Appendix for more details).

Less than half of the WPLs in our sample acknowledged that they will have to stand for re-election, which contravenes the water management guidelines provided by the Namibian government (RoN, 2001). These guidelines call for regular elections every three years in the water points. The lack of regular elections results in office terms for WPLs that are much longer than intended – over eight years on average. Although some WPLs mentioned that they ‘just accepted’ the vote of the community,⁵ the most common motivation to run for office in our sample was to help the community and develop the village.⁶ Nearly all of the leaders stated that they would like to run for another term. Since most of the WPLs did not know that they had a limited term in the first place, this can be seen as an indication that WPLs want to stay in power. While there are no financial incentives to gain from holding office, almost all WPLs reported substantial social benefits: increased popularity and status in the village and connections to people outside the village. These benefits on top of the intrinsic motivations to serve the community could explain why they spend about 20 h per week on leader activities.

Finding 2: Democratic principles, such as anonymous, regular elections, are not strictly adhered to, which could explain why leaders have significantly longer terms in office than prescribed by the government. The absence of anonymous elections, however, does not lead villagers to feel pressured to vote for certain candidates.

Next, we focus on general values regarding leadership and procedural fairness expressed by leaders and villagers. We analyse whether WPLs hold values that are representative of the entire community, or whether their values are more in line with what traditional authorities deem important. Fig. 3 reports the preferences of villagers, WPLs, and traditional headmen concerning the characteristics they value in a good leader. We do not find significant gender differences for these prefer-

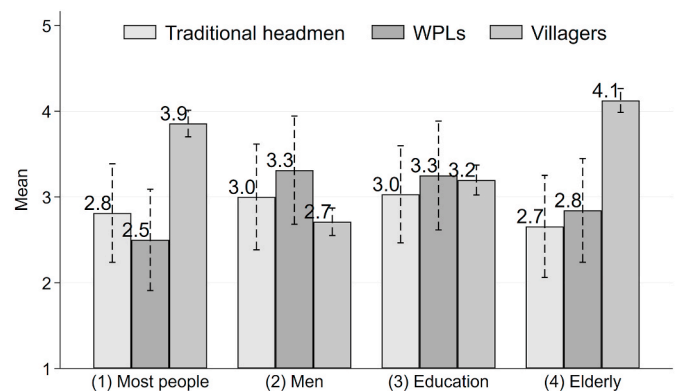


Fig. 3. What makes a good leader?. Notes: Responses were measured using a 5-point Likert scale, where 1 indicates ‘strongly disagree’ and 5 ‘strongly agree’. (1) Most people can learn to be leaders; it is not a matter of birth. (2) On the whole, men make better political leaders than women do. (3) On the whole, more educated people make better political leaders than the less educated do. (4) On the whole, elders make better political leaders than the youth do. Errors bars in grey indicate 95 per cent confidence intervals.

ences among WPLs and villagers; see Table A2 for significant differences

⁵ Examples: ‘because there was a lack of people on the committee’, ‘accepted villagers’ decision’, ‘just accepted the vote’, ‘just accepted votes and did not volunteer to be a candidate’.

⁶ Examples: ‘to help the community, maintain or take care of the water pipes’, ‘to lead the community, take care of the water supply’ or ‘to serve the community, take care of water-related needs’.

across all groups using a binary specification as a robustness check.⁷ Overall, we find that WPLs express significantly different opinions about what makes a good leader compared to villagers (joint orthogonality test, $F(4, 411) = 5.88, p < 0.01$) but not compared to traditional headmen (joint orthogonality test, $F(4, 59) = 0.5, p > 0.1$). Villagers deem seniority to be the most important trait for a leader (Mann-Whitney U, $z = -4.52, p < 0.01, n = 416$), whereas gender, education, and birthrights are less important. Villagers are also significantly more likely to agree that people are not born to be leaders (Mann-Whitney U, $z = -4.61, p < 0.01, n = 416$).

In contrast to the villagers, among WPLs, 19 out of 32 disagree that most people can learn to be leaders; instead, they believe it is a matter of birthright. Such a view may stem from the fact that many elected WPLs are related to the powerful traditional elite and also come from wealthier households in the community. Both male and female WPLs strongly agree with the statement that men make better political leaders than women (Mann-Whitney U, $z = 1.98, p = 0.048, n = 416$). Interestingly, female WPLs are the most likely to think that men make better political leaders (7 out of 17 strongly agree). A leader's education is equally important for all respondents.

With this comparison, we cannot determine whether elected WPLs adopt the views of traditional headmen while in office or whether they already held such values before being elected. The latter seems more likely, as length in office is only correlated with the opinion that elders make better political leaders, not with the other statements.

Finding 3: WPLs have a relatively exclusive view of who can become a political leader, more in line with the beliefs of traditional headmen than those of villagers. Villagers value seniority more than WPLs, and gender and birthright less than WPLs.

Fig. 4 reports opinions from the same groups on four statements about democratic principles and acceptable behaviors by political leaders in office. Again, we find no significant gender differences among WPLs, as well as no differences between WPLs and traditional headmen for all four statements (see Table A2). We find that WPLs are significantly less likely to agree that leaders need to serve all people than villagers (Mann-Whitney U, $z = -4.12, p < 0.01, n = 416$). There is a dichotomous split among WPLs, as 13 strongly disagree and 19 strongly

agree with the statement. Additionally, only 10 per cent of villagers strongly agree that taking bribes as a leader is sometimes justified, whereas nearly 40 per cent of WPLs (12 out of 32) strongly agree (Mann-Whitney U, $z = 1.77, p = 0.076, n = 416$). WPLs are also less optimistic that elections ensure the accountability of elected leaders; over 70 per cent of villagers strongly agree with this statement (Mann-Whitney U, $z = -2.99, p < 0.01, n = 416$). We find no significant differences between WPLs and villagers concerning the importance of group voting in important decisions.

Finding 4: WPLs express views regarding nepotism, bribe-taking, and electoral accountability similar to those of traditional headmen. They are significantly more likely to agree that taking bribes and favouring friends and relatives as a leader is justified than average villagers.

4.3. Norm enforcement of leaders in the experiment

Using a sample of leaders from community forest groups in Ethiopia, Kosfeld and Rustagi (2015) determine that leader punishment explains cooperation in the group; the authors even link this factor to better forest conditions. Although there is substantial evidence that women are on average less selfish, more egalitarian, and more cooperative than men (Croson and Gneezy, 2009; Eckel and Grossman, 1998; Greig and Bohnet, 2009), there is no evidence on the punishment attitudes of female versus male leaders. We compare the propensity of male and female WPLs to engage in altruistic punishment and then relate this aspect to the satisfaction of villagers with their WPL.

Fig. 5 shows the intensity (panel a) and frequency (panel b) of pro-social and anti-social punishment (PSP and ASP) for male and female WPLs. We find that male WPLs tend to issue both PSP (67 per cent vs. 47 per cent) and ASP (27 per cent vs. 12 per cent) more than female WPLs. However, these differences of up to 20 percentage points are not statistically significant, given the limited sample size (two-sided proportions test, $z = 1.12, p = 0.26$ for PSP). Moreover, when female WPLs punish pro-socially, they do so less intensively than male WPLs; in fact, we determine that female leaders punish about four times less intensively than male WPLs (see Table A5), a significant difference.⁸ We find no significant gender differences concerning social preferences or personality traits (see Figure A4). The results from the personality trait analysis should be interpreted with caution, as the concept was

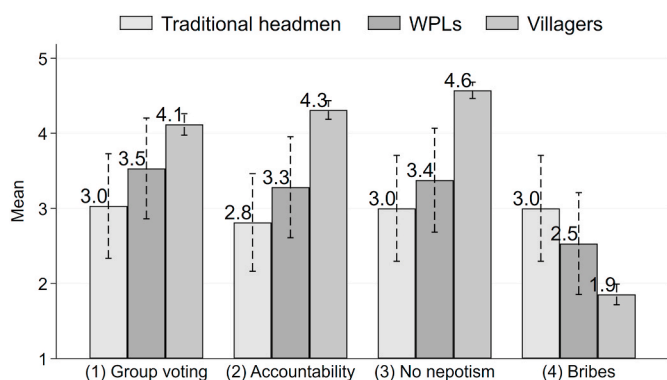


Fig. 4. Democratic principles and leader behavior. Notes: Responses were measured using a 5-point Likert scale, where 1 indicates 'strongly disagree' and 5 'strongly agree'. (1) For important decisions, members of a group should be allowed to vote. (2) Democratic elections in this village ensure that the elected authorities act in the interest of their people. (3) A leader has to serve all people, including those who did not vote for him/her or are not friends. (4) Accepting a bribe in the course of one's duties is sometimes justified. Errors bars in grey indicate 95 per cent confidence intervals.

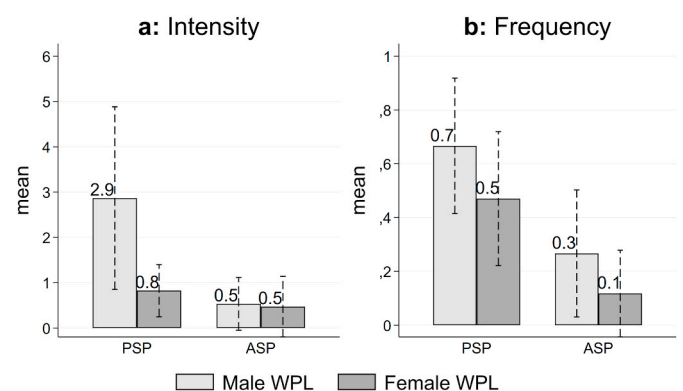


Fig. 5. Rule enforcement in the experiment. Notes: Panel A shows the average punishment intensity imposed on Villager 2, dependent on whether Villager 2 was trustworthy or not. Panel B shows the share of leaders who decided to punish in these two situations.

⁷ For WPLs, the Likert scale often only takes 2 values on the extremes, which could be problematic when comparing the whole scale across groups.

⁸ As the dependent variable is left-censored and many observations are clustered around zero (they do not punish at all), we use non-linear tobit regression to account for censoring and clustering in our data. OLS estimates of the complete sample would be biased and inconsistent.

developed in WEIRD (Western, educated, industrialized, rich, and democratic) countries and might not apply to the local context. We pretested the translation of the psychometric scale to make sure each item made sense for the respondents in our study. Details on how we measured the preferences and traits can be found in the Appendix.

The results from the punishment task indicate that cooperation and especially the payment discipline of villagers might be lower under female leadership, as norm enforcement by women leaders is less pronounced. Although we do not have ideal measures of cooperation or payment discipline, in the next section we link punishment behavior to villager satisfaction, as cooperation can be associated with satisfaction with the leader. Punishment may not be the only way to enforce norms, and women might use different strategies than men to achieve the same level of compliance.

Finding 5: Female WPLs tend to punish less frequently (not statistically significant) and also significantly less intensively than male WPLs.

4.4. Villager satisfaction as a function of leader gender, values, and behavior

As the final step, we examine the determinants of villagers' satisfaction with the performance of WPLs. Gender differences do not appear to drive villagers' overall satisfaction with leaders. In Fig. 6, we plot satisfaction with both male and female WPLs on the 5-point Likert scale that we used for measurement. The vast majority, about 80 per cent of villagers, are 'very satisfied' with their WPL, with no significant gender differences (Mann-Whitney U, $z = -1.3$, $p > 0.01$, $n = 327$).

To simplify the further regression analysis and due to clustering of observations, we transform the Likert scale into a binary satisfaction variable that distinguishes between respondents who are at least a little satisfied (Likert scale ≥ 4) or not (Likert scale < 4). We use a general-to-specific modelling approach to identify significant variables that explain variation in villagers' satisfaction with their WPLs.⁹ We find that from a large set of potential explanatory variables,¹⁰ only five remain

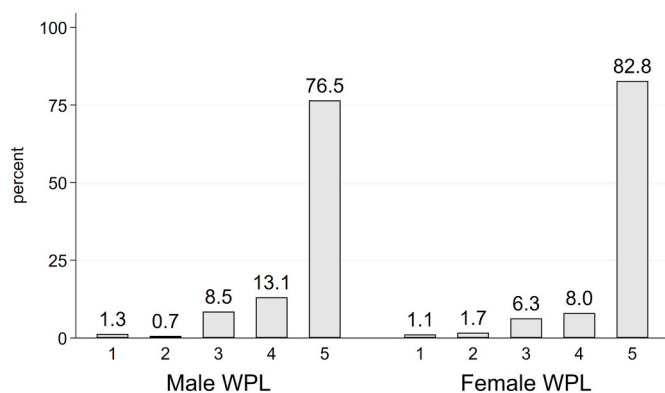


Fig. 6. Villager satisfaction with the WPL. Notes: $N = 327$. We only include respondents who knew who the current WPL was. The responses were measured using a 5-point Likert scale, where 1 indicates 'very dissatisfied' and 5 'very satisfied'.

⁹ We use the general-to-specific (Gets) algorithm from the stata package 'genspec' (Clarke, 2014). This allows us to identify the variables with the greatest relevance and explanatory power from a large set of potential explanatory variables and produces the best-fitting final model.

¹⁰ The full specification includes socio-demographics of villagers and characteristics of WPLs, including their behavior in the experiment and values regarding leadership and democracy. See Table A6 for more detailed probit regression models in which we sequentially introduce these sets of control variables.

significant in the final model, which can explain 12 per cent of the variation in villager satisfaction (see Table 3). The observed behavior of WPLs – their punishment choices and social preferences – has no significant explanatory power for villagers' satisfaction (see Table A6). Rather, satisfaction depends on distinct leader characteristics and relationships within the village. Again, we find that family relationships play a role, as relatives of the WPL are more likely to be satisfied. Satisfaction is also increasing in the WPL's age and education. Interestingly, villagers are more satisfied with WPLs who state that leadership is not a birthright; specifically, villagers are about 10 percentage points more likely to be satisfied with WPLs who strongly agree with that statement.

Finding 6: Villagers are equally satisfied with male and female WPLs, despite observing differences in age, education (Finding 1), and norm enforcement in the experiment (Finding 5). They are more satisfied with older WPLs and when they are related to the WPL. The differences among WPLs in punishment choices, social preferences, and most values do not significantly explain villager satisfaction.

5. Discussion

Our results can be summarized as follows: De-facto democratic elections significantly differ from the blueprint design (Finding 2), which allows ruling elites to empower or even install WPLs who share their values (Findings 3 and 4), potentially because they are related to the ruling family (Finding 1), while meeting the gender quota proposed by the Rural Water Supply and, most importantly, managing water supply in a satisfactory way (Finding 6). The only noteworthy difference between the behavior of male and female WPLs was detected in the punishment task measuring norm enforcement (Finding 5); however,

Table 3
Determinants of villager satisfaction with the performance of WPLs.

VARIABLES	GETS model (1)
Transparency	0.17*** (0.05)
Villager: Related to WPL	0.12*** (0.03)
WPL: Over 52 years old	0.09*** (0.03)
WPL: Education in years	0.01** (0.01)
WPL: 'Most people can learn to be a leader, not a matter of birth.'	0.02** (0.01)
Constant	0.55*** (0.09)
Observations	320
R-squared	0.12

Notes: The dependent variable is the binary satisfaction variable. We only include respondents who knew who the WPL in the village was. 'Transparency' = The WPA takes decisions in an understandable way. The agreement with the statement 'Most people can learn to be a leader, not a matter of birth' is measured on a 5-point Likert scale. OLS estimates with robust standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

this does not seem to influence the effectiveness of water management or villager satisfaction, and most likely reflects a different leadership style of the women in our sample.¹¹ The observed pattern is consistent with the idea of 'travelling blueprints' (Bierschenk, 2014), as the policy of

¹¹ Also, Schnegg and Linke (2015) point out that in rural Namibia formal sanctions are often substituted by informal rule enforcement in water management, without leading to a breakdown of water supply. The authors identify the importance of sharing norms in multiplex networks as a low-cost alternative to formal sanctioning of collective activities.

equity in access and control over natural resources in CBNRM institutions is locally appropriated and newly coded to fit cultural norms and values. How a blueprint becomes assembled and disassembled in a new situation is dependent on what Haraway (1991: 194) calls ‘skilled practices’ – namely, on embodied cultural knowledge that does not travel with the blueprint but receives it in situ. In subsequent translation and appropriation processes, some aspects of the blueprint are accepted, whereas others are rejected, adapted, or transformed to fit local specificities. This specific relationship between the global and the local has been described in various concepts such as ‘appropriation’ (Macamo and Neubert, 2008; Spittler, 2003) and ‘glocalization’ (Robertson, 1992) in development and globalization theory. Similar dynamics are also described in theories of institutional bricolage (Cleaver, 2017).

According to those theories, ruling elites respond to changing circumstances dictated from the outside world but partially maintain their grip on power by bending democratic rules and installing favourable leaders from their own family, as is the case in our example. In addition, the multiplex networks in rural villages (Schneegg, 2018) inhibit the enforcement of democratic rules, given the interdependencies and reliance on traditional elites.¹² This might also explain villagers’ positive evaluation of female WPLs’ performance in our sample, which could be connected to the fact that most female WPLs are related to traditional authorities and as such need to be shown respect. Reports from CBNRM projects in Africa (Cassidy, 2001; Gujadhur, 2000) highlight how rural inhabitants in particular consider their traditions to be not only the basis of their identity but also a guarantee of their social survival. The desire for social cohesion thus overrules external ideas of individual equity. With regard to gender and the empowerment of women, this is in line with indigenous and black feminism, which argue against imported ideas that are in conflict with local gender identities and cultural values. Hence, traditional leaders may be anxious to retain their power, but women might also seek to maintain their socio-cultural role even in the new positions they have attained. This interpretation is supported by the elected female WPLs who commented that they simply accepted the villagers’ decision and that they wish to help the community. The eagerness of participating in developing the community, is also found in rural development projects in South Africa (Kongolo and Bamgose, 2002: 87). Thinking in line with Karen Sacks’ early study of African women (1979), accepting the position as WPL could even be interpreted as an individual gain, pointing to the power of women as sisters, emphasizing that kin relations equal the allocation of material means. However, we cannot preclude the possibility that women are compliant with others’ decisions because they will have to bear the consequences if they are seen to averse local norms and values (also see Kongolo and Bamgose, 2002: 82). The combination of these mechanisms nevertheless prevents the encompassing structural change envisioned by those promoting democratic principles and gender quotas, even though the traditional norms of leadership and government structures have seemingly been upgraded to the western standards of democracy and gender equality inscribed into CBNRM. While this process can empower rural women in terms of giving them a voice and decisive force in water management, it can also burden them with problems and puts them in difficult situations of intertwined power relations. Their task is to sustainably manage the scarce water resources that are often at risk of degradation by livestock populations beyond the local carrying capacity. A female WPL has to build consensus among a community with diverse water needs to preserve the carrying capacity of the water point. This bears the risks of conflicts, where men who own more livestock may want to shape payments rules in their favour (i.e. flat payment scheme), which could increase pre-existing inequalities and threaten water levels. Such developments can put female WPLs in difficult situations where they have to enforce rules that are perceived as not fair by the majority

in the community, for example when someone can’t make their payments.

The long-term effects of women in leadership positions could be more encompassing. In particular, the villagers’ satisfaction with the performance of female WPLs could potentially challenge and revise traditional norms associated with leadership. It shows that different leaders and many forms of leadership styles are accepted by the villagers in these communities. This challenges those who believe that people only listen to strong, elderly and male leaders. Additionally, it has been found in India that women in leadership positions serve as role models for young girls, raising their aspirations and reducing the gender gap in education (Beaman et al., 2012).

One of our main findings is the discrepancy in values between WPLs and villagers concerning ‘who should become a leader’ (Finding 3) and the importance of democratic principles in ensuring accountability (Finding 4). Given that de-facto election practices reflect the views of acting WPLs, the water point committees seem to follow practices and values close to those of the traditional authorities, indicating the adaptation of grass-roots institutions to local contexts based on local practices and traditions rather than precise adherence to outside recommendations for democratic principles. Theories of institutional bricolage describe how individuals consciously and subconsciously patch together institutional arrangements from the social and cultural resources available to them, but they cannot determine whether this process ultimately yields desirable outcomes. In the rural areas of Sub-Saharan Africa characterized by strong rules, norms, and traditions of lineage and seniority-based male authority that foster structural inequalities for women and the poor, such a bricolage may either be seen as a transition process moving towards a democratic society or as an impediment to structural change. In our view, future research should go beyond a descriptive approach of institutional bricolage to attempt to evaluate these outcomes. Even when such bricolage is seen as an impediment to structural change, it is not evident that the elites who attain leadership positions are not serving their community. Our assessment reveals very high satisfaction with both traditional leaders and elected leaders, which is in line with cross-country studies showing the high legitimacy of traditional authorities among their constituents; this supports the positive and nuanced view of traditional authorities throughout Sub-Saharan Africa, especially among the younger population (Logan, 2013).

Our survey-based approach has the advantage over a purely qualitative approach of not only documenting potential problems (that is, the fact that democratic elections are not held anonymously or regularly, or that most female leaders are related to the village’s traditional leader) but also indicating the frequency of these problems in a randomly drawn sample encompassing 32 villages in three constituencies using comparable data across the villages. Although our data offer extensive insights into local perceptions and the values of leaders and villagers, we are unable to describe the complex causal factors related to leadership and social dynamics in each village. We cannot, for example, interpret our results against the socio-cultural background concerning gender roles and dispositions or evaluate the influence of traditional male leaders on the nomination and election of female candidates. The fact that the majority of our WPLs are women could also simply be due to a lack of available younger men. As Cassidy (2001) shows for Botswana, young men in particular tend to leave their rural villages to seek wage labour in urban agglomerations.

Thus, the two methods can be seen as complementary. Future ethnographic fieldwork should contextualize our findings within the local socio-cultural setting against which the dynamics of change regarding leadership and female empowerment can be captured. Studying the stakeholders’ perspectives could improve our understanding of the discrepancies in the evaluation of leadership qualities between WPLs and villagers (Finding 3) as well as the adherence of female WPLs to traditional leadership values (Finding 4). Qualitative research could scrutinize the agency of female WPLs and the question of

¹² Indeed, each WPL was on average a member in two or more village groups or associations such as religious, recreational, or professional groups.

whether they adopt locally accepted leader strategies in order to obtain authority along the established model, or whether they simply accept what male elites expect from them without questioning gender inequality. This might also help to explain why female WPLs are younger than their male counterparts despite the importance of seniority. That is, younger women might be preferred to older women because they are more likely to follow the advice of senior traditional authorities. In this light, further research could reveal whether or not women punish less often and less severely because it contradicts their traditional social position, and whether they fear social condemnation if they act otherwise.

6. Concluding remarks

Over 20 years after the establishment of the first WPAs in Namibia, our empirical snapshot from 32 randomly selected communities highlights the inclusion of younger, educated women in leadership positions, as well as their constituents' satisfaction with their performance. However, we observe that the majority of these leaders are related to the ruling elites and follow practices and values that are closer to elite values than those of the average villager. Existing power structures that keep structural inequalities in place thereby remain intact. The goal of obtaining leadership positions for women has been achieved, but the objectives of breaking up power structures and giving a stronger voice to the marginalized groups within communities intended by the CBNRM approach have not.

Further qualitative research is needed to embed our findings within the social context of local norms and leadership values with respect to strategies of safeguarding social cohesion, and cultural identity. Researchers should follow up on potential local struggles for power by studying in detail how and by whom candidates for the water points are chosen. One could thereby identify whether the current implementation of CBNRM truly allows others to gain access to traditional leadership, what impact this may have on structural inequity, and how local residents would evaluate such changes. Future research could also determine whether or to what extent the CBNRM institution has changed attitudes towards water as a common natural resource. Additionally, we need a better understanding of the longer-term impacts of the increased visibility of women in leadership positions, such as changes in gender stereotypes in the public and private realm. These avenues of research would enable a critical assessment of empowerment policies from the stakeholders' perspective.

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CRediT authorship contribution statement

Ivo Steimanis: Methodology, Formal analysis, Investigation, Data curation, Visualization, Writing - review & editing, Project administration. **Rebecca Hofmann:** Writing - original draft, Writing - review & editing. **Meed Mbidzo:** Resources, Writing - review & editing. **Björn Volland:** Conceptualization, Methodology, Writing - review & editing, Supervision, Funding acquisition.

Declaration of competing interest

The authors declare that they have no competing interests.

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Appendix A. Supplementary data

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References

- Agarwal, B., 2009. 'Gender and forest conservation: the impact of women's participation in community forest governance'. *Ecol. Econ.* 68 (11), 2785–2799.
- Beaman, L., Duflo, E., Pande, R., Topalova, P., 2012. Female leadership raises aspirations and educational attainment for girls: a policy experiment in India. *Science* 335 (6068), 582–586.
- Bernhard, H., Fehr, E., Fischbacher, U., 2006. Group Affiliation and altruistic norm enforcement. *Am. Econ. Rev.* 96 (2), 217–221.
- Besley, T., 2005. Political selection. *J. Econ. Perspect.* 19 (3), 43–60.
- Bierschenk, T., 2014. From the anthropology of development to the anthropology of global social engineering. *Z. Ethnol.* 139 (1), 73–97.
- Cassidy, L., 2001. Improving Women's Participation in CBNRM in Botswana.
- Chattopadhyay, R., Duflo, E., 2004. Women as policy makers: evidence from a randomized policy experiment in India. *Econometrica* 72 (5), 1409–1443.
- Clarke, D., 2014. GENSPEC: stata module to implement a general-to-specific modelling algorithm. <https://EconPapers.repec.org/RePEc:boc:bocode:s457892>.
- Cleaver, F., 2002. Reinventing institutions: bricolage and the social embeddedness of natural resource management. *Eur. J. Dev. Res.* 14 (2), 11–30.
- Cleaver, F., 2017. *Development through Bricolage: Rethinking Institutions for Natural Resource Management*. Routledge.
- Croson, R., Gneezy, U., 2009. Gender differences in preferences. *J. Econ. Lit.* 47 (2), 448–474.
- Crow, B., Sultana, F., 2002. Gender, class, and access to water: three cases in a poor and crowded delta. *Soc. Nat. Resour.* 15 (8), 709–724.
- Das, P., 2014. 'Women's participation in community-level water governance in urban India: the gap between motivation and ability'. *World Dev.* 64, 206–218.
- Eckel, C.C., Grossman, P.J., 1998. Are women less selfish than men?: evidence from dictator experiments. *Econ. J.* 108 (448), 726–735.
- Fehr, E., Gächter, S., 2000. Cooperation and punishment in public goods experiments. *Am. Econ. Rev.* 90 (4), 980–994.
- García-Penalosa, C., Konte, M., 2014. Why are women less democratic than men? Evidence from sub-saharan african countries. *World Dev.* 59, 104–119.
- Goffman, E., 1994. *Interaktion Und Geschlecht*, Campus Studium (1. Aufl.). Kölner Zeitschrift für Soziologie und Sozialpsychologie, 46. Campus-Verlag, pp. 734–735.
- Gottlieb, J., Grossman, G., Robinson, A.L., 2018. Do men and women have different policy preferences in Africa? Determinants and implications of gender gaps in policy prioritization. *Br. J. Polit. Sci.* 48 (3), 611–636.
- Graham, J., Amos, B., Plumptre, T., 2003. *Principles for Good Governance in the 21st Century*, vol. 15. Policy Brief.
- Greig, F., Bohnet, I., 2009. Exploring gendered behavior in the field with experiments: why public goods are provided by women in a nairobi slum. *J. Econ. Behav. Organ.* 70 (1), 1–9.
- Gujadhur, T., 2000. *Alcohol Abuse Intervention Strategies for Rural (Bushmen) Settlements Embarking on CBNRM*, Gaborone, Botswana.
- Haraway, D., 1991. 'Situated Knowledges: the Science Question in Feminism and the Privilege of Partial Perspective', *Simians, Cyborgs, and Women: the Reinvention of Nature*. Routledge, New York, pp. 183–202 (consulted January 2019). <https://www.taylorfrancis.com/books/9781135964764>.
- Hoff, K., Kshetramade, M., Fehr, E., 2011. Caste and punishment: the legacy of caste culture in norm enforcement*. *Econ. J.* 121 (556), F449–F475.
- IPU, 2020. *Women in parliamentary leadership roles. Women in parliament: 1995–2020*. Inter-Parliamentary Union, Geneva, pp. 2–4.
- Khandker, V., Gandhi, V.P., Johnson, N., 2020. Gender perspective in water management: the involvement of women in participatory water institutions of eastern India. *Water* 12 (1), 196.
- Kongolo, M., Bamgose, O., 2002. Participation of rural women in development: a case study of tsheseng, thintwa, and makhalaneng villages, South Africa. *J. Int. Wom. Stud.* 4 (1), 79–92.
- Kosfeld, M., Rustagi, D., 2015. Leader punishment and cooperation in groups: experimental field evidence from commons management in Ethiopia. *Am. Econ. Rev.* 105 (2), 747–783.
- Logan, C., 2013. The roots of resilience: exploring popular support for african traditional authorities. *Afr. Aff.* 112 (448), 353–376.
- Lund, C., 2006. Twilight institutions: public authority and local politics in Africa. *Dev. Change* 37 (4), 685–705.
- Macamo, E., Neubert, D., 2008. 'The New and its Temptations: Products of Modernity and Their Impact on Social Change in Africa', *Unpacking the New: Critical Perspectives on Cultural Synchronicity in Africa and beyond*. LIT Verlag, Vienna, pp. 271–304.
- Mandara, C.G., Niehof, A., van der Horst, H., 2017. Women and rural water management: token representatives or paving the way to power? *Water Altern.* (WaA) 10 (1), 116–133.
- Maskey, V., Gebremedhin, T.G., Dalton, T.J., 2006. Social and cultural determinants of collective management of community forest in Nepal. *J. For. Econ.* 11 (4), 261–274.

- Meinzen-Dick, R., Zwartveen, M., 1998. 'Gendered participation in water management: issues and illustrations from water users' associations in South Asia'. *Agric. Hum. Val.* 15 (4), 337–345.
- Mudege, N.N., Nyekanyeka, T., Kapalasa, E., Chevo, T., Demo, P., 2015. 'Understanding collective action and women's empowerment in potato farmer groups in ntcheu and dedza in Malawi'. *J. Rural Stud.* 42, 91–101.
- Murphy, J.J., Allen, P.G., Stevens, T.H., Weatherhead, D., 2005. A meta-analysis of hypothetical bias in stated preference valuation. *Environ. Resour. Econ.* 30 (3), 313–325.
- Namibian Statistics agency, 2016. Namibia Household Income and Expenditure Survey (NHIES) 2015/2016 - Main Report (No. 4).
- Olken, B.A., 2010. Direct democracy and local public goods: evidence from a field experiment in Indonesia. *Am. Polit. Sci. Rev.* 104 (2), 243–267.
- Persha, L., Andersson, K., 2014. Elite capture risk and mitigation in decentralized forest governance regimes. *Global Environ. Change* 24, 265–276.
- Robertson, P.R., 1992. *Globalization: Social Theory and Global Culture*. SAGE.
- Rodrik, D., 2000. Institutions for high-quality growth: what they are and how to acquire them. *Stud. Comp. Int. Dev.* 35 (3), 3–31.
- RoN, 2001. Guidelines for Management Plan of Water Point Association Windhoek: Ministry of Agriculture, Water and Rural Development - Directorate of Rural Water Supply.
- Sacks, K., 1979. *Sisters and Wives: the Past and Future of Sexual Equality*. University of Illinois Press.
- Schnegg, M., 2016. Lost in translation: state policies and micro-politics of water governance in Namibia. *Hum. Ecol.* 44 (2), 245–255.
- Schnegg, M., 2018. Institutional multiplexity: social networks and community-based natural resource management. *Sustainability Science* 13 (4), 1017–1030.
- Schnegg, M., Linke, T., 2015. Living institutions: sharing and sanctioning water among pastoralists in Namibia. *World Dev.* 68, 205–214.
- Schnegg, M., Linke, T., 2016. Travelling models of participation: global ideas and local translations of water management in Namibia. *Int. J. Commons* 10 (2), 800–820.
- Shejavali, N., 2018. *Though a Leader in Gender Representation, Namibia Still Has Work to Ensure Full Equality | Afrobarometer* (No. 224). Afrobarometer Dispatch.
- Spittler, G., 2003. 'Globale Waren – Lokale Aneignungen', *Ethnologie Der Globalisierung. Perspektiven Kultureller Verflechtung*. Dietrich Reimer Verlag, Berlin, pp. 15–31.
- Stichter, S.B., Parpart, J.L., 1988. *Patriarchy and Class: African Women in the Home and Workforce* (consulted June 2020). <https://africabib.org/rec.php?RID=W00096162&DB=w>.
- Vollan, B., 2011. The difference between kinship and friendship: (field-) experimental evidence on trust and punishment. *J. Soc. Econ.* 40 (1), 14–25.
- Vollan, B., 2012. Pitfalls of externally initiated collective action: a case study from South Africa. *World Dev.* 40 (4), 758–770.
- Vollan, B., Blanco, E., Steimanis, I., Petutschnig, F., Prediger, S., 2020. Procedural fairness and nepotism among local traditional and democratic leaders in rural Namibia. *Science Advances* 6 (15), eaay7651.