
Notes

CHAPTER 1

THE INDELIBLE STAMP

1. Stanford and Allen 1991; we were responding to models/scenarios of human evolution developed in, among others, Tooby and DeVore 1987; Foley and Lee 1989.

CHAPTER 2

MAN THE HUNTER AND OTHER STORIES

1. Kingston and colleagues (1994) show that Pliocene hominid habitats in East Africa were likely a woodland and woodland/grassland mosaic rather than savanna with only scattered trees.

2. Moore 1996.

3. Stanford and Allen 1991.

4. Wrangham and Peterson 1996.

5. Zihlmann et al. 1978.

6. Latimer et al. 1981.

7. For example, Tooby and DeVore 1987; Foley and Lee 1989.

Both decry the use of a chimpanzee analogic model, but in the end they conclude that our last common ancestor was very chimpanzee-like.

8. Hill 1994.

9. Wrangham 1987.

10. Ghiglieri 1987.

11. McGrew 1979, 1981.

12. Isaac 1978.

13. Strum 1981, 1983.

14. Connor et al. 1992.

15. Rodman and McHenry 1980.

16. The volume resulting from the conference was *Man the Hunter* (1968), edited by Richard Lee and Irven DeVore.

17. Washburn and Lancaster 1968. See Cartmill (1993) for a discussion of *Man the Hunter* as a fable.

18. Simmons and Scheepers (1996) suggest that the traditional Darwinian explanation for neck length in giraffes—longer necks are for feeding—is not supported well by field data.

19. Tanner and Zihlmann 1976.

20. Murdock 1965.

21. Fedigan 1986.

22. Wrangham 1980, for example.

23. See Gero and Conkey 1991.

24. Morgan 1982.

25. Langdon (1997) shows that most of the supposed adaptations to aquatic life that Morgan invokes in human anatomy and physiology are actually shared with a wide variety of nonaquatic mammals.

26. Steudel 1994, 1996.

27. Taylor and Rowntree 1973.

28. Rodman and McHenry 1980.

29. Jablonski and Chaplin 1993.

30. Dart 1953.

31. Falk 1990; Wheeler 1984.

32. Hunt 1994.

33. Rose 1984.

34. Lovejoy 1981.

35. Washburn 1959.

36. Steudel 1994, 1996.

37. However, a recent discovery (Köhler and Moyá-Solá 1997) of a 9 million-year-old ape fossil that appears to have been bipedal has shed new light on the origin of human posture. Living on an island in the Mediterranean region, *Oreopithecus bambolii* had a modified form of bipedal posture and locomotion that may have evolved in parallel with the hominid bipedality that was to arise several million years later in Africa. The authors speculate that the island habitat, which had no predator species, may have

afforded a safe, isolated environment in which upright posture could have evolved as a foraging adaptation.

38. Washburn merged his troglodytian theory of human origins with knuckle-walking models of human origins, and both Washburn and the ideas held sway for many years (Tuttle 1974).

39. But see Boesch and Boesch 1989, who argue that Taï chimpanzees at times (mainly in the hunting season) search for colobus monkeys.

40. Aiello and Wheeler 1995.

CHAPTER 3 APE NATURE

1. Caccone and Powell 1989.

2. Hill and Ward 1988. Although there is some debate, Miocene fossils from China and Pakistan, assigned to the genera *Sivapithecus* and *Ramapithecus*, are frequently considered to be ancestral orangutans.

3. Nishida 1968. In Mahale National Park, 100 kilometers south of Gombe on the eastern shore of Lake Tanganyika, Nishida and a team of primarily Japanese scientists studied chimpanzees for nearly as long as Goodall and her students have worked at Gombe (see Goodall 1968). The Japanese were the first to outline the social system of the chimpanzee, referring to what Western scientists call the community as the "unit-group." There is a fascinating convergence between Western and Japanese approaches to the study of primate societies, whose history is described in D. Haraway's *Primate Visions* (1989).

4. Gagneux et al. 1997.

5. Stanford et al. 1994a. Gombe chimpanzees kill up to seven colobus at a time, though this is rare, and one or two kills is the norm. The number of kills is directly correlated with the number of hunters. In a hunt at Gombe in 1992, seven colobus were killed, totaling nearly 30 kilograms of carcass weight. See also Teleki 1973.

6. Boesch and Boesch 1989; Boesch 1994.

7. Nishida et al. 1992.
8. Goodall 1986; Stanford et al. 1994a,b.
9. Stanford 1998a; Stanford 1996.
10. Kano 1992; White 1988.
11. Furuichi 1987; see also Idani 1991.
12. Stanford 1998b.
13. Tutin 1979; see also Wallis 1997.
14. Kano 1996.
15. Takahata et al. 1996. Mahale male chimpanzees copulated at a higher mean rate than male bonobos at Wamba (*P. troglodytes* 0.20–0.29/hr; *P. paniscus* 0.10–0.21/hr). These rates are for adults, but adolescent male chimpanzees also have higher copulation rates than adolescent male bonobos. Bonobo mating rates are thus not higher than those among chimpanzees if the swelling duration and not the entire interbirth period is used as the time frame. If the entire interbirth period is included, then bonobos show higher copulation rates, because the period of maximal swelling occupies a slightly larger percentage of the menstrual cycle in bonobos than in chimpanzees. In their earliest field accounts of bonobo sex, researchers were cautious about interpreting differences with chimpanzees (see Thompson-Handler et al. 1984).
16. De Waal 1987, and implications thereof in Wrangham 1993.
17. Kano 1992.
18. Wood and White 1996.
19. Fossey 1983; Schalle 1963.
20. Kuroda et al. 1996; see also Goldsmith 1996; Remis 1997; Tutin 1996; Yamagiwa et al. 1996; Jones and Sabater Pi 1971.
21. Watts 1989.
22. Mitani 1985; see also van Schaik and van Hooff 1996 for a review of orangutan behavior and ecology.
23. Wrangham 1980; van Schaik and van Hooff 1983.
24. Moore 1984a; Strier 1994.
25. Stewart and Harcourt 1987.
26. Manson and Wrangham 1991.
27. These captured monkeys sometimes ended up dead from

seemingly unintentional mistreatment during handling. Sabater Pi et al. 1993.

28. Sugardjito and Nuhuda 1981.
29. Stanford 1998a.
30. Hohmann and Fruth 1993; also Ihobe 1992.
31. Milton and Demment 1989.
32. Kano 1992.

CHAPTER 4

THE VIEW FROM THE PLIOCENE

1. Sept 1992, 1994.
2. Shipman and Walker 1989.
3. Yellen 1991.
4. Dart 1953.
5. Ardrey 1961.
6. Brain 1981.
7. Binford 1981.
8. Speth 1991.
9. Stiner 1991.
10. Potts and Shipman 1981; Bunn and Kroll 1986; Shipman 1986.
11. Blumenschine 1987; but see Tappen 1995 for a counter-argument.
12. Blumenschine 1986.
13. Marean 1989.
14. Schaller and Lowther 1969.
15. Isaac 1978; Isaac and Crader 1981.
16. Bunn and Ezzo 1993.
17. Boesch 1991.
18. Speth 1987, 1989.
19. Speth and Davis 1976.
20. McGrew 1992.
21. Stanford 1995.
22. Plummer and Stanford, submitted manuscript.
23. Caro 1994.
24. Cheney and Seyfarth 1991.

25. Plummer and Stanford, unpublished manuscript.
26. Howell 1966.
27. Binford 1987; see also Binford 1981.
28. Binford 1987.
29. Stiner 1991.
30. Trinkhaus 1987.
31. Straus 1987.

CHAPTER 5

THE HUNTING PEOPLE

1. Lee 1979. A debate has long raged about how influenced the !Kung San have been by the outside world.
2. Bailey et al. 1989.
3. Smith and Winterhalder 1992, for example.
4. The description of this Aché day is taken from Hill and Hawkes 1983.
5. Rodman and McHenry 1980; see related discussion in chapter 3.
6. Although note that hunter-gatherers such as the Aché often kill small prey without using weapons. Even after shooting a monkey out of a tree with a bow and arrow, the kill is sometimes made by hand (Hill and Hawkes 1983).
7. Lee 1979.
8. O'Connell and Hawkes 1988; Bunn and Ezzo 1993.
9. Alvard 1993.
10. Speth 1991.
11. Stanford 1995
12. Hill and Hawkes 1983; Kaplan and Hill 1985a.
13. Hill and Hawkes 1983.
14. Hawkes 1991.
15. Kaplan and Hill 1985a.
16. Ibid.
17. Blurton-Jones 1984.
18. Hawkes 1991; see also Moore 1984b; Hawkes 1993.
19. Kaplan and Hill 1985b.
20. A /Xai/xai San hunter, in Lee 1979, 244.

21. Lee 1979.
22. Winterhalder 1996, 1997.
23. Boehm 1993, and in press.
24. Erdal and Whiten 1994, 1996.

CHAPTER 6

THE GHOST IN THE GORILLA

1. Dennett 1995. A skyhook is a *deus ex machina* invoked consciously or unconsciously by those who accept the fact of evolution but are skeptical about the role that natural selection has played in the origins of the mind.

2. Toth et al. 1993.

3. Darwin 1871. In *The Descent of Man*, Darwin has the facts right but the chronological sequence, and therefore the feedback loop, wrong.

4. See McGrew 1992 for an extensive discussion of chimpanzee tool use and its implication for early hominid evolution.

5. Milton 1981.

6. Cheney and Seyfarth 1981.

7. de Waal 1982.

8. Jolly 1966; Humphrey 1976.

9. Cheney and Seyfarth 1991.

10. Hauser 1993; Manson 1996.

11. Dunbar 1992.

12. Dart 1959, 5.

13. Jerison 1973.

14. Byrne 1995.

15. Deacon 1990.

16. Tiger and Fox 1971.

17. Tiger 1969.

18. Tooby and Cosmides 1992.

19. This anecdote obviously includes some interpretation of events: I *infer* that Frodo could see the colobus but they could not see him, and I *infer* that Frodo was using considerable foresight in letting the colobus see a bridge to safety that was actually a very clever trap set to catch one of them. I also *infer* that there

was a real connection between Frodo's actions and the actions taken by the colobus; that is, he was employing a strategy rather than just holding the palm frond in such a way that it appeared to be a trap. This is the sort of anecdote that may not fit into any empirical framework for interpretation. Anecdotes can only be retold, discussed, and perhaps videotaped; the underlying motivations and cognitive abilities that are suggested can be accepted or rejected.

20. Stephens and Krebs 1986.

21. Dietz, pers. comm. 1996.

22. Perry and Rose 1994.

23. *Ibid.*; Rose 1997.

24. Fedigan 1990.

25. *Ibid.*

26. Rose 1997.

27. Stanford 1998a.

28. Boesch 1994.

29. de Waal et al. 1993.

30. Strum 1981, 1983. The Gilgil baboons hunted more often than any other nonhuman primate population that has been recorded, but this may have been due to the influence of particularly avid males.

31. Erdal and Whiten 1994, 1996.

32. Boehm 1993; see also Boehm 1997.

CHAPTER 7

MEAT'S PATRIARCHY

1. Ortner and Whitehead 1981, and Lerner 1986, for example.

2. Martin 1992.

3. Smuts 1995; Hrdy 1997.

4. Smuts 1995; Smuts and Smuts 1993.

5. Manson and Wrangham 1991.

6. Smuts 1995.

7. Adams 1990.

8. Sanday 1981.

9. Speth 1990.

10. Adams 1990.
11. Tanner and Zihlmann 1976, for example.
12. Gagneux et al. 1997.
13. Siskind 1973.
14. Hrdy 1981, for example.

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