Research Article

Cross-Cultural Research
2025, Vol. 0(0) 1–44

DOI: 10.1177/10693971251338210
journals.sagepub.com/home/ccr


"Fiercely Egalitarian": Thematic Cross-Cultural Analysis Reveals Regularities in the Maintenance of Egalitarianism Across Four Independent African Hunter-Gatherer Groups

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Abstract

Globally, there are large disparities in wealth and political decision making power. By contrast, several African hunter-gatherer groups are considered exemplars of material and political egalitarianism. Whilst extant literature has revealed egalitarian maintenance mechanisms specific to individual communities, systematic cross-cultural analysis has been lacking. To better understand how egalitarianism is maintained, such ethnographic comparison would

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Received: 18 December 2024; accepted: 4 April 2025

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enable identification of shared and distinct processes among diverse egalitarian societies. Utilizing the eHRAF World Cultures database, we conducted a thematic analysis of 666 observations across four African hunter-gatherer groups. This study reveals six mechanisms relevant to maintaining egalitarianism: residential mobility, opportunity to acquire resources/information, widespread resource sharing/transfer, non-coercive and informal leadership, consensus-based decision making/dispute resolution, and social norm reinforcement. While these core mechanisms were actively maintained, the degree to which they were applied varied between groups. The greatest disparity was observed between the three more 'immediate-return' groups and the one more 'delayed-return' group, the latter utilising fewer levelling mechanisms. In all three more immediate-return groups, individuals formed morally unified coalitions to collaboratively suppress hierarchical behaviour. We also identify nuanced differences among the more immediate-return groups, chiefly in the balance between promoting individual autonomy and emphasising social connectedness. Examining hunter-gatherer egalitarianism from a cross-cultural perspective thus illuminates how greater equality is maintained, particularly through the dual processes of personal autonomy-seeking and coordinated collective action.

Keywords
African hunter-gatherer societies, egalitarianism, cross-cultural analysis, levelling mechanisms, social hierarchy, stratification, forager political organisation

Introduction

There is staggering global inequality, with the richest 1% owning 44.5% of global wealth (Shorrocks, 2023). By contrast, many subsistence societies including hunter-gatherers (or foragers) have been characterised as egalitarian. Equality between individuals has been central to many definitions of egalitarianism (see Arneson, 2002; Stibbard-Hawkes & von Rueden, in review). However, no nominally egalitarian society is truly equal in all domains of life (Stibbard-Hawkes & von Rueden, in review). What precisely constitutes equality - whether of wealth, opportunity, justice, democratic equality or some other aspect - is much debated in social and political philosophy (Hirose, 2014). Thus, egalitarianism is a protean concept (Arneson, 2002). Indeed, recently some authors have argued that the concept is so poorly defined and outdated that it should be abandoned. For example, Graeber and Wengrow (2021, p.99) argue that "it's not entirely clear what the term 'egalitarian society' should even mean." Despite these critiques, different

ethnographies from different egalitarian societies suggest that there exist at least some empirically grounded commonalities. If the egalitarianism concept is to be retained, therefore, there is a clear need to define and operationalise it, and to establish what, if anything, these so-called egalitarian societies have in common.

In this article, we adopt an empirical anthropological understanding of egalitarianism. Specifically, we operationalise the abstract notion of 'egalitarian ethos' as observable practices and mechanisms promoting equality through sharing and other forms of cooperation, whilst discouraging behaviours which advance status inequality, authoritarianism, and property accumulation (Townsend, 2018). Using thematic analysis of the eHRAF World Cultures database (henceforth 'eHRAF-WC'), we identify and delineate these practices. We ask whether they are the same across four African hunter-gatherer groups.

Evolutionary Perspectives on Egalitarianism

Some contend that, before the emergence of agriculture, egalitarianism characterised most of recent human evolutionary history (Gowdy, 2021; though see Singh & Glowacki, 2022; Graeber & Wengrow, 2021). According to certain models (Boehm, 2009; Knauft, 1991; Stibbard-Hawkes, 2020) dominant hierarchical structures of our non-human primate ancestors transitioned to an egalitarian hunter-gatherer social order, which endured through the Pleistocene. However, with the Neolithic revolution and advent of agriculture, societies with more coercive hierarchies became common (von Rueden, 2020). Knauft (1991) proposed a U-shaped trajectory in the evolution of political hierarchy, where the trough represents a prolonged stable egalitarian phase, and the two peaks represent our ape-like ancestors and the mid-late Holocene respectively. The Pleistocene period was characterised by extreme environmental variation, and it has been suggested that egalitarian social norms practised by our hunter-gatherer ancestors could have established pragmatic behaviours key to survival (Gowdy, 2021). Anthropologists working in contemporary contexts have suggested that resource egalitarianism, particularly, should appear under conditions of high resource stochasticity, where sharing buffers against individual shortfall (Cashdan, 1980; see also Ember et al., 2018) or where subsistence requires high residential movement such that resources cannot be accumulated and so are stored 'in the bellies of neighbours' (discussed Hawkes et al., 2001; Gurven, 2004; but see Woodburn, 1998; Hawkes, 1991). Similar subsistence contexts may have been more commonplace throughout the human past than today.

Conversely, Singh and Glowacki (2022) critique the 'nomadic-egalitarian' model, noting that contemporary foragers, often pushed to marginal habitats and interacting with agricultural societies, may not serve as accurate models

for Late Pleistocene societies. Their 'diverse histories model' argues that anthropologists have tended to underestimate the frequency of groups who were relatively sedentary, socially stratified, and capable of large-scale co-operation long before the Neolithic revolution. Graeber and Wengrow (2021) make a similar argument, drawing on recent ethnographic evidence of hierarchical foragers, as well as archaeological evidence from the past 20,000 years. Both are supported by substantial ethnographic evidence (Ammes, 1994; Hajda, 2005; Roscoe, 2006; Woodburn, 1982) and archaeological studies of "complex" hunter-gatherers, with sedentarism, storage and, often, strong social stratification (reviewed in Kelly, 2013; Testart, 1982; Prentiss & Kuijt, 2007; Arnold, 1992; Cannon & Yang, 2006; Habu, 2008; Sakaguchi, 2009; Moreau, 2020).

This critique aligns with broader discussions about the nature of egalitarianism (see Stibbard-Hawkes & von Rueden, in review). Although it is certainly possible that egalitarianism was more common throughout human evolutionary history than it is today (Gowdy, 2021), it does not necessarily follow that egalitarianism is inherent (von Rueden, 2020). On the contrary, Woodburn (1982) stated that egalitarianism is not simply the 'neutral' absence of inequality and hierarchy, but must be actively asserted. Boehm (2009) further asserts that humans tend to seek status and assert dominance. Thus, egalitarianism necessitates the reversal of an intrinsic desire for power, wealth and status (Boehm, 1993). Instead of a dominant few ruling the majority, the political pyramid is inverted such that a unified majority suppresses politically assertive individuals (Boehm, 1993). Inherently vulnerable to potential usurpers, this structure requires vigilant and determined effort to hold those with proclivities for ascendancy in check (Boehm, 2009). Biesele (2023) echoed this by attesting that egalitarianism did not come about serendipitously, but instead by the steadfast commitment to rules and expectations. Each hunter-gatherer society has its own intrinsic understanding of normative egalitarian order, but only through an array of levelling mechanisms is this order upheld (Lewis, 2008; McCall & Widerquist, 2015). The current literature reveals an array of 'egalitarian mechanisms' deployed by specific societies across the globe. We outline four such mechanisms below: residential mobility; resource and information sharing; equitability in leadership and decision making; and norm reinforcement.

Mechanisms of Egalitarianism

Residential Mobility. Many small-scale societies, especially foragers, are characterised by residential mobility. People move locations multiple times per year to secure better access to food and water, particularly where resources are distributed across the landscape and there are diminishing returns to resource acquisition in any given location (Kelly, 2013). Constant mobility

limits storage, property and, thus, wealth accumulation to only what can practically be carried (Woodburn, 1982). Beyond practical constraints, residential mobility acts as a levelling mechanism by enabling fluid movement of individuals between groups and groups across territories. Spatial relocation according to resource distribution equilibrates resources across group-members in conditions of high resource stochasticity (Cashdan, 1980), whilst fluidity of group membership can prevent dispute escalation by geographical separation of disputants (Woodburn, 1982). Furthermore, any individual experiencing subjugation from a group member can leave, thereby undermining the power dynamic and undercutting any would-be despotism (Boehm, 1993). In line with Lee (1990), the redistribution of resources and the fluid movement of individuals prevent the emergence of entrenched inequalities and political dominance, ensuring that wealth remains shared and private property remains minimal.

Access to and Sharing of Resources and Information. Among many foragers, every person has access to all raw materials necessary for food production, construction (of housing and weapons) and external trade (Woodburn, 1982). Without specialisation or formal training, anyone of the appropriate gender can freely learn through imitation without entering into commitments or dependencies (Woodburn, 2005). Property inheritance is not customary, further equalising resource access, and preventing pronounced intergenerational inequalities or relationships of dependence or patronage (Woodburn, 1982). A cross-cultural analysis by Borgerhoff Mulder and colleagues (2009) found that hunter-gatherers have low levels of inter-generational inheritance, particularly for material wealth, in comparison with other subsistence types.

Equal access to the means of production does not automatically translate to equal material returns, due to differences in skill and luck (Stibbard-Hawkes, 2018; Woodburn, 1982). Many hunter-gatherer communities are characterised by redistributive mechanisms that result in broadly equal and immediate access to food (Gurven, 2004), thereby minimizing the potential for inequalities (Woodburn, 1982). Sharing may be unsolicited, or the result of direct, often vociferous requests, named 'demand sharing' (Peterson, 1993). In some societies, demand sharing has been framed as 'tolerated theft', where individuals in need take resources from those with surplus, tolerated due to the declining value of supply as it exceeds storage capacity, alongside social pressure (Blurton Jones, 1991; Kaplan et al., 2018; Winterhalder, 1996). Individuals who are perceived as stingy are met with public denouncement, continual requests, or more extreme sanctions (Draper, 1978). Meat sharing in particular is governed by a complex web of norms and social expectations (Wiessner, 1996). As a result of sharing norms, in some cases hunters appear to lack significant control over how their returns are distributed (e.g. Hawkes, 2001; but see Wood & Marlowe, 2013).

Demand sharing overlaps with other motives for transfer, including reciprocity (Gurven, 2004; Jaeggi & Gurven, 2013; Peterson, 1993). When targeted at those able to reciprocate in kind, food transfers mitigate risk by creating social obligation in the recipient, to be redeemed in times of shortfall (Wiessner, 1978). Group members may also have incentive to aid more generous producers when the latter are in need, to return key sharing partners to full productivity (Gurven et al., 2000). Hawkes (2000; 2010) argues that men pursue large game, which can have a more variable return rate relative to smaller game, in large part for the social status that sharing large game confers. However, sharing can be multiply motivated, whether to help kin, acquiesce to others' demands, engage in reciprocity, or pursue status (Gurven & Hill, 2009; Hawkes, 2000; Stibbard-Hawkes, 2019).

Leadership and Decision Making. Characteristically, indeed canonically (Woodburn, 1982), egalitarian structure lacks 'formal' institutionalised hierarchy[1]. Leadership is common in the context of group production or collective decision making but, where it occurs, it normally lacks authoritative control (von Rueden, 2020). Leaders are seldom selected by lineage, but rather receive support based on personal strengths, abilities, and egalitarian values (Boehm, 1993; von Rueden et al., 2014; Garfield et al., 2019). Vigilantly monitored by peers, any transgressive behaviour on the part of leaders may incur a variety of social sanctions, for example being ignored, deliberately disobeyed, or replaced, though these sanctions are typically low-cost and do not usually involve corporal punishment (Boehm, 1993). Without formalised constitutions of governance, communities rely on intuitive social order (Boehm, 2009). Individuals typically have autonomy over their own decisions and group decisions are made collectively, aiming for consensus (Stibbard-Hawkes & von Rueden, in review; Venkataraman & Kraft, 2024). Indeed, leaders are those individuals who shepherd the consensus-building process (Garfield et al., 2019; Stibbard-Hawkes & von Rueden, in review). Disputes that remain unresolved by the parties directly involved are also frequently resolved collectively, and a number of rituals exist to restore community cohesion (Katz, 1997).

Social Norm Reinforcement. Egalitarian social norms are consistently reinforced in daily life through a variety of different mechanisms. Rituals, for example, frequently emphasise cooperation and cohesion, often encouraging entire community participation (Woodburn, 2005). Gray (2014) theorised that a playful attitude characterises many daily activities, fostering the abandonment of dominance in favour of cooperation. Indeed, anthropologists frequently note the amiable nature and humour of hunter-gatherers, with many games emphasizing cooperation over competition (Gray, 2014; Lewis, 2016; though also see Gallup & Eldakar, 2025).

Overtly self-aggrandizing or domineering behaviour is met with social sanctions, which may include deliberate oppositional behaviour or ridicule until humility is demonstrated. For example, if not appropriately modest about the size of their kill, individuals would mock both the meat and the hunter (Gray, 2011). Ridicule can be ritualized, including rituals in which women mock stereotypically male behaviour (Turnbull, 1962; Power, 2015; Stibbard-Hawkes & von Rueden, in review). Persistent deviation from expected levels of cooperativeness or humility leads to more severe social sanctions such as shunning, ostracism or, rarely, exile (McCall & Widerquist, 2015). These are especially impactful in tightly socially connected communities, and can cause significant emotional injury (McCall & Widerquist, 2015). Such mechanisms work to limit infractions and to assert and reinforce egalitarian social norms.

"Cooperative autonomy" describes the seeming contradiction between social norm reinforcement and the defence of individual autonomy in expression and in decision making characteristic of many egalitarian societies (see Endicott, 2011; Hewlett et al., 2011). For example, even as parents give and encourage their children to complete cooperative tasks, they may also affirm their children's right to noncompliance (Boyette & Lew-Levy, 2020). Normative inducements to acquiesce to reasonable cooperative demands help sustain individuals' autonomy over the long-term, by reducing inequalities in food access, and limiting coercion from domineering individuals (Blurton Jones, 1984; Woodburn, 1982, 1998).

Hunter-Gatherer Variability in Egalitarian Practices

Existing literature details the diverse range of mechanisms fundamental to maintaining egalitarian social structures in hunter-gatherer societies worldwide. However, to simply consider egalitarianism within these societies as a single construct is reductive (Stibbard-Hawkes & von Rueden, in review). Egalitarian societies can vary in the processes employed and the degree and means of enforcement (McCall & Widerquist, 2015).

Woodburn (1982) categorises economic systems within hunter-gatherer societies as immediate-return or delayed-return. Immediate-return societies, according to Woodburn's model (see also Layton, 2005; Salali & Migliano, 2015), prioritise present subsistence needs and instant reward for labour. Woodburn characterised immediate-returns societies as those where sharing and mutuality are key, and material exchange and redistribution is frequent. Group membership is fluid with freedom of association, and equal access to resources for economic production, which prevents relationships of dependency (Woodburn, 1982). Conversely, delayed-return societies invest labour in long-term projects, anticipating future yield (Townsend, 2018). This fosters firm commitments and dependent relationships between group members. Individuals have ownership rights over valuable assets used for food yield,

processed and stored foodstuffs, and even over their female kin, whom they can bestow in marriage (Woodburn, 1982). Although a useful conceptual framework, variability amongst hunter-gatherer societies resists binary distinctions; some societies with equitable 'immediate-return' resource access systems may assert control over kin marriage decisions (Headland, 1987), or over land (Lee, 1979). Kent (1993) proposed a continuum ranging from strongly to weakly egalitarian. In this model, immediate and delayed returns societies could be envisaged as opposite ends of this continuum[2].

Having established that egalitarian practices range across a spectrum, it is prudent to exercise caution in extrapolating the mechanisms of a single society to make generalisations (McCall & Widerquist, 2015). There is a need to critically explore whether even the most 'egalitarian societies' are each egalitarian in the same way. To do this it is vital to explore not only the outcomes of egalitarianism (in the form of equalities in rank, status, and resource access), but also delineate the distinct mechanisms which achieve these outcomes from a systematic cross-cultural perspective. In the present study, we begin to fill this gap. Specifically, we use the eHRAF World Cultures Database to examine cross-cultural similarities and differences in egalitarianism in four African hunter-gatherer groups. We focus on African hunter-gatherers because these have been identified as amongst the most strongly egalitarian (Kent, 1993). Moreover, the African hunter-gatherer groups for which eHRAF-WC contains detailed information on egalitarian mechanisms have no likely recent ancestral link (see Pickrell et al., 2012; Sands, 1998; Sands & Guldeman, 2009; Tishkoff, 2007). Thus, these groups are independent, allowing us to avoid phylogenetic autocorrelation (i.e., Galton's problem) in the study sample. By focusing on a relatively small number of groups, we are able to go into greater depth regarding the mechanisms by which egalitarianism is maintained.

Methods

Exploratory Search

JT first conducted an initial exploratory search within eHRAF-WC using Outline of Cultural Material codes (OCM; Murdock, 2008). This served both to locate descriptions of egalitarianism in a global sample of hunter-gatherer groups, and to test our search terms. Specifically, we used eHRAF-WC's 'Advanced Search' function with OCM codes 'Naming, Prestige and Status Mobility' (OCM code 550) and 'Social Stratification' (OCM code 560). This search returned any paragraphs which contained explicit information regarding the presence or absence of individual and class differentiation. The search was confined to societies coded as 'Hunter-Gatherers' or 'primarily Hunter-Gatherers' (defined by eHRAF-WC as ≥56% dependence on hunting, fishing, and gathering for subsistence), yielding

1280 paragraphs across 286 documents and 73 cultures. Coding of an initial 400 paragraphs revealed little mention of egalitarianism; instead, a greater prevalence of paragraphs described some form of hierarchical social structure. While some hunter-gatherers do have more explicit or formalized hierarchies, these search terms may not have yielded a balanced summary of hunter-gatherer social organisation. However, and echoing prior literature, the exploratory search highlighted African hunter-gatherer societies as amongst the most consistently egalitarian.

Targeted Search within African Hunter-Gatherers

To better capture descriptions of egalitarianism within eHRAF-WC, JT first used the 'Advanced Search' function targeting 'any' of the following OCM codes: Community Councils (OCM code #623), Community Heads (#622), Social Control (#626), Form and Rule of Government (#642), Accumulation of Wealth (#556), Status, Role and Prestige (#554), Castes (#564), Classes (#565), Manipulative Mobility (#557), Talent Mobility (#555) and Downward Mobility (#558). Each of these categories were pre-coded by the eHRAF-WC staff (e.g., see HRAF, 1961), and are non-directional; they are designed to capture egalitarian, inegalitarian and hierarchical norms as well as both the presence *and* absence of mobility and wealth accumulation. In other words, our search did not specifically target egalitarian norms.

As with the initial search, the second search was narrowed to Hunter-Gatherers and primarily Hunter-Gatherers, yielding 19,141 paragraphs across 957 documents and 89 cultures. JT restricted the search to African societies, which yielded 666 paragraphs across 73 documents, covering four groups: Hadza, Okiek, Mbuti, and San[3]. Field date ranges for source ethnographies in this dataset fell between 1917–2009, with most field dates falling between 1950 and 1985. Table 1 outlines the distribution of these paragraphs across the four groups alongside field date ranges, while Figure 1 depicts their geographic location within the continent. The following details for each paragraph were then tabulated: Continent, Subregion, Culture name, World Culture (OWC) code, Subsistence Type, Sample, Reference, OCM codes, Paragraph, Section, Page, Field Date and Coverage Date. Additionally, we consulted eHRAF-WC culture summaries, alongside broader ethnography, to gather general information regarding each group.

This sampling approach was chosen for several reasons. First, although these groups are each in the same continent, they are all phylogenetically distinct (see Sands, 1998; Tishkoff, 2007; Sands & Guldeman, 2009; Pickrell et al., 2012; Stibbard-Hawkes, 2025), avoiding issues of autocorrelation — that is, Galton's problem — in the study sample (see Murdock & White, 1969; Ember & Ember, 2009; Stibbard-Hawkes, 2025). Second, each was extremely well documented by 20th century anthropologists (e.g., Huntingford, 1954; Marshall, 1965; Turnbull, 1962; Turnbull, 1965; Woodburn, 1964; Woodburn, 1979). Third, these African

Table 1. Paragraph Distribution Across Analysed African Hunter-gatherer Groups.

Subregion	Group name	Documents	Date range	Paragraphs
Central Africa	Mbuti	5	1951–1973	211
Southern Africa	San[a]	46	1908–1993	363
Eastern Africa	Hadza	9	1917–2009	46
Eastern Africa	Okiek	13	1921–1990	46

[a]Primarily includes ethnographic accounts of the following groups: !Xun (!Kung), Ju|'hoansi, N||oq, |Gui, ||Gana, Kūa, Nharo, !Xóõ, Tshwa, and Hai||om. Note, not all groups here are discrete, and some are subpopulations of others; though we retain the population hierarchy level used in source ethnographies.

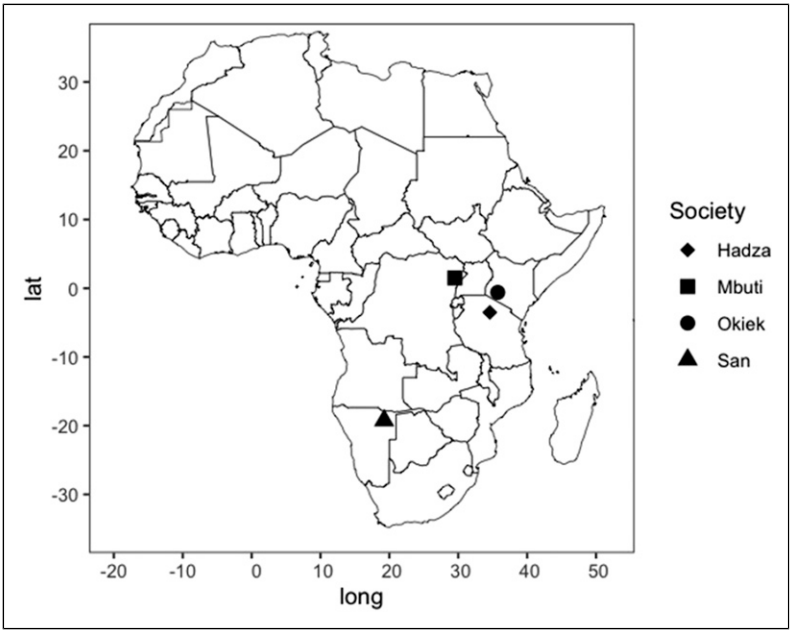

Figure 1. Geographic distribution of four African hunter-gatherer groups.

forager groups were each pivotal in developing theory underlying the highly influential concept of 'egalitarian societies' (Woodburn, 1982), to the extent that recent discussions of egalitarianism have sometimes contrasted 'African foragers' with other groups (see Graeber & Wengrow, 2021). These four societies have also been foundational in hunter-gatherer studies more broadly in developing the 'generalised foraging model' (Kelly, 2013) or 'nomadic egalitarian model' (Singh & Glowacki, 2022) as well as the immediate versus delayed returns dichotomy

(see, Woodburn, 1982; Kelly, 2013). However, to our knowledge, the egalitarian mechanisms used in these four groups have not been systematically compared via paragraph-level analysis. The purpose of the current targeted search is, therefore, to revisit this influential body of literature, and draw upon its depth, in order to provide a nuanced description regarding similarities and differences in the application of egalitarian mechanisms among African hunter-gatherers.

Thematic Analysis

To identify presence or absence of egalitarianism-relevant mechanisms within our focal African societies, JT conducted a thematic analysis following the step-by-step procedure outlined by Braun and Clarke (2006). JT twice read through each of the 28 Africa paragraphs that emerged from the initial eHRAF-WC search, in order to identify recurring mechanisms. She then generated exploratory, data-driven codes, which were organized according to ten key themes labelled: 'Residential Mobility', 'Weapon Access', 'Resource and Role Access', 'Sharing', 'Transfer', 'Councils/Heads', 'Decision Making', 'Inheritance', 'Ritual Reinforcements' and 'Social Control'.

Reviewing these themes highlighted overlap, so we merged several of our data-driven codes to ensure each aligned with a single theme. 'Ritual Reinforcements' and 'Weapon Access' were integrated into the 'Social Control' theme, and 'Inheritance' into 'Resource and Role Access' theme. The 'Sharing' and 'Transfer' themes were also combined, as they both pertained to resource redistribution. The final six themes were: 'Residential Mobility', 'Resource and Role Access', 'Sharing and Transfer', 'Community Heads and/or Councils', 'Decision Making' and 'Social Norm Reinforcement'. Details of themes, subthemes and example text are provided in Table 2.

We then repeated this process for the Africa-focused dataset of 666 paragraphs from the second eHRAF-WC search. Codes from the new analysis aligned with themes from the initial exploratory eHRAF-WC search, indicating that thematic saturation had been achieved.

Coding

Each of the 666 paragraphs from the second eHRAF-WC search was coded as follows: '1' if the theme was mentioned, indicating the presence of a specific egalitarian maintenance mechanism; '0' if that mechanism was explicitly negated (e.g. did not share); and 'N/A' if it was not mentioned. Both explicit information (e.g. the existence of a chief) and more underlying, implicit assumptions (e.g. from anecdotes) were used as bases for coding. Paragraphs were excluded if they were coded 'N/A' for all themes. This resulted in the exclusion of 123 paragraphs, leaving a total of 543 for cross-cultural comparison. Subsequently, a second coder applied the same coding scheme to analyse a 10% subset of paragraphs, resulting

Table 2. Themes of Egalitarian Maintenance Mechanisms.

Theme	Subthemes	Example quotes
Residential mobility	Reasons for mobility *(resource distribution; leave oppressive group; separation from dispute; exile of antisocial individuals)*	• The band is generally composite, and in any case its composition is constantly changing (Turnbull, 1965, p. 224)
	Functions of mobility *(limits wealth accumulation; social control; levelling mechanism)*	• Others have suggested that forager egalitarianism has to do with mobility (Marlowe, 2010, p. 45)
Resource and role access	Equal resource access *(ownership; inheritance)*	• It is not advantageous to multiply and accumulate in this society. Any man can make what he needs when he wants to. Most of the materials he uses are abundant and free for anyone to take (Marshall, 1961, p. 257)
	Equal role access *(specialisation; informal training)*	
Sharing and transfer	Demand sharing *(sharing rules; division responsibility; pressure to share; sharing reasons)*	• The most effective social principle and the one which is most vigorously observed—to the point of being almost compulsory—is the principle of sharing and cooperation (Tanaka, 1980, p. 123)
	Transmission *(restrictions on trade; random transfer)*	• Wealth differentials are also minimized, by sharing food and possessions and by giving presents (Shostak, 1981, p. 245)
Leadership	Internal leadership *(existence; qualities)*	• There are no chiefs or headmen and every adult member of the band has rights equal to those of all the other members (Silberbauer, 1981, p. 73)
	External leadership *(role; leadership levelling mechanisms)*	• The only function the capita serves, from the point of view of the band, is as an intermediary, little more than a message bearer (Turnbull, 1965, p. 45)

(continued)

Table 2. (continued)

Theme	Subthemes	Example quotes
Decision making and disputes	Decisions *(individual; group)*	• Individuals and families instigate and conduct their activities independently, and when plans and arrangements must be coordinated, this is done by people's talking together and reaching consensus (Marshall, 1976, p. 193)
	Disputes *(avoidance; dissipation; resolution)*	• Whenever possible, they try to solve disputes peacefully instead of aggravating the situation (Tanaka, 1980, p. 123)
Social norm reinforcement	Social norm *(proper demeanour; reinforcement through ritual and play)*	• Competition, ranking of individuals, boastfulness, and self-aggrandizement are all discouraged (Shostak, 1981, p. 245)
	Social sanctions *(ridicule; disapproval; ostracism and exile; violence; formal)*	• They are harshly leveled through social pressure, for the entire system depends on the equality of members (Wiessner, 1994, p. 111) • The weight of public opinion, expressed verbally, or through ridicule or mime, or in action such as thrashing (rare, and only for youths) or ostracism and exile (Turnbull, 1965, p. 216)

in a high concordance rate of 81.4%, demonstrating strong inter-rater reliability. All data are uploaded as a supplement to this paper.

Results

Ethnographic Background

The eHRAF-WC search resulted in ethnographic data from four hunter-gatherer groups: the Mbuti, the Hadza, the San, and the Okiek. The former three traditionally pursued relatively immediate-return subsistence strategies, while the latter practiced relatively more delayed-return subsistence.

The Mbuti, who total around 40,000 people, live in territorially defined mobile groups of 20–100 people dispersed throughout the Ituri rainforest, D.R. Congo. Mbuti primarily subsist by gathering/fishing, cooperative net-hunting or bow-hunting, activities which show a pronounced gendered division of labour. Divided into four subgroups, each speaks a language related to that of neighbouring horticulturalists with whom they trade. The basic economic unit of the Mbuti is sometimes considered to be the nuclear family. They practice bilateral descent and monogamy, although polygyny is not strongly proscribed (Beierle, 1995).

The most widely studied San groups inhabit various regions throughout Botswana, South Africa, Angola and Namibia. Settlements range from 1-12 households to 200–300 individuals. Though traditionally hunters and gatherers, they increasingly rely on their herding/farming neighbours, and some San engage in limited herding and agriculture. They practice bilateral descent and monogamy, although polygyny is permitted (Wilmsen, 2005).

The Hadza speak Hadzane and reside in multilocal groups of 1–100 individuals. They inhabit the hills and valleys of the Eyasi basin in Northern Tanzania. Though mobility is more limited today, they traditionally moved every 2–5 weeks and seasonally, with individuals freely moving between camps. Traditionally, subsistence relied upon men hunting and women gathering; however, ethno-tourism and agricultural immigrants have increased the prevalence of mixed economies, outsider trade, and wage labour. Despite open access to land and resources amongst Hadza, land and water tensions exist with these external groups including, increasingly, both pastoralists and farmers (Harris et al., 2024; Pollom et al., 2020). Hadza practice bilateral descent and serial monogamy (Crittenden, 2019).

Finally, the Okiek inhabit savanna plains in west-central Kenya and Northern Tanzania. They speak Okiek, although are frequently multilingual. They primarily live in patrilineal local groups with no hierarchical officials, although lineages owned tracts of land. Men and boys are grouped into age sets, fostering equality across lineages. Traditionally subsisting on hunting, gathering, and honey trading, today they predominantly rely on small-scale gardening, herding, trade and land transactions. Shifts in their economy have recently altered population sizes (25,000 in 2013) and settlement patterns. Historically mobile extended-family groupings are now more subdivided and based around more permanent plots, living primarily patrilocally and practising monogamy with bride payment (Kratz, 2014).

Mechanisms of Egalitarianism within the Hadza, San, Mbuti, and Okiek

Cross-cultural thematic analysis identified six categories of mechanisms contributing to egalitarianism in the four populations: residential mobility,

resource/role access, sharing/resource transfer, community leadership, decision making, and social norm reinforcement (see Table 2). Table 3 shows the percentage of each society's paragraphs mentioning any particular mechanism. It is important to note that terms such as "band" and "horde," though now seldom used, are retained from the original ethnographic sources to maintain the integrity of quoted material. We do not, however, endorse the epistemic validity of these terms. Below we describe details from all four societies, organized according to the six egalitarianism mechanism categories.

Residential Mobility. The mobile lifestyle of many hunter-gatherers enables people to relocate. Group size fluctuates based on resource (e.g. food and water) availability (e.g., Cashdan, 1984). For instance, the Mbuti disperse during the honey season to maximize access to the territory's honey resources (Turnbull, 1965). Historically, mobility "involves no loss of property and no sacrifice of any important interests", making group membership voluntary (Woodburn, 1979, p. 252). "Voluntary membership means that subjection to band policies is also voluntary" (Silberbauer, 1981, p. 189). Individuals can leave oppressive groups or domineering leaders, and geographically separate from disputes; fission obviates the need for violence (Turnbull, 1965). Though uncommon, in all four hunter-gatherer groups, forcible exile may be enacted against disruptive antisocial individuals, including dominant individuals and, in certain groups, those named as witches (Silberbauer, 1981). For example, after accusing an Mbuti person of witchcraft following a series of deaths, campmates opted for exile rather than corporal or capital punishment, illustrating how the institution serves as a non-violent solution to perceived threats (Turnbull, 1965).

Frequent mobility renders permanent storage impractical, and puts a "sharp limit on the quantity of objects they want to possess" (Marshall, 1961, p. 257). Consequently, "wealth tends to be fairly well equalized", discouraging status disparities (Marshall, 1959, p. 345). In all four hunter-gatherer groups, ephemerality of residence also serves as a means of social control, using the threat of exile to enforce social norms. Additionally, the potential for desertion serves as a levelling mechanism for would-be chiefs, and the ever-changing composition ensures "the central figure will never gain extensive power in group decision making" (Wiessner, 1978, p. 277). The central role of residential mobility is highlighted by the emergence of centralized leadership and wealth differentials among sedentary !Xun (!Kung) San, as sedentism leads to reliance on food storage, territorial competition, restricted sharing networks, and the development of new mechanisms, other than movement or decentralized mediation, to resolve severe conflicts (Hitchcock, 1982).

Resource and Role Access. Among the Hadza, Mbuti and San, "the unimproved land itself is the means of production" and storage (Lee R. B., 1979, p. 455).

Table 3. Percentage of Included Paragraphs Mentioning Specific Mechanism per Society.

Percentage of paragraphs mentioning mechanism							
Society	Residential mobility	Resource and role access	Sharing and transfer	Leadership	Decision making and disputes	Social norm reinforcement	N included paragraphs
Mbuti	23.75	29.38	23.75	27.50	46.25	71.88	160
Hadza	48.48	21.21	30.30	57.58	48.48	48.48	33
San	30.29	40.72	36.48	52.77	31.27	44.63	307
Okiek	4.65	25.58	18.60	72.09	46.51	30.23	43

Natural resources lack exclusive ownership, and inheritance of status are limited, with no inheritance for material possessions (Turnbull, 1965). This fosters equal access to all resources within the territory (Lee R. B., 1979). Although the Dobe !Xun (!Kung) San have a core group (*k"xausi*) who 'own' the water hole and surrounding resources (*n!ores*; see Yellen, 1977), ownership is mostly symbolic and, in practice, they permit access to both members and visitors (Marshall, 1976). This represents an intermediate arrangement, where every individual "has access to all the necessary elements of livelihood" (Tanaka, 1980, p. 107) thus minimizing concentrations of wealth or power (Silberbauer, 1981). Greater territoriality and more restricted access are reported among the Okiek. While Okiek patrilineal lineages do not own the land itself, they do "own the rights to certain products found on the land" and regulate residency (Blackburn, 1986, p. 210). Lineage positions are inherited patrilineally, as are hives, livestock, and other possessions (Kratz, 2014).

In all four hunter-gatherer groups, there is limited authority for one individual to dictate the actions of others (Lee R. B., 1972) and "each individual can accomplish everything necessary for his or her livelihood" (Tanaka, 1980, p. 93), promoting economic independence (Silberbauer, 1981). With limited exceptions such as the 'clown' among the Mbuti (Turnbull, 1965), there is little rigid specialisation, though individuals skilled in certain areas may receive recognition (Tanaka, 1980). The most consistent and pronounced role specialisation occurs by gender. This may include a strong gendered division of labour where "hunting is done by men and gathering by women" (Tanaka, 1976, p. 101). Training is informal and occurs through emulation (Wilmsen, 2005), as children acquire intergenerational knowledge and skills for land use (Lee R. B., 1979). Successful hunters earn respect regardless of age, whilst freeloaders are considered lazy (Marshall, 1965). Immense public pressure to hunt is countered by pressure against dominance: a successful !Xun (!Kung) hunter "may stop hunting in order to give other men the chance to take the limelight", instead relying on reciprocal relationships (Lee R. B., 1979, p. 249).

Sharing and Transfer. Among the Hadza, Mbuti and San, fruit, vegetables and, situationally, smaller game are typically shared less widely outside households, "the big game hunted by the men is distributed in the respective camp" (Porr, 1997, p. 44). Sharing rules vary, but it is generally "shared out immediately with residents and visitors alike" (Lee R. B., 1979, p. 412) or distributed "between any who took part in the hunt directly or indirectly" (Turnbull, 1965, p. 172-B). Typically, there is no preferential treatment (Turnbull, 1965). Although, amongst the Hadza, division of the most sacred, nutritional cuts ('*epeme* meat') is limited to initiated males, everyone normally receives some portion of meat (Porr, 1997). Allocation responsibility varies. It is sometimes determined by the successful hunter (Putnam, 1948) or, among

the !Xun (!Kung), the lender of the arrow used to make the kill (Wiessner, 1978). Deciding division is often unenviable, as perceived "dishonesty in the division of the meat are frequent causes for dispute" (Turnbull, 1965, p. 231-B). Demand sharing is often "not voluntary but… mandatory" (Kent, 1993, p. 500) and there is intense social pressure to be generous (Turnbull, 1965). Those who refuse are considered "stingy, or far-hearted", and made to give "till it hurts" or ostracised (Lee R. B., 1979, p. 458). Additionally, among the Mbuti, sharing itself is frequently employed as a social sanction by denying antisocial individuals their share (Turnbull, 1965). Sharing ensures the meat is used before it rots (Lee R. B., 1972), "promotes social bonding" and "acts as a levelling mechanism to equalize unequal situations" (Kent, 1993, p. 506). Additionally, some argue it creates a "storage of social obligations" (Wiessner, 1978, p. 381), and the reciprocal sharing insures against the unpredictability of hunting (Lee R. B., 1972).

In all four hunter-gatherer groups, external trade is permitted, although, of the Hadza, Woodburn reports that "they avoided entering into relations of economic dependence on outsiders" (Woodburn, 1979, p. 250). For the Mbuti, alternative transfer methods were preferred to trade in order to avoid creating dependencies (Turnbull, 1965). Similarly, several San employ *hxaro* gift-giving networks, where partners reciprocally exchange unused items (Lee R. B., 1979). "The net effect is to maintain a constant circulation of goods and an equal distribution of wealth among the members of the society" and wealthy individuals are merely "the people who have a greater than average number of trading partners" (Lee R. B., 1979, p. 456). Reciprocal obligations enable periods of rest, and "one who gives more than his share is considered a fool" (Wiessner, 1978, p. 148). Although individuals can withdraw from partnerships, strong social pressures ensure individuals remain in the wider *hxaro* network (Silberbauer, 1981).

In contrast to the other three hunter-gatherer groups, the Okiek eHRAF-WC paragraphs do not discuss sharing, but do describe trade. Wealth accumulation, such as honey and cattle, was achieved through gift-exchange, purchase and bride-payment (Huntingford, 1954). More recently, they engaged in wage-labour and sold off sections of land for profit (Blackburn, 1982). Accumulated wealth enabled individuals to "subsist in periods of hard time" (Blackburn, 1986, p. 77), and use earnings to purchase, for example, radios and liquor (Kratz, 1990).

Leadership. In all four hunter-gatherer groups, "there are no chiefs or headmen" (Silberbauer, 1981, p. 73) with authority or hereditary claim. Although among the !Xun (!Kung), the central figure of the *kxau* (*kxau n!a*) is patrilineal, he is "chief in name only and without any authority over the members of the group" (Lee R. B., 1979, p. 346) or additional wealth (Marshall, 1976). Likewise, Hadza camps may be named after an elder man, but while this may

indicate respect, it "signifies neither any particular role nor influence" (Crittenden, 2019, p. 12). In all four hunter-gatherer groups, individuals typically considered 'leaders' are merely afforded respect and sought for advice (Lee R. B., 1979), but possess "no coercive powers over the others, are not the sole decision-makers and do not have more possessions" (Wiessner, 1978, p. 277). They emerge based on age, experience, and personal attributes (Lee R. B., 1979). Admirable qualities include proficiency in hunting and speaking, integrity, modesty and generosity (Turnbull, 1965), whilst arrogance and wealth desire can be disqualifying (Lee R. B., 1979).

Occasionally, these respected individuals are appointed to serve as liaisons with outsiders, sometimes externally assuming the role of 'chief'. For example, the Mbuti *capita/sultani* conveys the community's desires to the village, but "carries no authority whatsoever and little influence among members of the hunting band", often also assuming the role of village 'clown' (Turnbull, 1965, p. 44). Outsiders may mistake these liaisons for chiefs, and occasionally the individual may try to leverage this position to gain internal power (Woodburn, 1979). However, "any tendency toward charismatic leadership is countered by ridicule" (Turnbull, 1965, p. 179), and they may even face replacement or ostracism (Turnbull, 1965). Indeed, !Xun (!Kung) use the word '*kaiha*' (chief) as a term of mockery (Lee R. B., 1979).

Decision Making and Disputes. Individual decisions are normally autonomous within all four hunter-gatherer groups, with each individual a "headman over himself" (Lee R. B., 1979, p. 457). The method for making group decisions varies. The Hadza are highly individualistic, and Woodburn asserts they have "no procedure for reaching joint decisions[4]" (1979, p. 253). Whilst brief discussions do happen (Porr, 1997), decisions are often made independently and without extensive planning (Woodburn, 1979). Conversely, Okiek decision making is more organized (Blackburn, 1974). Within-group decisions are made by an informal clan council, composed of elders and circumcised males (Huntingford, 1954). Inter-group issues are resolved, and compensation determined, by the *koret* council (*kiruket*) on a needs basis. Whilst an older, well-respected man (the '*kirunkidet*') may influence and announce decisions (Huntingford, 1951), he "was not a chief at all", and did not "act for the whole horde [SIC]" (Huntingford, 1954, p. 130).

The Mbuti and San occupy a middle ground. "Group decisions are reached through consensus" (Shostak, 1981, p. 10), with everyone encouraged to freely express their opinion (Turnbull, 1965). Experts in certain fields, such as hunting, are respected in their area only (Turnbull, 1965) and "it is in this way that authority is dispersed throughout the band" (Turnbull, 1965, p. 181). Whilst "the words of these individuals definitely carry weight in the areas of their prestige, only as nonbinding suggestions, and there is no compulsion to follow these suggestions" (Tanaka, 1980, p. 108). Power is held by the

community, not an individual nor supernatural power (Silberbauer, 1981). This said, the Mbuti judge decisions "in terms of pleasing or displeasing the forest" (Turnbull, 1965, p. 278). The forest rewards unanimity and correct decisions with good hunting, health, and weather, whilst it punishes with '*akimi*' (noise).

For all four hunter-gatherer groups, particularly the San and Mbuti, discussion is also central to resolving disputes as it facilitates open dialogue and alleviates tension (Marshall, 1976). "No dispute can be allowed to threaten the co-operative pattern of the hunt, for subsistence depends completely upon the continuation of such close co-operation" (Turnbull, 1965, p. 158). Therefore, aided by their intimate living quarters, tensions are "aired when the level of conflict is low and its extent small", thereby averting excessive harm (Silberbauer, 1981, p. 171). Disagreements around sharing, for example, are frequently used to raise and resolve other conflicts early on (Turnbull, 1965). If a bigger argument ensues, it commonly expands to involve the entire community and is typically resolved through consensus, sometimes guided by an elder (Silberbauer, 1981). Alternatively, "the rest of the band joins in an effort to divert attention away from the actual cause of the dispute" by, for instance, "raising all sorts of minor but associated disputes" (Turnbull, 1965, p. 189). Tension can also be dissipated using humour and play (Tanaka, 1980) and "amusements, such as dancing, singing, and chatting" (Tanaka, 1980, p. 123) which also aid in reconciliation following disputes (Kent, 1989).

Humour (joking, laughing) and convivial scapegoating can be used to diffuse disputes (Tanaka, 1980). Amongst the Mbuti, the camp 'clown', or other scapegoats such as witches, endure ridicule to divert the blame (Turnbull, 1965). Usually "necessary sanctions [are] imposed verbally" (Tanaka, 1980, p. 108) and violence is considered shameful, fearful, and ineffective (Shostak, 1981). Nonetheless, spontaneous fights do occur and are occasionally fatal (Marshall, 1976), especially among the Hadza who have easy access to poisoned weapons. That said, even Hadza violence is rare. For the San, "a more serious social crisis is averted by geographical separation of the parties involved through group realignment" (Tanaka, 1980, p. 108). Consequently, overall, "social harmony has been kept by everyday conversation and by fission of groups" (Tanaka, 1987, p. 46).

Social Norm Reinforcement. The Hadza, Mbuti and San considered arrogance and stinginess dangerous, and "humility is the proper stance" (Lee R., 1979, p. Xx). Consequently, individuals are often highly self-depreciative, as exemplified by the quiet and understating behaviour of San hunters regarding their kill size (Shostak, 1981). This egalitarian cooperation and aversion to dominance is reinforced through rituals, helping to "instill a certain degree of common purpose" (Guenther, 1979, p. 80). For example, the Mbuti women's '*elima*' initiation dance brings together the whole community and its

choreography "emphasizes special patterns of cooperation" (Turnbull, 1983, p. 46). Cooperation is also emphasized in play, as "competitiveness in games is almost entirely lacking" (Draper, 1976, p. 202). Overall, social norms oppose dominance, and "their desire to avoid both hostility and rejection leads them to conform in high degree to the unspoken social laws" (Marshall, 1976, p. 231). If someone deviates, "any movement toward individual authority, conscious or otherwise, is sharply countered" (Turnbull, 1965, p. 187) using social sanctions, although precise sanctions vary between societies.

The Mbuti and San utilise "ridicule, verbal abuse, dispersal, and divination" (Wilmsen, 2005, p. 9). Rough humour, put downs and back-handed compliments are frequent (Lee R. B., 1979). If necessary, ridicule ensues "which becomes more and more exaggerated until it is so humorous that even they join in the laughter", minimizing resentment (Turnbull, 1965, p. 188). The wrongdoer may also face group disapproval. Being "extremely dependent emotionally on the sense of belonging and on companionship" (Marshall, 1961, p. 231), this sense of rejection is a potent sanction (Marshall, 1976).

Disapproval may also manifest through gossip, songs about the individual's behaviour, and direct criticism (Marshall, 1976). Among the Mbuti, for example, any individual may use the midcamp to harangue all present, with pointing or naming the individual deemed especially mortifying (Turnbull, 1965). Among San, particularly the Ju'/hoansi, older women are often disproportionately likely to initiate public criticism (Wiessner, 2005), which may contribute to lower likelihood of retaliation or conflict escalation. However, responses to more fractious offenses such as big-shot behaviour generally require the coordination of several community members (Wiessner, 2005). "Lack of repentance, repeated offenses, or ignoring band castigation can all lead to the offender's being "eased out" of the band" (Silberbauer, 1981, p. 173). Ostracism creates a sense of unwelcomeness and profound loneliness for the individual, motivating them to depart without hostility (Silberbauer, 1981). In extreme cases, they may be directly exiled although this is rare, and the mere threat of ostracism or exile is often deterrent enough (Turnbull, 1962).

Among the Hadza, "egalitarian, individual autonomy is stressed, while specific responsibility and commitment to others is minimized" (Woodburn, 1979, p. 264), decreasing the likelihood of coercion and exploitation (Crittenden, 2019). Therefore, along with mobility, social control depends mainly on "who hold a monopoly over the most obvious means of coercion, the bow and poisoned arrow" (Woodburn, 1979, p. 256). Although actual bloodshed is infrequent, the latent potential for violence makes individuals cautious to overtly transgress social norms and serves as a levelling mechanism (Woodburn, 1979)[5]. Amongst the Okiek, the belief that "a stranger is a potential enemy" leads to overwhelming dependence on group membership thus they rarely transgress (Huntingford, 1954, p. 133). When transgressions

occur, the clan/*koret* councils determine compensatory payment, serving as a deterrent (Huntingford, 1954). Additionally, "in this society, lacking authority roles and most mechanisms for social control, its [the society's] achievement must rely on informal persuasion, the threat of supernatural retribution, and the passive rules of the territorial and resource tenure systems" (Blackburn, 1986, p. 62). Significantly, the resource tenure system "functions primarily as a mechanism for social control by limiting access to the most important forest resource — honey" (Blackburn, 1986, p. 62).

Discussion

While certain authors have questioned the validity of the egalitarianism concept and have argued "it's not entirely clear what the term 'egalitarian society' should even mean" (Graeber & Wengrow, 2021, p.99), the present analysis of 666 paragraphs from 73 documents shows that there are clear, identifiable, active mechanisms that are common to multiple egalitarian groups, with no likely recent shared history or ancestry. Cross-cultural analysis from African hunter-gatherer groups - including all areas of the continent where there are extant contemporary foragers - revealed a variety of active mechanisms employed to maintain egalitarian social order, with greater alignment among the so-called 'immediate-return' groups compared to the more delayed-return Okiek. The array of mechanisms was underlined by common themes reflecting those previously described in single ethnographies. Consistency of evidence suggests that these are widespread features, and perhaps instrumental (i.e., conditional) cross-cultural universals (*sensu* Brown, 2004). Table 4 provides a summary of common mechanisms enforced by the societies, along with their resultant impact on the maintenance of egalitarianism. In what follows, we first contextualise the diversity of mechanisms we observed in our study, and then compare our findings with those of other societies both in and outside of Africa.

Egalitarian Mechanisms in African Hunter-Gatherers

Consistent with their designation as 'delayed-return' hunter-gatherers (*sensu* Woodburn, 1982), the Okiek demonstrated less adherence to egalitarian maintenance mechanisms than the three immediate-return groups. The Okiek are unique in this subset in that they hold patrilineally determined rights over tracts of land (Blackburn, 1986), arguably modulating adherence to other mechanisms. 'Ownership' results in less mobility and facilitates wealth accumulation and trade, potentially causing disparities in wealth and status (Blackburn, 1986). Additionally, political expression is concentrated within councils, and lesser mobility means dominant relationships are hard to escape (Huntingford, 1954). Woodburn (1982) theorised that assertive egalitarianism

Table 4. Summary of Common Mechanisms and Their Impact on Egalitarianism.

Theme	Mechanisms	Impact on egalitarianism
Residential mobility	• Relocate and adjust clan size according to resource distribution (M,H,S) • Move away from assertive individuals and leaders (M,H,S) • Dispute separation (M,H,S) • Exile (M,H,S,O)	• Possessions limited to what can be carried, equalizing wealth • Greater equality of resources between groups • Power of potentially dominating individuals undermined • Less need for formalised law and order or violence • Social sanction against transgressive behaviour, such as domination
Resource and role access	• No individual has control over natural resources or another's activities (M,H,S) • Little inheritance (M,H,S) • Minimal specialisation except by gender (M,H,S,O) • Training through emulation (M,H,S,O)	• Equal access to resources, decreasing wealth and status disparities • Able to provide for oneself, discouraging relationships of dependency
Sharing and transfer	• Small animals/vegetables shared amongst family, with bigger game shared among community (M,H,S) • Sharing reinforced, and used as sanction (M,H,S) • Use reciprocal transfer mechanisms and no internal trade (M,H,S)	• Ensures equal access translates to equal distribution • Promotes social bonding • Ensures meat is used before it rots • With no storage to provide security, acts as a 'storage of social obligation' against times of scarcity • Discourages relationships of dependency • Constant circulation of goods, with little importance placed on belongings

(continued)

Table 4. (continued)

Theme	Mechanisms	Impact on egalitarianism
Leadership	• No hereditary leadership with authority to command or additional wealth (M,H,S,O)	• Prevents discrepancies in status and wealth
	• 'External leaders' have no within-community authority (M,H,S,O)	• Allows individual autonomy
	• 'Leaders' appointed based on admirable and egalitarian qualities (M,H,S,O)	• Reinforces admirable egalitarian values
	• Overly-assertive leaders sanctioned (M,H,S,O)	
Decision making and disputes	• Individual decisions autonomous (M,H,S,O)	• Prevents any individual having major influence, discouraging wealth and status discrepancies
	• Group decisions communal (M,S)	• Disputes prevented from growing and disrupting cooperation
	• Disputes mostly resolved early through communication, humour/play and fission (M,H,S,O)	
Social norm reinforcement	• Social norms of cooperation and non-dominance reinforced in rituals and play (M,S)	• Hunter-gatherers rarely deviate from playful, cooperative and self-depreciative demeanour due to unspoken social laws
	• Any deviation countered with sanctions, including ridicule, group disapproval through talk and songs (M,S)	• Sanctions act as deterrent against dominant behaviours because of strong desire to avoid hostility and rejection
	• Occasional violence, ostracism and exile (M,H,S,O)	• Social control without need for explicit law and order

Key: M = Mbuti, H = Hadza, S = San, O = Okiek.

is rooted in the dissociation of people from property. Therefore, the Okiek's territorial rights and more sedentary lifestyle may play a direct causal role in their less pronounced egalitarian norms. This exemplifies the mutually reinforcing nature of the core mechanisms identified in this study (visualised in Figure 2).

The disparity between the Okiek and the other groups was not unexpected (Woodburn, 1982). However, cross-cultural analysis also enabled granular exploration of the variation *within* the three 'immediate-return' groups. One

example is differences in the relative emphasis placed on autonomy versus mutuality between these populations. Whilst data showed all three immediate-return groups champion personal autonomy (Crittenden, 2019), it also revealed variation in coordination to suppress hierarchy and uphold cooperation, for example, through sharing and social sanctions (Lee R. B., 1979). The Mbuti and San tend towards mutuality, relying on consensus for group decisions (Marshall, 1976) and collectively imposing social sanctions against antisocial individuals (Kent, 1989). Meanwhile, the Hadza were reported to be more autonomous, heavily relying on sporadic individual decisions (Woodburn, 1979). Thus, for each society, a different point of equilibrium between autonomy and mutuality is reached, resulting in different expressions of egalitarianism. Wherever this point of equilibrium, the combination of social norm reinforcement and the defence of individual autonomy in expression and in decision making in egalitarian societies has been termed "cooperative autonomy" (see Endicott, 2011; Hewlett et al., 2011). However, mutuality and autonomy are not necessarily oppositional, as cooperative demands and normative inducements to acquiesce to reasonable demands arguably help sustain individuals' autonomy over the long-term, such as via levelling of self-aggrandizing or domineering individuals.

The prevalence of coalitional norm enforcement, particularly in the Mbuti and San, is consistent with Boehm's (1993) assertion that intentional, preemptive action performed by a morally aligned community is pivotal for

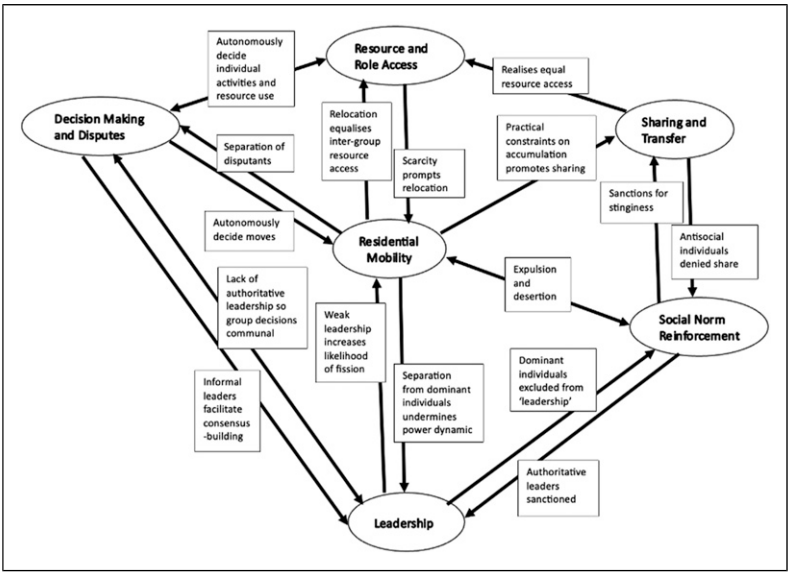

Figure 2. Visual representation of relationships between mechanisms.

maintaining an egalitarian social structure. There has been extensive theoretical discussion in the evolutionary behavioural sciences regarding the utility of norm-enforcing punishment, and especially whether punishment is costly to the punisher as well as to the recipient (discussed in Fehr & Gächter, 2002; Barclay, 2006; Henrich 2006). Much of the literature describes verbal punishment, including complaints and lampooning (Marshall, 1961; Wiessner, 2005) which is relatively low cost. However, it can be unclear what the payoffs are for the punisher, and there are instances of high-cost punishment also, including ostracism and exile (Turnbull, 1965, p. 216). Certain individuals may anticipate lower costs from punishment, due to their physical or social capital, or anticipate greater gains from reinforcing cooperation (von Rueden & Gurven, 2012). Participation in punishment may also be self-interested because it happens within dyads, or because participating in the coalitional punishment of a third-party limits later risk to the punisher (discussed in Stibbard-Hawkes & von Rueden, in review). Whatever the relative payoffs, the present analysis clearly shows that norm enforcement is a commonplace feature of at least some egalitarian societies and there is more work to be done exploring these dynamics (e.g. Wiessner, 2005).

Today, all of the hunter-gatherer groups discussed in this study are experiencing, or have already experienced, increased sedentarisation and market access. Among both the Okiek and many of the San groups, substantial sedentarisation and subsistence transition has already occurred (e.g., see Kent, 1996; McCall, 2000; Wiessner & Huang, 2022), and many individuals no longer primarily subsist by hunting and gathering. Both the Mbuti (Hart, 1978) and the Hadza (Pollom, 2021) are still experiencing ongoing subsistence shifts, and shifts away from hunting are occurring at different rates in different locations. Longitudinal studies are required to evaluate whether there are any regularities or patterns among different groups experiencing similar rapid lifestyle change. Though there exist some studies of subsistence transition, especially among San groups (e.g., Kent, 1995; Wiessner & Huang, 2022), longitudinal studies that assess initial shifts away from political egalitarianism are few. For example, after Malaysian Lanoh forager-traders resettled in larger communities in the late 20th century, competition for leadership increased, and elders began asserting greater influence over the decisions of younger men and women, which they justified as important for maintaining community cohesion and security (Dallos, 2011). A study of Bolivian Tsimane forager-horticulturalists identified associations between market integration and changing politics within and across Tsimane villages, including increased conflict frequency, concentration of mediation in select individuals, and increased inequality in informal political influence (von Rueden, 2023). More comparative research work on this topic would be invaluable.

Egalitarianism and Non-egalitarianism in Other Societies

While the present dataset is limited to African hunter-gatherers, there are many other societies world-wide who have also been described as egalitarian, including, but not limited to the Malaysian Batek (Endicott & Endicott, 2008) and the Filipino Agta (Headland, 1987). Further, many of the six mechanisms identified in the present eHRAF-WC search are also observed in these two societies. For instance, the Batek have high residential mobility and "movement to avoid potential or real conflict is common" (Endicott, 1988, p. 122). They also have high autonomy in decision making, few formal institutions of leadership, prescriptions against personal aggrandisement, and normative proscriptions that "prevent any individual or group from establishing a monopoly over some necessity of life" (Endicott, 1988, pp. 122–123). Likewise, the Agta have extensive resource redistribution (Griffin, 1982), and high residential mobility, with some individuals historically moving once every 18 days (Rai, 1982 via Headland, 1987). The Agta illustrate the linkage among these mechanisms: resource redistribution via demand sharing is more common in camps with higher residential mobility (Smith et al., 2016). Notably, other mechanisms are less evident. Unlike the Hadza, Mbuti and San, the Agta do not have complete autonomy in marriage decisions, and parentally facilitated arranged marriages are commonplace (Headland, 1987).

Importantly, some of the mechanisms identified in the present eHRAF-WC search are also observed among non-foragers. Many societies that practice horticulture and thus experience less residential mobility and greater opportunity for material accumulation nonetheless retain more egalitarian politics, such as the Bolivian Tsimane (von Rueden et al., 2014). In the Tsimane, collective decision making within communities remains consensus-based, and strong social norms penalize aggrandizing behaviour and stinginess. While concentrated within extended families, the breadth of resource sharing within Tsimane communities has not been adversely affected by market integration to date (Gurven et al., 2015). More generally, usufruct-based land use and low-intensity cultivation, as in the Tsimane, are associated with levels of wealth inequality and inheritance more akin to mobile foraging than to high-intensity agricultural production (Gurven et al., 2010).

While the six mechanisms are each observed in other forager communities worldwide, they are often *not* observed in neighbouring communities despite regular interaction and opportunities for norm transmission (Ichikawa, 1991; Morimochi, 1979; Mous, 2021). For instance, the Hadza share territory with the Datoga, who subsist via pastoralism. Despite frequent trade and intermarriage, several mechanisms identified in the present eHRAF-WC search are reversed among the Datoga. Unlike the Hadza, the Datoga have strong formal institutionalised positions of leadership and, for instance, household elders

(i.e., men in their 50s), typically hold council positions, and delegate all physical labour to other individuals (Morimochi, 1979). Hadza men conduct more direct parenting, which appears to structure population-level differences in testosterone (Alvarado et al., 2019). In the Datoga, most subsistence labour is also carried out by women (Mulder, 1992). First born sons of household heads inherit formal leadership roles and exert "strong influence over the young people" in their homesteads (Morimochi, 1979, p. 13). Property wealth is concentrated and passed down via inherence, rather than via broad sharing, and there are clear inequalities in wealth which create differences in nutritional outcomes between households (Sellen, 2003). There are pronounced reproductive inequalities where certain men have many more wives than others. Though Datoga residential locations themselves may change frequently (Mulder, 1992), residential group membership is more static than among the Hadza, family groups are patrilocal rather than multilocal (see Dyble, 2015; Woodburn, 1964) and there are fewer prescribed opportunities for household members to migrate (Morimochi, 1979).

Taken together, these findings suggest that the mechanisms of egalitarianism are strongly related to relatively mobile hunter-gatherer subsistence and, despite numerous opportunities for interaction and intermarriage, remain distinct from neighbouring populations. However, these mechanisms can also occur in other subsistence contexts, and despite low residential mobility and land ownership, Tsimane forager-horticulturalists have high levels of autonomy in political decision making. Here we offer only a limited, informal comparison. To further address the cross-cultural patterning of these phenomena, future studies should explore these trends in systematic global perspective.

Limitations

This study has several limitations. First among them is that our sampling of hunter-gatherer groups captures ethnographic diversity from only one continent. While phylogenetically distinct, these four groups were chosen *expressly* because of their influence within literature on hunter-gatherer egalitarianism, which means that the commonalities observed here may result from selection bias. Further, many if not most authors writing on this topic will be familiar with each other's theoretical frameworks. Thus, the observations of the researchers who conducted the ethnographic work analysed here are not wholly independent. Though in this paper we demonstrate commonalities, and show, contrary to certain critiques, that the mechanisms underlying egalitarianism are both well-defined, well-operationalised, and consistent across three of four cultures, we cannot demonstrate whether these findings generalise more broadly. To further explore (1) how egalitarianism is maintained among hunter-gatherer societies worldwide, and (2) whether these same

mechanisms are at play among groups pursuing different subsistence strategies, future studies should draw from a global random or stratified sample.

This study draws upon ethnographic data. The participant observation method is an irreplicable tool for gathering rich, thickly described contextualised information. However, ethnographers can misinterpret what they observe. For example, Marshall (1958) originally misattributed traditional headman authority to the *kxau n!a*, thereby understating !Xun (!Kung) egalitarianism. While this specific misconception was corrected, others may go unnoticed. Moreover, the age, gender, or social position of informants, the contexts in which informants are speaking, the number and diversity of informants the ethnographer can interview, the incentives of the informants to provide accurate information, and the personal relationship between the informants and the ethnographer all have the potential to bias ethnographic data. For instance, male ethnographers may spend more time interacting with men, and may have more circumscribed access to women's worlds. Also, ethnographer interpretations may reflect historically-contingent socio-political views (O'Reilly, 2009). For example, Leacock (1978) details a relative underappreciation of women's political activities, particularly in older accounts. More recently, many authors have specifically redressed this imbalance and highlighted the role women play in hunter-gatherer egalitarianism (Finnegan, 2013). Whilst critically important, the expansive nature of this topic necessitates separate enquiry (see Woodburn, 1982; Stibbard-Hawkes & von Rueden, in review for further discussion).

There are also biases inherent to coding ethnographic texts. In large datasets like the eHRAF-WC, data are filtered not only through the lens of the ethnographer, but also of the coders (e.g., see Murdock, 1983). Specifically, in this paper we have commented on the prevalence of particular egalitarian mechanisms in different groups by searching for paragraphs using OCM codes. These are designed to provide "rapid access to pertinent sections of ethnographic works" (Ember, 2007, p. 396). However, the presence of certain levelling mechanisms is more likely to be reported than their absence, and thus, our search may artificially inflate the importance of key behaviours. Further, to address the issue of bias in the thematic analysis coding (see Ember & Ember, 2009, ch7), in the present study we employed a second coder to code a 10% subset of paragraphs, which they did with high (>80%) concordance. Even so, both coders were British and both were undergraduate students, which may result in shared coding biases derived from shared cultural backgrounds.

Finally, research conducted within a defined time frame reflects certain ecological and historical conditions of the society, and a focus on the 'ethnographic present' as described in ethnography ignores changes within a society (O'Reilly, 2009). In the current eHRAF-WC search, date ranges for the Mbuti data fell between 1951–1973, Hadza data between 1917–2009,

Okiek data between 1921 and 1990, and the San data between 1908 and 1993. In the case of the Mbuti, this span is too brief to meaningfully explore society-wide normative changes. For the San, our search grouped several different populations, rendering longitudinal comparisons difficult. For the Hadza, ethnographers have noted that descriptions of egalitarian practices have been notably consistent across time (Marlowe, 2010). That said, over the last ten years, there has been significant subsistence change in the Eyasi region and present work is currently being conducted to explore whether this has had an impact on egalitarian norms. As described above, while the Okiek have historically recognised relatively greater land-rights than the other groups, population sizes have increased and mobility has decreased over the 70 year span captured by these datasets. Proper longitudinal exploration of changes is rendered difficult by the relatively small number of sources and the often broad time coverages. However, it would be enlightening to broaden this search beyond the eHRAF-WC dataset to explore longitudinal changes in egalitarian norms across each of these societies between, for instance, the late and early 20th century texts. Since our sample was limited to work conducted between 1917–2009, future work should explore more recent changes which have happened in the last 15+ years.

Conclusion

In summary, while some authors have argued that egalitarianism is poorly defined (Graeber & Wengrow, 2021), when we focus on the mechanisms underlying egalitarianism it becomes clear that egalitarianism is a genuine cross-cultural phenomenon with solid empirical footing. The present cross-cultural analysis of African hunter-gatherer groups revealed numerous mechanisms that reoccur across time and space, broadly aligned under six core themes. It is these mechanisms, rather than broad society level equality, which are the underlying foundations essential for defining egalitarianism across diverse contexts (see also Stibbard-Hawkes & von Rueden, in review). In line with previous research (Biesele, 2023), data highlighted that maintenance of egalitarianism requires these mechanisms to be actively enforced, sometimes by coalitions.

Cross-cultural analysis revealed variation in these mechanisms between societies, potentially reflecting an egalitarian continuum (Kent, 1993). Although the most striking differences existed between relatively more 'immediate' and 'delayed-return' societies, subtle differences were also detected within the immediate-return subset, such as the varying emphasis placed upon autonomy relative to connectedness. Here, further research, including direct, cross-cultural quantitative comparison, would be invaluable for further delineating the similarities and differences between so-called egalitarian groups. Nonetheless, despite its limitations, the present study demonstrates that there

are clear and identifiable cross-cultural empirical regularities among egalitarian societies and, despite recent critiques (Graeber & Wengrow, 2021), that the framework has a solid cross-cultural empirical basis.

Beyond anthropology, properly understanding the mechanisms promoting egalitarianism is appealing given the severe extent of global inequality today. However, mechanisms which function within small hunter-gatherer societies may not be scalable to vastly more complex social and economic structures (Bird-David, 2017). Whilst this may prevent importing specific strategies wholesale, some of the broader concepts highlighted in this discourse could be potentially illuminating, even in global contexts. For example, akin to spatial relocation equalising resource access between hunter-gatherer groups, promoting remote working opportunities could allow equal employment prospects irrespective of geographical locality and its socioeconomic implications (Aksoy, 2022). Notwithstanding the potential utility of adapting these broader themes, their implementation requires determined communal effort (Biesele, 2023). Indeed, the hunter-gatherer examples considered here clearly demonstrate that realising a more egalitarian social structure will not arise serendipitously, but requires the intentionality of a morally aligned cohesive force (Boehm, 1993). Our world is currently confronting the dual existential challenges of remarkable global inequality and devastating climate change (Gowdy, 2021), and the need for a moral collective to act with conviction has never been more pressing.

Acknowledgments

Thanks to Lucy Greig for conducting inter-coder reliability. Thanks to Robert Hitchcock and Akira Takada for guidance on San community names.

Author Contributions

Jessame Thomson: Conceptualization, Methodology, Formal analysis, Investigation, Data Curation, Writing - Original Draft. Sheina Lew-Levy: Supervision, Writing - Review & Editing, Manuscript Revision. Chris von Rueden: Writing - Review & Editing, Manuscript Revision. Duncan N. E. Stibbard-Hawkes: Visualization, Validation, Writing - Review & Editing, Manuscript Revision.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: DSH was supported in writing review and

theory development by a grant from the Leverhulme Foundation (Award Number: RF170291).

Ethical Statement

Ethical Approval

Ethical approval was obtained from the Durham Psychology Department Ethics Sub-Committee. Initially automatically approved by the online ethics system, the study was confirmed as 'low-risk' by an ethics chair due to the absence of live participants or personal, confidential data.

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Data Availability Statement

All data are uploaded as a supplement to this paper.

Supplemental Material

Supplemental material for this article is available online.

Notes

1. Humans exhibit a broad spectrum of diversity in leadership which is expressed along numerous dimensions (Garfield et al., 2020). We here define 'formal leadership' as a named, institutionalised leadership role with the recognised authority to tell others what to do. We recognise, however, that this definition does not satisfactorily capture leadership across societies and, for instance, certain egalitarian groups have institutionalised leadership roles such as !Kung *n!ore* owners (Lee, 1982) or Aka *kombeti* discussion leaders (Hewlett, 1988), which confer certain leadership rights even though individuals are yet otherwise constrained in their ability to exert authority.
2. See also McCall & Widerquist (2015) for an alternative model distinguishing weak and strong forms of egalitarianism in forager societies, and Kelly (2013) for further discussion of classification schema.
3. While the term San has derogatory origins, the Working Group of Indigenous Minorities in Southern Africa (WIMSA) "has accepted the term San as the preferred over-arching term for the hunting and gathering groups indigenous to southern Africa and their descendants today" (Hays, 2016, p. XIV).
4. This may be an overstatement and DSH has personally observed Hadza group deliberations, though it is certainly true that Hadza hunting is normally solitary and there is atypically low need for labour coordination (discussed in Stibbard-Hawkes and von Rueden, in review).
5. And see Stibbard-Hawkes (2020) for further discussion.

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