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## 2 **Complex Hunter-Gatherers**

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### 6 **Introduction**

7 Complex hunter-gatherers are hunter-gatherers  
8 whose cultures and societies have cultural, social,  
9 and economic traits that anthropologists and  
10 other scholars had long assumed required agri-  
11 culture for them to develop. Permanent inequality  
12 is the trait that has attracted the most attention  
13 among archaeologists, but others include large,  
14 dense populations; large, relatively permanent  
15 settlements; and intensive economies among  
16 other characteristics. First widely recognized by  
17 archaeologists in the late 1970s, they have been a  
18 focus of major research efforts since. This  
19 research has been a testing ground for many the-  
20 ories about the origins and evolution of social  
21 complexity, especially of the origins and devel-  
22 opment of permanent inequality in small-scale  
23 societies.

### 24 **Definition**

25 At the most fundamental level, complex hunter-  
26 gatherers are hunter-gatherers who do not fit  
27 Richard B. Lee and Irven DeVore's characteriza-  
28 tion of hunter-gatherers in the 1968 seminal

29 volume *Man the Hunter*, “We make two basic  
30 assumptions about hunters and gatherers: (1) they  
31 live in small groups and (2) they move around  
32 a lot” (Lee & DeVore 1968: 11). They go on to  
33 list five additional characteristics of hunter-gath-  
34 erers: first, because of mobility, the amount of  
35 personal property is kept low; second, the  
36 resource base keeps group size very small,  
37 below 50; third, local groups do not “maintain  
38 exclusive rights to territory” (i.e., do not control  
39 property); fourth, food surpluses are small to  
40 nonexistent; and fifth, groups are not strongly  
41 attached to “any single area.” An additional char-  
42 acteristic not listed by Lee and DeVore here is  
43 that these small social groups are strongly egalit-  
44 arian. These hunter-gatherers approximate ste-  
45 reotypes of hunter-gatherers that were widely  
46 held by scholars and others during the past sev-  
47 eral centuries. These stereotypes began to break  
48 down in the 1960s and 1970s as the great diver-  
49 sity among hunter-gatherer societies became  
50 clearer as a consequence of archaeological  
51 research. However, the *Man the Hunter* charac-  
52 terization does accurately describe some hunter-  
53 gatherer groups; those are labeled “generalized  
54 hunter-gatherers” in Table 1. Current definitions  
55 of complex hunter-gatherers often focus on trait  
56 lists of how they contrast with generalized  
57 hunter-gatherers (Table 1).

58 Certain attributes of complex hunter-gatherers  
59 are more central to our understanding of them  
60 than are others.

61 **Demography and Group Size**

62 Complex hunter-gatherer societies tend to have  
63 larger populations than do generalized hunter-  
64 gatherers. They also have higher population den-  
65 sities and larger communities. The significance  
66 here is that there are more people in daily face-to-  
67 face contact.

68 **Corporate Groups**

69 Generalized hunter-gatherer social groups  
70 beyond the nuclear family tend to be very fluid  
71 in their membership. Complex hunter-gatherers  
72 generally have stable, long-lived corporate  
73 groups, often in the form of households.

74 **Residential and Mobility Patterns**

75 Complex hunter-gatherers tend to be partially to  
76 fully sedentary. Mobility across and exploitation  
77 of the landscape tends to be logistical, a pattern in  
78 which long-term residential bases are established  
79 and task groups harvest and process resources at  
80 some distance from the base and return with the  
81 processed material. Generalized hunter-gatherers,  
82 in contrast, shift their residential bases as needed  
83 to position them close to available resources.

84 **Property, Wealth, and Inheritance**

85 Generalized hunter-gatherers usually consume  
86 resources as they are harvested, and while indi-  
87 viduals may own objects they make or acquire,  
88 accumulation of property is usually repressed by  
89 social means. Among complex hunter-gatherers,  
90 consumption or use of harvested resources may  
91 be delayed through storage, and corporate groups  
92 and individuals own property which is transferred  
93 from one generation to the next. Recent research  
94 distinguishes among three forms of wealth:  
95 embodied (health, knowledge, skills), relational  
96 (social networks and ties), and material (things,  
97 beings) (Bowles et al. 2010). Among generalized  
98 hunter-gatherers, wealth is generally embodied  
99 or relational (Smith et al. 2010); among complex  
100 hunter-gatherers, wealth is also manifested  
101 through material wealth.

102 **Subsistence and Economy**

103 Subsistence economies are likely to be “broad  
104 spectrum,” that is, harvesting a diverse array of

resources, some of which are highly productive 105  
but require significant amounts of labor to realize 106  
their potential (e.g., seeds). The high levels of 107  
labor can be invested in harvesting and/or in 108  
processing. Within the subsistence economy, 109  
there may be a few “keystone” resources which 110  
are fundamental to long-term economic success. 111  
Thus, while a group may harvest a wide diversity 112  
of plants, over the long run, they are most heavily 113  
dependent on just one or two species. Complex 114  
hunter-gatherer economies tend to rely most 115  
heavily on aquatic resources (marine, lacustrine, 116  
riverine) and/or plants. 117

**Social Organization and Economy** 118

Complex hunter-gatherers are generally charac- 119  
terized by formal, permanent social inequality in 120  
the form of ranking or stratification. The systems 121  
of inequality are supported and reinforced by 122  
political economies which manage the creation 123  
and movement of material wealth through the 124  
society. 125

Some definitions of complex hunter-gatherers 126  
focus primarily on population size (e.g., Koyama 127  
& Thomas 1981). Another label for complex 128  
hunter-gatherers, “affluent foragers” as originally 129  
defined, emphasized their larger populations. Yet 130  
other definitions exclude all characteristics 131  
except permanent inequality (Arnold 1996), 132  
restricting the term “complex hunter-gatherers” 133  
to only those hunter-gatherer societies with per- 134  
manent inequality and elite control over non-kin 135  
labor (i.e., the political economy extends beyond 136  
the corporate or kin group). Arnold (2001) pro- 137  
poses applying “affluent forager” to those groups 138  
displaying many of these traits, but lacking per- 139  
manent inequality. Whichever definition or set of 140  
traits individual scholars prefer, most research 141  
focuses on the development and maintenance of 142  
permanent inequality. 143

As an alternative to trait-based definitions, 144  
some researchers (e.g., Price 1981, Binford 145  
2001) define hunter-gatherer complexity in 146  
terms of systems’ complexity, that is, as cultural 147  
systems with many subsystems and many links 148  
among subsystems. This carries the implication 149  
that the subsystems are heterogeneous, that is, 150  
different from each other. The nature of this 151

152 heterogeneity is often unspecified. Implicit to this  
153 definition is the notion that generalized hunter-  
154 gatherer cultural systems lack internal differentia-  
155 tion (subsystems) and are consequently  
156 homogeneous.

## 157 **Historical Background**

158 Lee and DeVore's description of hunter-  
159 gatherers essentially crystallized a view of  
160 hunter-gatherers that was several centuries old  
161 of small, simple, and egalitarian societies.  
162 Anthropologists, historians, and others took for  
163 granted that these societies represented the pris-  
164 tine human condition and that the appearance and  
165 subsequent development of complex societies  
166 required agriculture. A few ethnographically  
167 documented hunter-gatherer societies displayed  
168 traits thought to require agriculture. The classic  
169 example was the hunter-gatherer-fisher peoples  
170 of the Northwest Coast of North America (coastal  
171 northern California, Oregon, Washington, British  
172 Columbia, and southeast Alaska). They had  
173 dense populations, large communities, and an  
174 incipient class system among other things. They  
175 were explained away as the consequence of an  
176 unusually rich environment: the abundance of the  
177 natural environment substituted for the abun-  
178 dance produced by farming. Other exceptions  
179 were explained away as a consequence of contact  
180 with Europeans or other complexly organized  
181 peoples. Hunting and gathering was viewed as  
182 a very ancient lifeway that had persisted  
183 unchanged for millennia, at least since the  
184 appearance of the first modern humans if not  
185 their ancestors. The *Man the Hunter Conference*,  
186 in fact, grew out of a famous Harvard University  
187 project that conducted research among hunter-  
188 gatherers in South Africa's Kalahari Desert that  
189 was based on the assumption that these people  
190 were behaviorally the closest modern analogues  
191 to that ancestral state.

192 The *Man the Hunter* conference was held at  
193 the University of Chicago in 1966. By the late  
194 1970s–early 1980s, the picture of hunter-  
195 gatherers presented at the conference had become  
196 obsolete. As a consequence of a global expansion

of archaeological research and knowledge, it was  
197 clear that many ancient hunter-gatherer societies  
198 were far more diverse and complex than antici-  
199 pated in 1966. The concepts of “affluent for-  
200 agers” and “complex hunter-gatherers” were  
201 developed in part to encompass and describe  
202 this newly discovered diversity. Three interna-  
203 tional conferences were crucial. The first of  
204 these was held in 1979 in Osaka, Japan, with the  
205 original purpose of comparing the ancient forag-  
206 ing economies of Japan and California (Koyama  
207 & Thomas 1981). It was at this conference that  
208 the notion of “affluent foragers” was formalized.  
209 As noted above, central to that idea was high  
210 population densities supported by rich environ-  
211 ments, which required subsistence economies  
212 capable of supporting those densities. The second  
213 conference was held in Amsterdam in 1980, and  
214 its topic was *Archaeological Approaches to Com-  
215 plexity* (van der Leeuw 1981). Price (1981)  
216 presented a paper in which he coined the term  
217 “complex hunter-gatherers” and developed the  
218 first set of characteristics distinguishing them  
219 from generalized hunter-gatherers. His list was  
220 based upon comparisons among Japanese, Cali-  
221 fornia, and Mesolithic European hunter-gath-  
222 erers. Thus, two of his three examples were  
223 archaeological. He also presented the systems  
224 theory definition of complexity. The third confer-  
225 ence again was a major international conference  
226 held in Vancouver, British Columbia, in 1983  
227 (Price & Brown 1985). It established the concept  
228 of complex hunter-gatherers and laid out the  
229 agenda for much of the research on hunter-  
230 gatherer complexity over the next two decades.  
231 This agenda focused on the causal relationships  
232 among population growth, subsistence and eco-  
233 nomic intensification (including storage), mobil-  
234 ity patterns, and permanent inequality. At the  
235 same time, the importance of corporate groups  
236 (Hayden & Cannon 1982) and the domestic mode  
237 of production (Ames 1985) to the development of  
238 hunter-gatherer complexity was recognized. This  
239 was both a crucial theoretical and methodological  
240 step, since much subsequent research on hunter-  
241 gatherer complexity was framed within house-  
242 hold archaeology (e.g., Coupland 1985).  
243

244 The initial interest in complex hunter-  
245 gatherers stemmed from three sources: first,  
246 they were a range of societies poorly represented  
247 in the modern ethnographic sample, and neither  
248 how common they were in the past nor their time  
249 depth was known. Research on complex hunter-  
250 gatherers was also research on the diversity  
251 of human cultures. Secondly, they represented  
252 routes to complexity, particularly to permanent  
253 inequality, not dependent on agriculture; they  
254 were in a sense an independent set of cultural  
255 evolutionary experiments in the evolution of  
256 complexity. Investigating them might clarify  
257 how and why permanent inequality and other  
258 aspects of complexity arose from small, egalitar-  
259 ian societies. Thirdly, they were implicated in the  
260 domestication of plants and animals. Research in  
261 the 1960s and 1970s suggested that the prelimi-  
262 nary steps toward domestication were taken by  
263 what became known as complex hunter-gather-  
264 ers. The origins of civilization – complex soci-  
265 eties – and of agriculture were major disciplinary  
266 issues globally beginning in the 1950s and were  
267 the subjects of intensive research. Research on  
268 complex hunter-gatherers could provide insights  
269 into both issues. Their presumed role in domesti-  
270 cation is now far less clear. They still represent  
271 a diverse set of experiments in cultural evolution,  
272 and research has tended to focus on the hows and  
273 whys of the development of permanent  
274 inequality.

275 This research has investigated key case stud-  
276 ies. In North America, these include the North-  
277 west Coast, the Fraser-Thompson Plateau of  
278 interior British Columbia, the Santa Barbara  
279 Bight of southern California, and western Flor-  
280 ida. In these instances, complex societies devel-  
281 oped within the last 2,000 years or so, although  
282 on the Northwest Coast they may have evolved as  
283 much as a millennium or two earlier. In these  
284 cases, archaeologists have access to both the  
285 archaeological record and to ethnographic and  
286 ethnohistoric records which can be used as paral-  
287 lel lines of evidence in investigating complexity.  
288 Thus, we know, for example, that permanent  
289 inequality existed in southern California and on  
290 the Northwest Coast based on the ethnographies.  
291 Recently, archaeologists in the southeastern

United States have explored a record of fluctuat- 292  
ing levels of hunter-gatherer complexity between 293  
about 5,500 and 3,000 years ago. Here, complex- 294  
ity is marked by extensive systems of earthen 295  
mounds, plazas, and in some places large rings 296  
constructed of marine and freshwater mollusk 297  
shells – for example, monumental architecture. 298  
There is no ethnographic record for these 299  
hunter-gatherers. 300

Globally, among the key case studies are the 301  
Jomon hunter-gatherers of Japan, the Natufian 302  
peoples of the Levant, and the Upper Paleolithic 303  
and Mesolithic peoples of western Europe. These 304  
ancient societies illustrate the difficulties and 305  
ambiguities of investigating complex hunter- 306  
gatherers known only from the archaeological 307  
record. It has proven very difficult, for example, 308  
to demonstrate the presence of permanent 309  
inequality in any of these cases. In fact, Price, 310  
who used the Mesolithic in his original formula- 311  
tion of the complex hunter-gatherer concept, has 312  
subsequently decided Mesolithic societies were 313  
not complex given the ambiguity of the available 314  
evidence (Price 1995). 315

### Key Issues/Current Debates 316

Current debates revolve around the causes of 317  
permanent inequality in these small societies (as 318  
opposed to the causes of permanent inequality in 319  
large societies, such as the Aztec or Incan 320  
Empires), although there are other “key” 321  
unresolved issues, including the subject matter 322  
itself. “Hunter-gatherer” as a category of human 323  
society and subsistence has proven difficult to 324  
define or at least to draw boundaries around. 325  
There are some scholars who argue that the entire 326  
concept of hunter-gatherers needs to be aban- 327  
doned. Similar suggestions have been made for 328  
the notion of complex hunter-gatherer, perhaps 329  
substituting less economically specific phrases 330  
like “middle range society” or “transegalitarian” 331  
society. Part of the difficulty arises from precon- 332  
ceptions about hunter-gatherers. A particularly 333  
powerful preconception is that they have no sig- 334  
nificant environmental impact. They harvest wild 335  
foods but do not “produce” foods or create 336

337 “anthropogenic” environments (anthropos –  
338 human; genic, genesis as in created, human cre-  
339 ated or modified environments). It is now clear  
340 that all environments in which humans live are  
341 anthropogenic to one degree or another, even  
342 those occupied by the most “pristine” generalized  
343 hunter-gatherers. However, most complex  
344 hunter-gatherers actively modify their environ-  
345 ments, acting to increase productivity and pre-  
346 dictability through practices such as regular  
347 burning or firing the environment, selective  
348 harvesting, tilling, pruning, transplanting, and  
349 landscape engineering. Such practices are diffi-  
350 cult to reconcile with the notion of hunter-  
351 gatherers as environmentally passive. Should  
352 people who do these things even be considered  
353 hunter-gatherers?

354 Setting that issue aside, a second is whether  
355 hunter-gather complexity can be sustained for  
356 long periods of time. T. Douglas Price (1995)  
357 has suggested that most instances of hunter-  
358 gatherer complexity are actually the result of  
359 contact with farmers and that hunter-gatherer  
360 complexity in any case is relatively ephemeral –  
361 that is, it does not last long because hunter-  
362 gatherer economies are not capable of the  
363 sustained economic production complexity  
364 requires. Price may be correct, in long archaeo-  
365 logical sequences; complexity among hunter-  
366 gatherers does seem to come, go, and sometimes  
367 come again in a different form, or not at all. Once  
368 complexity develops, it is not necessarily perma-  
369 nent, in some cases disappearing after a few cen-  
370 turies and in other cases persisting for millennia.

371 A third issue is the notion of egalitarianism.  
372 One definition of egalitarianism is that egalitarian  
373 societies are those with as many positions of high  
374 prestige as their people to fill them and that there  
375 is equal access to resources (of all sorts) neces-  
376 sary for life in the particular culture. Many small-  
377 scale societies practice what might be termed  
378 “formal egalitarianism” in which egalitarianism  
379 is highly valued and morally reinforced and anti-  
380 egalitarian behavior repressed. It is thought that  
381 egalitarianism was essential for small group sur-  
382 vival during the Pleistocene with its extreme and  
383 rapid environmental shifts. The balanced or  
384 reciprocal social ties that formal egalitarianism

reinforces provided a crucial safety net when  
385 local resources failed. Recently, the whole notion  
386 of egalitarianism has been critiqued by anthro-  
387 pologists and others, and this “formal egalitari-  
388 anism” rethought as a form of reverse dominance  
389 hierarchy in which alliances among subdomi-  
390 nants restrain and repress dominance. The issue  
391 then is whether egalitarian societies as once con-  
392 ceived ever existed. If not, it would suggest that  
393 permanent inequality is not, in itself, an attribute  
394 of social complexity but rather an attribute of the  
395 human condition (Ames 2010).  
396

A fourth issue is the trait-based definitions of  
397 complex hunter-gatherers and affluent foragers. It  
398 is argued, correctly, that the lists bundle together  
399 attributes of complexity, causes of complexity,  
400 and the consequences of complexity (Arnold  
401 1996). For example, looking at Table 1, high  
402 populations, food storage, and logistical mobility  
403 are all attributes of complexity, but perhaps, as  
404 Binford (2001) argues, logistical mobility is  
405 a consequence of increased population density.  
406 If that is so, is population density a trait of  
407 complexity or a cause (or perhaps both)?  
408 Distinguishing causes and consequences and  
409 teasing out their relationships are in part episte-  
410 mological questions, but they are also methodo-  
411 logical. In many instances, our chronological  
412 controls are simply not refined enough to know  
413 what comes first.  
414

415 However, current debates focus primarily on  
416 the origins and causes of permanent inequality  
417 among egalitarian peoples. Prior to about 1990,  
418 most explanations invoked general demographic,  
419 social, or economic causal processes or circum-  
420 stances. These included population growth,  
421 sedentism, storage, property, and economic  
422 intensification (increased production per capita,  
423 per unit time, or per unit land). Theoretical work  
424 in the 1990s recognized these processes not as  
425 causes but either as consequences or catalysts of  
426 the development of complexity. The search for  
427 causation shifted to human agency, seeing per-  
428 manent inequality as emerging from the actions  
429 of individuals in particular historical circum-  
430 stances. Some theories (e.g., Hayden 2001)  
431 invoke the existence of prestige-seeking individ-  
432 uals or aggrandizers (AAA personalities).

433 Aggrandizers forcefully act or compete to  
434 advance their own interests and those of their  
435 near kin at the expense of others. Formal egalitarian  
436 societies actively repress the actions  
437 of aggrandizers since they would disrupt the  
438 reciprocal social ties necessary for group  
439 survival. The emergence of inequality requires  
440 that repression to end, allowing aggrandizers to  
441 pursue their own ends. Why does the repression  
442 of aggrandizers end?

443 Answers differ and engender considerable  
444 debate. Maschner (1991) argues that aggrandizers  
445 will act whenever the opportunity presents  
446 itself. In contrast, Brian Hayden posits that  
447 repressing aggrandizers is costly in time and  
448 energy and therefore erodes or ends when the  
449 local environment becomes productive and stable  
450 enough to meet everyone's basic needs. This can  
451 be the result of environmental or technological  
452 changes. When people's needs are met and when  
453 reciprocal ties are no longer central to survival,  
454 people stop enforcing the rules against aggrandizer  
455 behavior, and aggrandizers are free to  
456 manipulate their way to social prestige and  
457 power. Other scholars (e.g., Fitzhugh 2003)  
458 think that inequality develops during times of  
459 stress, which provide aggrandizers opportunities  
460 for self advancement. Others do not invoke  
461 human personality types, suggesting instead that  
462 times of stress facilitate the development of  
463 inequality from the normal jostling and friction  
464 of human social relationships. Yet other explanations  
465 look not to human personalities or material  
466 conditions but to changing ideologies and control  
467 of symbolic resources (e.g., Sassaman 2004).

468 Research on the evolution of inequality among  
469 hunter-gatherers is part of a broader inquiry into  
470 why permanent social inequality is a common  
471 feature of most human societies, regardless of  
472 subsistence economy or size. Recent work suggests  
473 that a common thread among all societies  
474 with permanent inequality is the  
475 intergenerational transfer (inheritance) of wealth  
476 from one generation to the next (Smith et al.  
477 2010). Importantly, this work reconceives wealth  
478 to include three forms: material wealth (what we  
479 normally think of when we think of wealth, i.e.,  
480 property, control of material resources,

structures), embodied wealth (physical health, 481  
skills, knowledge), and relational wealth 482  
(exchange partners, social networks, etc.). It 483  
appears that inherited differences in embodied 484  
and relational wealth occur among modern egalitarian 485  
hunter-gatherers. However, such differences 486  
may be very difficult to observe and 487  
measure among living peoples and even more 488  
elusive among ancient ones known only archaeologically. 489  
It also appears to be the case that 490  
strong systems of inequality are based on material 491  
wealth. Archaeologists usually assume that a lack 492  
of evidence for material differences in wealth or 493  
prestige indicates an ancient society is egalitarian. 494  
That assumption can no longer be made. 495  
However, more to the point here, this research 496  
suggests a rethinking of the general approach to 497  
the origins and evolution of social inequality is in 498  
order – the key question becomes “under what 499  
circumstances does material wealth develop so 500  
that inequality becomes both archaeologically 501  
visible and stronger?” 502

Complex hunter-gatherer archaeology has 503  
been strongly materialist since its beginnings in 504  
the 1970s. Research has emphasized either material 505  
causes (e.g., demography, subsistence, economy, 506  
ecology, environmental change) or those 507  
with relatively clear material consequences 508  
(e.g., corporate groups). This research was also 509  
comparative (searching for cross-cultural regularities). 510  
However, for most of that time, there 511  
has been a strong minority among archaeologists 512  
taking an idealist stance, arguing for the primacy 513  
of ideological systems (e.g., spirituality, belief 514  
systems, ethical systems) in shaping hunter-gatherer 515  
(and all human) behavior. This scholarship 516  
has also tended to focus on the importance of 517  
local, contingent (non-repeating, unique) events 518  
in shaping cultural history (e.g., Cannon 2011). 519  
This division is not restricted of course to complex 520  
hunter-gatherer studies. The tension 521  
between these approaches raises persistent issues. 522

## International Perspectives 523

Although the literature may seem dominated by 524  
a few case studies (e.g., southern California, 525

526 Northwest Coast, Plateau, Japan) and a few the-  
527 orists (e.g., Hayden, Arnold), research on com-  
528 plex hunter-gatherers has been strongly  
529 international and intellectually diverse since its  
530 inception. Thus, while the Koyama and Thomas'  
531 (1981) volume emphasized the North Pacific  
532 Rim, the Price and Brown volume drew its exam-  
533 ples broadly from North America, Eurasia, the  
534 Levant, and Australia and temporarily from the  
535 late Pleistocene through the Holocene. A recent  
536 volume (Grier et al. 2006) includes papers from  
537 East Africa, Australia, Central and South Amer-  
538 ica, and Korea as well as Jomon Japan and the  
539 Northwest Coast. What is new is that while the  
540 original literature was written almost exclusively  
541 by Anglophone (American and British Common-  
542 wealth) scholars, that is no longer the case. The  
543 papers are now still primarily in English, but the  
544 authorship is much more truly international.

545 This is a reflection of the expansion of both  
546 archaeology as a profession and of the known  
547 archaeological record of the past two or three  
548 decades. It is obvious that ancient societies were  
549 far too diverse to be easily accommodated either  
550 by the old stereotypes that all hunter-gatherers  
551 were similar to modern generalized hunter-gath-  
552 erers, and all more or less complex societies were  
553 agricultural. The difficulties increase as the vari-  
554 ability among human subsistence economies and  
555 the degree to which people have modified the  
556 environment in the past are more evident. The  
557 concepts of "complex hunter-gatherers" or  
558 "affluent foragers" provide intellectual and meth-  
559 odological frameworks with which to approach  
560 that diversity. While the trait lists (e.g., Table 1)  
561 may be problematic in terms of mixing causes  
562 and consequences, they provide useful compara-  
563 tive frameworks for conceiving research and  
564 dimensions of variability along which that  
565 research can be conducted (e.g., Grier et al.  
566 2006). There are three significant elements of  
567 this research: it is being conducted within the  
568 frameworks of local research traditions but to  
569 address questions of global interest, it is inter-  
570 ested in testing the basic assumptions and hypoth-  
571 eses of the Anglophone literature, and it is  
572 strongly comparative, conducting its tests using  
573 multiple case studies.

## Future Directions

574

575 Several trends seem likely. At a very general  
576 level, debate will continue over the ontological  
577 status of hunter-gatherers and complex hunter-  
578 gatherers: are they real or figments of the anthro-  
579 pological/archaeological imagination. To that  
580 extent, this debate is useful; it will either sharpen  
581 our understanding of these concepts or help our  
582 understanding of the limits of their usefulness.  
583 For example, it may be that Arnold is right and  
584 that "complexity" is best restricted to hereditary  
585 inequality coupled with control of non-kin labor  
586 or that Price is correct and complexity is most  
587 usefully conceived as a description of  
588 a heterogeneous system. Debate will also con-  
589 tinue over whether the past is best investigated  
590 from a materialist or an idealist epistemology. At  
591 some level, these are mutually exclusive, but at  
592 less exalted levels, they can be seen as compli-  
593 mentary, and archaeologists will work to build  
594 bridges between. Thus, for example, while the  
595 sudden appearance of earthen mounds in the  
596 southeastern USA may indeed reflect an equally  
597 sudden ideological shift, their construction had  
598 material consequences in how labor was orga-  
599 nized, fed, etc. that also needs to be understood.

600 The construction of case studies will continue.  
601 To my mind, the most useful will be those that  
602 endeavor to cover very long periods of time, such  
603 as the entire Holocene. Most research tends to  
604 focus on particular examples within relatively  
605 limited time frames. Thus, in coastal southern  
606 California, strong social inequality developed  
607 after 1,200 cal BP. Consequently, research on  
608 the evolution of complexity has tended to focus  
609 most heavily only on the last 2,000 years. How-  
610 ever, an examination of the entire 12,000 year  
611 sequence for this region from the perspective of  
612 social complexity would be useful. It would facil-  
613 itate comparisons with other regions and times,  
614 and it would help to elucidate the dynamics at  
615 work. It is possible, for example, that some  
616 aspects of "complexity" came and went over the  
617 last several thousand years there. Taking  
618 a different example, logistical mobility is widely  
619 seen as a crucial causal element in hunter-gather  
620 complexity. In south central British Columbia, it



621 appears or develops sometime just after 4,000 cal  
 622 BP, but permanent inequality does not develop  
 623 until 1,200 cal BP. There is a similar temporal lag  
 624 between the development of logistical mobility  
 625 and inequality in southern California. Thus, while  
 626 logistical mobility may be necessary for the  
 627 development of other aspects of hunter-gatherer  
 628 complexity, its presence does not seem to trigger  
 629 rapid social change. Long sequences will also  
 630 answer questions such as whether hunter-  
 631 gatherer complexity is inevitably of short dura-  
 632 tion, always comes and goes, or if in some cases it  
 633 is quite durable, and if so, why? At present,  
 634 almost all well-documented examples of com-  
 635 plex hunter-gatherers are Holocene in age. An  
 636 important question is whether such societies  
 637 existed earlier. A related question is how, given  
 638 the difficulties of the Pleistocene archaeological  
 639 record, we can find them. As part of developing  
 640 lengthy sequences, archaeologists need  
 641 improved, finer-grained chronological controls  
 642 which can only come from improved, finer-  
 643 grained excavations, use of new field techniques,  
 644 larger samples of radiocarbon dates (e.g., Prentiss  
 645 et al. 2007), and alternative methods of indepen-  
 646 dent dating not subject to the problems of radio-  
 647 carbon dating.

648 The purpose of long sequences and their compar-  
 649 ison, the purpose of any empirical work, is not  
 650 only establishing patterns in the past but the test-  
 651 ing of explanatory hypothesis and the building of  
 652 theories. Research on complex hunter-gatherers  
 653 has been one the most significant areas of  
 654 research into the origins of inequality in human  
 655 societies since World War II, and most of the  
 656 theories and hypotheses have been proposed and  
 657 tested by archaeologists. This will continue.

658 **Cross-References**

- 659 ▶ [Complex Society Development in North](#)
- 660 [America](#)
- 661 ▶ [Hunter-Gatherer Settlement and Mobility](#)
- 662 ▶ [Hunter-Gatherer Subsistence Variation and](#)
- 663 [Intensification](#)
- 664 ▶ [Hunter-Gatherers and Their Neighbors:](#)
- 665 [Frontiers and Interactions](#)

- ▶ [Hunter-Gatherers, Archaeology of](#) 666
- ▶ [Middle Fraser Canyon Complex Hunter-](#) 667
- [Gatherer Villages](#) 668
- ▶ [Sacred Traditions and “Art” in Hunter-](#) 669
- [Gatherer Contexts](#) 670

**References** 671

672 AMES, K. M. 1985. Hierarchies, stress, and logistical strat- 672  
 673 egies among hunter-gatherers in northwestern North 673  
 674 America, in T. D. Price & J. A. Brown (ed.) *Prehistoric* 674  
 675 *hunter-gatherers: the emergence of cultural complex-* 675  
 676 *ity*: 155-180. New York: Academic Press. 676  
 677 - 2010. On the evolution of the human capacity for 677  
 678 inequality and/or egalitarianism, in T. D. Price & G. 678  
 679 Feinman (ed.) *Pathways to power: archaeological* 679  
 680 *perspectives on inequality, Dominance and explana-* 680  
 681 *tion*: 15-44. New York: Springer 681  
 682 ARNOLD, D, J. E. 1996. The archaeology of complex 682  
 683 hunter-gatherers. *Journal of Archaeological Method* 683  
 684 *and Theory* 3: 77 - 126. 684  
 685 - 2001. The Chumash in world and regional perspective, in 685  
 686 J. E. Arnold (ed.) *The origins of a Pacific Coast chief-* 686  
 687 *dom: the Chumash of the Channel Islands*: 1-20. Salt 687  
 688 Lake City: University of Utah Press. 688  
 689 BINFORD, L. R. 2001. *Constructing frames of reference: an* 689  
 690 *analytical method for archaeological theory building* 690  
 691 *using hunter-gatherer and environmental data sets*. 691  
 692 Berkeley: University of California Press. 692  
 693 CANNON, A. 2011. *Structured worlds: the archaeology of* 693  
 694 *hunter-gatherer thought and action*. Sheffield: Equi- 694  
 695 nox Publishing. 695  
 696 COUPLAND, G. 1985. Household variability and status dif- 696  
 697 ferentiation at Kitselas Canyon. *Canadian Journal of* 697  
 698 *Archaeology* 9: 39 - 56. 698  
 699 FITZHUGH, B. 2003. *The evolution of complex hunter-gath-* 699  
 700 *ers: archaeological evidence from the North Pacific*. 700  
 701 New York: Kluwer Academic/Plenum Publishers. 701  
 702 GRIER, C., J. KIM & J. UCHIYAMA. (ed.) 2006. *Beyond* 702  
 703 *affluent foragers: rethinking hunter-gatherer complex-* 703  
 704 *ity*. Oxford: Oxbow Books. 704  
 705 HAYDEN, B. & A. CANNON. 1982. The corporate group as an 705  
 706 archaeological unit. *Journal of Anthropological* 706  
 707 *Archaeology* 1(1): 132-158. 707  
 708 KELLY, R. L. 1995. *The foraging spectrum: diversity in* 708  
 709 *hunter-gatherer lifeways*. Washington D.C.: 709  
 710 Smithsonian Institution Press. 710  
 711 KOYAMA, S. & D. H. THOMAS. (ed.) 1981. *Affluent foragers:* 711  
 712 *Pacific Coasts east and west* (Senri Ethnological Stud- 712  
 713 ies 9). Osaka: National Museum of Ethnology. 713  
 714 LEE, R. B. & I. DEVORE. (ed.) 1968. *Man the hunter*. 714  
 715 Chicago: Aldine Publishing Co. 715  
 716 MASCHNER, H. D. G. 1991. The emergence of cultural 716  
 717 complexity on the northern Northwest Coast. *Antiquity* 717  
 718 65: 924-934. 718

- 719 PRENTISS, A. M., N. LYONS, L. E. HARRIS, M. R. P. BURNS, &  
720 T. M. GODIN. 2007. The emergence of status inequality  
721 in intermediate scale societies: a demographic and  
722 socio-economic history of the Keatley Creek Site,  
723 British Columbia. *Journal of Anthropological Archae-*  
724 *ology* 26: 299 - 327.
- 725 PRICE, T. D. 1981. Complexity in "non-complex" societies  
726 in S. E. van der Leeuw (ed.) *Archaeological approaches*  
727 *to the study of complexity*: 55-99. Amsterdam:  
728 Universiteit van Amsterdam.
- 729 - 1995. Social inequality at the origins of agriculture in  
730 T. D. Price & G. M. Feinman (ed.) *Foundations of*  
731 *social inequality*: 129-146. New York: Plenum Pub-  
732 lishing Co.
- PRICE, T. D. & J. A. BROWN. 1985. (ed.) *Prehistoric hunter-* 733  
*gatherers: the emergence of cultural complexity*. 734  
Orlando: Academic Press, Inc. 735
- SASSAMAN, K. E. 2004. Complex hunter-gatherers in evo- 736  
lution and history: a North American perspective. 737  
*Journal of Archaeological Research* 12: 227 - 280. 738
- SMITH, E. A., K. HILL, F. W. MARLOWE, D. NOLIN, P. 739  
WIESSNER, M. GURVEN, S. BOWLES, M. B. MULDER, T. 740  
HERTZ & A. BELL. 2010. Wealth transmission and 741  
inequality among hunter-gatherers. *Current Anthro-* 742  
*pology* 5: 19 - 34. 743
- VAN DER LEEUW, S. E. (ed.) 1981. *Archaeological* 744  
*approaches to the study of complexity*. Amsterdam: 745  
Universiteit van Amsterdam. 746

Uncorrected Proof

t1.1 **Complex Hunter-Gatherers, Table 1** Generalized and complex hunter-gatherer traits (Modified from Kelly 1985)

	Generalized	Complex
t1.2 Environment	Unpredictable or variable	Highly predictable or less variable
t1.3 Diet	Terrestrial game	Marine or plant foods
t1.4 Mobility	Residential	Logistical
t1.5 Settlement size	Small	Large
t1.6 Demography	Low population density relative to food	High population density relative to food
t1.7 Food storage	Little to no dependence	Medium to high dependence
t1.8 Social organization	No corporate groups	Corporate descent groups (lineages)
t1.9 Political organization	Egalitarian	Hierarchical; classes based on wealth or descent
t1.10 Occupational specialization	Only for older persons	Common
t1.11 Territoriality	Social-boundary defense	Perimeter defense
t1.12 Warfare	Rare	Common
t1.13 Slavery	Absent	Frequent
t1.14 Ethic of competition	Not tolerated	Encouraged
t1.15 Exchange	Generalized reciprocity	Wealth objects, competitive feasts

Uncorrected Proof