Beyond the nomadic-egalitarian model

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The Neolithic Revolution is recent

- Last common ancestor with chimpanzees (~6 mya)
- Neolithic Revolution (~12kya)
- Origin of Homo (~2.8 mya)
The Neolithic Revolution is recent

- Last common ancestor with chimpanzees (~6 mya)
- Neolithic Revolution (~12 kya)
- Origin of Homo (~2.8 mya)
- Origin of Homo sapiens (~200 kya)
The Neolithic Revolution is recent

What are the **evolutionary origins** of human behavior?

How has society **culturally evolved**?

What is **peculiar** about modernity?
The Neolithic Revolution is recent

- Neolithic Revolution (~12kya)
- Origin of Homo sapiens (~200 kya)
- Origin of Homo (~2.8 mya)
- Last common ancestor with chimpanzees (~~~6 mya)
The Neolithic Revolution is recent

- Last common ancestor with chimpanzees (~6 mya)
- Origin of Homo (~2.8 mya)
- Origin of Homo sapiens (~200 kya)
- Neolithic Revolution (~12 kya)
Nomadic-egalitarian model
(Boehm 2012, Fry 2013, Lee 2018)
For 100,000+ years before the Holocene, and possibly much earlier,
“Historically nomadic foragers (HNF), small in scale, mobile, and egalitarian, reflect most closely the characteristics of ancient foragers”
(Lee 2018)

“Until a couple of millennia before the agricultural revolution began about 10,000 years ago, humankind practiced a mobile forager lifeway… There is widespread agreement that mobile forager band social organization is largely egalitarian…”
(Fry 2020)

Intergroup Aggression in Chimpanzees and War in Nomadic Hunter-Gatherers
Evaluating the Chimpanzee Model

Richard W. Wrangham · Luke Glowacki
Egalitarianism

Boehm (2012): Invokes to explain the evolution of morality, cooperative dispositions, and social emotions

Kaplan et al. (2009); Whiten et al. (2012): Core feature of human social evolution → cannot explain social organization, subsistence, or social cognition without considering egalitarianism
What is historically novel? (and therefore puzzling)

- Social stratification
- Inherited inequality
- Corporate groups
- Territoriality
- Property
- Cooperative projects involving hundreds or thousands of individuals
- Large-scale political consolidation
- Management of plant and animal resources

Argue that nomadic egalitarian model is deeply flawed

Propose an alternative

Explore implications

Longstanding and recently growing dissatisfaction

Diverse histories model

Nomadic-egalitarian model
- Mobile
- Minimal food storage
- Terrestrial resources
- Egalitarian
- Minimized status competition
- Small groups
- Small-scale cooperation

Sedentary or semi-sedentary
- Food storage
- Aquatic resources
- Hierarchical
- Institutionalized status competition
- Large groups
- Large-scale cooperation

Graph showing forager social diversity over years before present.
LIMITATIONS OF RECENT MOBILE H-Gs

MISCHARACTERIZATIONS OF RECENT H-Gs

SEDENTARY & NON-EGALITARIAN HGs
LIMITATIONS OF RECENT MOBILE H-Gs

MISCHARACTERIZATIONS OF RECENT H-Gs

SEDENTARY & NON-EGALITARIAN HGs
Marginalized Habitats

Marginalized Habitat Hypothesis
Modern HGs pushed to poor quality habitats by agriculturalists
(Lee & Devore 1968)

Porter & Marlowe (2007), Cunningham et al. (2019):
Compared HGs & agriculturalists and found no difference in habitat quality

But 2 complications
Marginalized Habitats

Complication 1
Marginalized Habitats

Complication 1
Marginalized Habitats

Complication 2
Used net primary productivity $\Rightarrow$ potentially misleading

**Rainforests:** high NPP but much inaccessible to humans

**The Hadza case:** Hadza environment “depleted” of wildlife but high livestock densities $\Rightarrow$ NPP does not capture

(Wood, personal communication)
Marginalized Habitats

Regardless

1. Many canonical models (e.g., Kalahari !Kung) live in marginal habitats

2. Ancestral HGs inhabited many habitats modern HGs do not (e.g., rich aquatic environments occupied by industrialized states)
Interactions with Agriculturalists

Large-scale agriculturalists impact modern HGs (incorporation, trade, slavery)

Some interactions are deep — HGs speak languages closely related to those of farmers

Philippines: 1-3kya (Junker 2002)

Central Africa: ≥2.5kya (Verdu et al. 2009)

(Unclear whether humans can live in rainforests on foraging alone)
Interactions with Agriculturalists

!Kung: stand-ins for Paleolithic peoples (Johnson & Earle 20000)

Began trading with Bantu populations 0.5-1.5kya

In 1920s, Bantu agropastoralists entered Dobe area

Harvard Kalahari project started in 1963, already incorporated into “regional pastoral, tributary, and mercantile economy”

Solway & Lee 1990
Interactions with Agriculturalists

1964: 466 Dobe !Kung across 9 camps
- 340 Bantu pastoralists & thousands of cattle
- 8/9 camps — Bantu & !Kung lived together
- 20% of !Kung working w/ cattle
- 1967-1969 — 51% of !Kung men planted fields

Lee 1984
The Dobe !Kung
“The !Kung are a fiercely egalitarian people”  
(Lee 1979)

“Egalitarianism is not simply the absence of a headman and other authority figures, but a positive insistence on the essential equality of all people and a refusal to bow to the authority of others, a sentiment expressed in the statement: “Of course we have headmen…*each one of us is headman over himself.*” (p. 457)
"The !Kung are a fiercely egalitarian people" (Lee 1979)

But !Kung experienced decline in leadership following Bantu incursion

Positions hereditary and restricted to men; "headman" considered owner of waterhole and could deny access

(Fourie 1928, Marshall 1965, Wiessner 1994)
Interactions with Agriculturalists

Mobility

1. Large, sedentary groups split into smaller mobile groups following pacification (New Guinea) (Roscoe 2016)

2. Become mobile foragers to specialize in trade (Penan of Borneo) (Hoffman 1984)

3. Mobility as a strategy to escape state control (Scott 2009, 2017) → often observed with pastoralists (e.g., Hima, Turkmen, Fulani)
LIMITATIONS OF RECENT MOBILE H-Gs

MISCHARACTERIZATIONS OF RECENT H-Gs

SEDENTARY & NON-EGALITARIAN HGs
Group size & mobility

25
(or similar order of magnitude)

Group size & mobility

1: Within-society

**Archers (Efe)**
36 individuals per camp (12-72)

**Net-hunters (Sua Mbuti)**
150 individuals per camp (120-250)

9 !Kung camps in 1964
9 to 117

(Turnbull 1965)

(Lee 1984)
Group size & mobility

2: Temporal

Presumably nomadic foragers transitioned between small, mobile bands and large, sedentary settlements (Wengrow & Graeber 2015)

- Arctic and Alaskan populations (Summer/Winter)
- Northern Australia (Dry/wet)

Populations of 76 Yu’pik winter villages published in Mauss (1950)
<table>
<thead>
<tr>
<th>Cooperation</th>
<th>Authority</th>
<th>Resource management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile foragers in North America, Australia, Europe, and Arctic engage in large-scale cooperation (hundreds)</td>
<td>Coercive leadership less common among foragers, but present nevertheless (Garfield et al. 2020)</td>
<td>Shamans often leverage supposed powers to exercise political authority</td>
</tr>
</tbody>
</table>
LIMITATIONS OF RECENT MOBILE H-Gs

MISCHARACTERIZATIONS OF RECENT H-Gs

SEDENTARY & NON-EGALITARIAN HGs
<table>
<thead>
<tr>
<th></th>
<th>Mobile hunter-gatherer</th>
<th>Sedentary hunter-gatherer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary food</td>
<td>Terrestrial resources</td>
<td>Aquatic resources</td>
</tr>
<tr>
<td>Food storage</td>
<td>Very rare</td>
<td>Typical</td>
</tr>
<tr>
<td>Mobility</td>
<td>High mobility</td>
<td>Low mobility</td>
</tr>
<tr>
<td>Hierarchy?</td>
<td>“Egalitarian”</td>
<td>Hierarchical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(wealth or hereditary)</td>
</tr>
<tr>
<td>Slavery</td>
<td>Absent</td>
<td>Present</td>
</tr>
<tr>
<td>Competition</td>
<td>Minimized</td>
<td>Publicized</td>
</tr>
</tbody>
</table>

(Kelly 2013)
Rich, defensible resources

“Only those who have at their disposal an excess can be classified as ‘rich.’”
Testart 1985

Density  Sedentary  Hierarchy

Testart 1985, Smith & Codding 2021
Sedentary hunter-gatherers
Ethnographic examples
- Pacific NW Amerindians (e.g., Tlingit)
- New Guinean aquatic resource HGs (e.g., Asmat)
New Guinea

New Guinea’s hunter-gatherers vary tremendously.

All subsist on starch from sago palm.

Two groups of HGs (ignoring those who engage in trade):

1. Terrestrial/arboreal game
   Resemble mobile HGs elsewhere

   Small bands, mobile, low density, relatively egalitarian

Roscoe 2002
New Guinea

New Guinea’s hunter-gatherers vary tremendously

All subsist on starch from sago palm

Two groups of HGs (ignoring those who engage in trade)

2. Aquatic resources
   “exhibited a cultural complexity that rivaled or surpassed that of many intensive agriculturalists”

Roscoe 2002
Asmat
Southwestern New Guinea (West Papua, Indonesia)

≥70k people (split into sub-groups)

Villages could have 100s to >1000 ppl (one longhouse was 90 meters long)

Chiefs
polygynous (some highly so), acquired sago stands and fishing grounds of wives and then distributed resources

Elaborate artistic culture
Knauf 1993
Leader(s) commissioned construction of supernaturally powerful ancestor pole

Paid carvers, who spent 3 months

Upon completion, erected before men’s house in ceremonial inauguration

Leader(s) hosted feasted → up to 2000 people attended

Watch it here: https://www.youtube.com/watch?v=y5lvHegTDAA

(See: large groups, acceptance of inequality or hierarchy, elaborateness of material culture)
Arnold et al. (2016): Examined bio anth textbooks published between 2006 & 2014 → no mention

Boehm’s LPA database: deliberately excludes

Marlowe (2005): Sedentary foragers may have been present immediately before Holocene “but for modeling earlier periods we should exclude them”
Anomalous

Require aquatic resources which occurred late in human history

Little archaeological evidence in Pleistocene
Anomalous? 

Archaeological
Ethnographic
Both

<table>
<thead>
<tr>
<th>ID</th>
<th>Region</th>
<th>Culture/Sub-region</th>
<th>Time</th>
<th>Subsistence</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Africa</td>
<td>Southern South Africa Coast (Plettenberg</td>
<td>4,500–2,000 BP</td>
<td>Marine resources, including high-trophic-level animals (e.g., seals)</td>
<td>Coastal</td>
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<td>Bay &amp; Cape St. Francis)</td>
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<tr>
<td>2</td>
<td>Africa</td>
<td>Western South Africa Coast (Eland’s Bay &amp;</td>
<td>3,000–2,000 BP</td>
<td>Marine resources, especially shellfish</td>
<td>Coastal</td>
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<td>Lambert’s Bay)</td>
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<td>3</td>
<td>Africa</td>
<td>Kansyore (Lake Victoria)</td>
<td>8,000–4,500 cal.</td>
<td>Terrestrial and aquatic resources, especially fish</td>
<td>Lacustrine and riverine</td>
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<td>BP</td>
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<td>4</td>
<td>Africa</td>
<td>Lothagam (Lake Turkana)</td>
<td>10,000–7,000 BP</td>
<td>Primarily aquatic resources (e.g., Nile perch); terrestrial hunting</td>
<td>Lacustrine</td>
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<td>5</td>
<td>Africa</td>
<td>Early Khartoum</td>
<td>10,000–8,000 cal.</td>
<td>Primarily aquatic (riverine) resources</td>
<td>Riparian with floodplains,</td>
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<td>grasslands, woodlands,</td>
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<td></td>
<td></td>
<td>Lacustrine</td>
</tr>
<tr>
<td>6</td>
<td>Africa</td>
<td>Gobero Lake</td>
<td>9,500–8,200 cal.</td>
<td>Terrestrial and lacustrine resources</td>
<td>Lacustrine</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>BP</td>
<td></td>
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<tr>
<td>7</td>
<td>Africa</td>
<td>Late Acacus</td>
<td>8,800–8,000 BP</td>
<td>Wild cereals, cattails, barbary sheep</td>
<td>Arid mountains</td>
</tr>
<tr>
<td>8</td>
<td>Africa</td>
<td>Taforalt</td>
<td>13,000–11,000 BP</td>
<td>Diverse terrestrial fauna, esp. land snails, Barbary sheep, and nuts</td>
<td>Arid semi-desert</td>
</tr>
</tbody>
</table>
Aquatic resources?
Pleistocene?

a: Sungir; b: Arene Candide; c/d: Dolne Vestonice
Pleistocene?

a: Sungir; b: Arene Candide; c/d: Dolne Vestonice

Epipaleolithic “necropolises” or “cemeteries” (e.g., Italy, Morocco) → density, sedentism?

But all evidence 40kya or younger and in circum-Mediterranean/Eurasia

What about Africa???
1. Far fewer archaeologists work in Africa (think of the Calusa)
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2. Most promising sites are **submerged**

**Predict important finds from underwater archaeology**
(think of Ohalo II)
Many recent foragers shaped by interactions with agricultural societies.

Social organization of “mobile” & “egalitarian” foragers much more diverse than often appreciated.

Humans subsisting on rich, predictable resources reliably build societies that are low-mobility (+ often non-egalitarian & large).

Insofar as humans have been behaviorally modern for 100,000 years, likely were socially diverse for that period as well.
\[ \frac{3}{4} \quad \frac{1}{4} \]
Implications
Dominance and status-seeking
(seek and understand social interactions in terms of power & status)

Group identity and minimal group affiliation
(exhibit in-group biases on basis of “mere membership”)

Others?
(Gene-culture coevolution with diversity of institutions)