

Language and the Orang-utan: The Old 'Person' of the Forest^{*}

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I still maintain, that his [the orang-utan] being possessed of the capacity of acquiring it [language], by having both the human intelligence and the organs of pronunciation, joined to the dispositions and affections of his mind, mild, gentle, and humane, is sufficient to denominate him a man.

Lord J. B. Monbodo, *Of the Origin and Progress of Language*, 1773¹

If we base personhood on linguistic and mental ability, we should now ask, 'Are orang-utans or other creatures persons?' The issues this question raises are complex, but certainly arrogance and ignorance have played a role in our reluctance to recognise the intellectual capacity of our closest biological relatives - the nonhuman great apes.

We have set ourselves apart from other animals, because of the scope of our mental abilities and cultural achievements. Although there were religious perspectives that did not emphasise our estrangement from nature, such as the doctrine of St. Francis and forms of nature religions, the dominant Judeo-Christian tradition held that white 'man' was separate and was given dominion over the earth, including other races, women, children and animals. Western philosophy continued this imperious attitude with the views of Descartes, who proposed that animals were just like machines with no significant language, feelings or thoughts. Personhood was denied even to some human groups enslaved by Euro-American colonial institutions. Only a century or so ago, scholarly opinion held that the speech of savages was inferior to the languages of complex societies. While nineteenth-century anthropologists arrogantly concerned themselves with measurements of human skulls to determine racial superiority, there was not much sympathy for the notion that animals might also be persons.

Ignorance is almost always the basis for defining difference as 'other'. Since the West had no representatives of our closest relatives, the apes, we were ignorant of our primate heritage and the species that link us more closely with nature.² In cultures where humans could routinely observe apes, some very different world views emerged. For instance, the term 'orang-utan' in Malay has been variously translated as 'reasonable being of the woods'³ or 'old person of the forest'.⁴ The sense of 'orang' is one of intelligence, reverence and respect.⁵ The Dyak of Malaysia have a myth that the orang-utan was an older form of person who wisely did not let humans know that they could speak for fear that they would be put to work.⁶ Because the Dyak came into close contact with orang-utans, they understood that these creatures were a sort of 'person'.

In this century our ignorance is being transformed into a more mature understanding of our place in the cosmos. We have developed this awareness through investigating the nature of the universe, the evolution of life and our species; exploring the complexity of the human mind and body; moving towards human and animal rights; solving global problems of the environment, economy, politics and communication; and engaging in space exploration, with the implicit idea that we may find others like ourselves. Once Western science made the effort

* In PAOLA CAVALIERI & PETER SINGER (eds.), *The Great Ape Project* (New York: St. Martin's Griffin, 1993), pp. 42-57.

¹ Lord J. B. Monbodo, *Of the Origin and Progress of Language*, Vol. 1. (1774), 2nd edn (reprinted, AMS Press, 1973), as cited in J. H. Schwartz, *The Red Ape* (Houghton Mifflin, Boston, 1987), p. 21.

² E. Linden, *Apes, Men and Language* (Penguin Books, New York, 1981).

³ R. M. Yerkes and A. W. Yerkes, *The Great Apes: A Study of Anthropoid Life* (Yale University Press, New Haven, 1929), p. 38.

⁴ B. Galdikas-Brindamour, 'Orangutans, Indonesia's "People of the Forest"', *National Geographic*, vol. 148, no. 4 (1975) pp. 444-73.

⁵ D. Freeman, *The Great Apes* (Putnam, New York, 1979).

⁶ T. L. Maple, *Orang-utan Behavior* (Van Nostrand Reinhold, New York, 1980), p. 213.

to look more closely at apes under natural conditions and in captivity, it became increasingly difficult to explain ape behaviour without making reference to human behaviour. Observers developed more complex methods to study primates and discovered a range of human-like behaviours, including family structures, tool-making, hunting, shelter construction, complex communication and deception.⁷ Researchers were careful to avoid naive anthropomorphism, but there seemed to be strong similarities between ape and human culture. Frans de Waal felt compelled to describe the ape personalities and politics he observed in human terms, stating that they 'can only be portrayed accurately by using the same adjectives as we use to characterize our fellow human beings'.⁸ The 'other' was beginning to resemble us more than we thought possible.

We are now at an ethical crossroads, propelled by remarkable discoveries about our close genetic relatedness to apes and the extent of ape intellectual and emotional abilities. We are wondering if apes have the mental capacity to have culture, learn to speak, reason, attribute knowledge to others, deceive, be self-aware, develop a sense of ethics -that is, are they persons? Darwin has shown that we are linked through common ancestry with our biological cousins, the apes. Thus, human characteristics and social structures have their roots deep in a primate heritage. There are, of course, important differences between humans and animals, but beliefs about the degree of human uniqueness have been challenged. One of these challenges has come from recent experiments to teach language to apes, the subject of my research for the last fifteen years. If an orang-utan can learn to use language, might it be a person? It is time to look deeply into the eyes of the 'other', and listen to what it has to say.

The Orang-utan

The orang-utan is the most mysterious of the great apes because relatively little is known about it. The pioneering primatologists Robert and Ada Yerkes described orang-utans as quiet, thoughtful and melancholy.⁹ Prehistorically they had a much larger range than today, living in varied environments throughout Asia. Orang-utans are now found only on the islands of Borneo and Sumatra, where their habitat ranges from hilly and mountainous regions to swampy lowlands. Previously considered to be exclusively arboreal, or tree-dwelling, we now know that orang-utans travel long distances on the ground and visit caves. They are primarily fruit-eaters but have a wide diet, which may determine their large size and social organisation, which is more extensive than was once believed.¹⁰

There are significant differences between humans and great apes, but we share 98-99 per cent of our genetic make-up with them. If we were to strictly follow our own taxonomic system of classification, scientists would place the great apes in one genus with hominids (humans and near-human ancestors). But, an anthropocentric (human-centred) view prevails and humans are conveniently placed in a different genus from apes. Chimpanzees and gorillas are generally believed to be more closely related to humans than are orang-utans, primarily on the basis of genetic studies, although this has been questioned.¹¹ At odds with those studies, orang-utans have a surprising number of behavioural and biological similarities with humans, which has produced a puzzle. Of all the apes, orang-utans are most similar to humans in gestation period, language and the orang-utan brain hemispheric asymmetry, characteristics of dentition, sexual

⁷ D. L. Cheney and R. M. Seyfarth, *How Monkeys See the World: Inside the Mind of Another Species* (University of Chicago Press, Chicago, 1990); J. Goodall, *The Chimpanzees of Gombe: Patterns of Behavior* (The Belknap Press of Harvard University Press, Cambridge, MA, 1986); H. L. Miles, 'How can I tell a lie?: Apes, language and the problem of deception', in R. W. Mitchell and N. S. Thompson (eds), *Deception: Perspectives on Human and Nonhuman Deceit* (State University of New York Press, Albany, 1986), pp. 245-66.

⁸ F. de Waal, *Chimpanzee Politics: Power and Sex Among Apes* (Harper & Row, New York, 1982), p. 54.

⁹ Yerkes and Yerkes, *The Great Apes*.

¹⁰ B. Galdikas, 'Orangutan diet, range, and activity at Tanjung Puting, Central Borneo', in *International Journal of Primatology*, vol. 9, no. 1 (1988), pp. 1-35.

¹¹ H. Schwartz, *The Red Ape* (Houghton Mifflin, Boston, 1987).

physiology, copulatory behaviour, hormonal levels, hair pattern, mammary gland placement and insightful style of cognition. Why would orangutans have these behavioural and morphological similarities to humans given their genetic distance?

One current explanation is that humans and African apes may have diverged from each other more recently, but that the chimpanzee and gorilla have evolved their own specialisations. Both the fossil data and comparisons of DNA and other biochemical measures suggest that the orang-utan is the most conservative, or primitive, of the great apes. They are most like the ancestral hominoid (ape-like primate) living about twelve million years ago that later gave rise to apes and humans.¹² Orang-utans have retained more of the characteristics of this hominoid than have the African apes. As a result, orang-utans have been labelled a 'living fossil', and thus are a kind of time traveller.¹³

Orang-utans have amazing abilities that need wider recognition within both the general population and the scientific community. Cognitive studies with orang-utans have shown that they are at least as intelligent as the African apes, and have revealed a human-like insightful thinking style characterised by longer attention spans and quiet deliberate action.¹⁴ Susan Essock and Duane Rumbaugh commented: 'Chimpanzees are often reputed to be the "smartest" of the apes, and orang-utans have the reputation of being dull and sluggish. Such tags are unfortunate and contrary to the results of studies.'¹⁵

Orang-utans make shelters and other tools in their natural setting. In captivity, they learn to tie knots,¹⁶ recognise themselves in mirrors,¹⁷ use one tool to make another, and are the most skilled of the apes in manipulating objects.¹⁸ They are the escape artists of zoos because of their ability to cleverly manipulate bolts and wires to get out of their enclosures, a trait with which I have become very familiar. In discussing these tendencies, Benjamin Beck has compared the probable use of a screwdriver by chimpanzees, gorillas and orang-utans. The gorilla would largely ignore it, the chimpanzee would try to use it in a number of ways other than as a screwdriver, and:

The orang-utan would notice the tool at once but ignore it lest a keeper discover the oversight. If a keeper did notice, the ape would rush to the tool and surrender it only in trade for a quantity of preferred food. If the keeper did not notice, the ape would wait until night and then proceed to use the screwdriver to pick the locks or dismantle the cage and escape.¹⁹

Wright showed an orang-utan named Abang how to strike flakes from a piece of flint to make a knife, as our hominid ancestors did two million years ago. After Abang learned to make flakes, he opened a box containing food by cutting a string that held it closed.²⁰

Finding that orang-utan and human brains are similar in areas specialised for language prompted scientists to speculate that orangutans could possibly be taught to use gestural

¹² D. Pilbeam, 'New hominoid skull material from the Miocene of Pakistan', *Nature*, vol. 295 (1982) pp. 232-4.

¹³ R. Lewin, 'Is the orangutan a living fossil?', *Science*, vol. 222 (1983) pp. 1222-3.

¹⁴ T. L. Maple, *Orang-utan Behavior*.

¹⁵ S. M. Essock and D. M. Rumbaugh, 'Development and measurement of the cognitive capabilities in captive nonhuman primates', in H. Markowitz, V. J. Stevens and L. P. Brett (eds), *Behavior of Captive Wild Animals* (Nelson-Hall, Chicago, 1978), pp. 161-208.

¹⁶ F. Jantschke, *Orang-utans in Zoologischen Garten* (R. Piper, Munchen, 1972).

¹⁷ G. G. Gallup, 'Towards an operational definition of self-awareness', in R. H. Tuttle (ed.), *Socioecology and Psychology of Primates* (Mouton, Paris, 1975).

¹⁸ J. Lethmate, 'Versuche zum "vorbedingten" Handeln mit einem jungen Orang-utan', *Primates*, vol. 18, no. 3 (1978) pp. 531-43; C. E. Parker, 'Responsiveness, manipulation and implementation behavior in chimpanzees, gorillas and orang-utans', in C. R. Carpenter (ed.), *Proceedings of the Second International Congress of Primatology*, vol. 1, *Behavior* (Karger Basel, New York, 1969), pp. 160-6.

¹⁹ B. B. Beck, *Animal Tool Behavior* (Garland Press, New York, 1980), pp. 68-9.

²⁰ R. V. S. Wright, 'Imitative learning of a flaked stone technology - the case of an orangutan', *Mankind*, vol. 8, no. 4 (1972) pp. 296-306.

signs.²¹ Since 1973, I have been doing just that, first with chimpanzees, and, more recently, with an orang-utan named Chantek. Now we do not have to wonder about what might be in the mind of apes, or what emotions they might feel. If we keep our expectations realistic and use human children as our model, we can just ask them. I have learned much about these creatures and, like my colleagues doing similar research, I have found myself unconsciously experiencing them as persons.

Chantek: An Orang-utan Who Uses Sign Language

The biochemical similarities between apes and humans seemed in conflict with our behavioural differences, until ape language experiments shifted scientific opinion and began to fill in the gap. Attempts to teach speech to orang-utans have not been very successful because apes lack the flexible right-angle bend to their vocal tract that is necessary to make the range of human speech sounds.²² After researchers began to use American Sign Language for the deaf to communicate with chimpanzees and gorillas,²³ I began the first longitudinal study of the language ability of an orang-utan named Chantek, who was born at the Yerkes Primate Center in Atlanta, Georgia, USA.²⁴ There was criticism that symbol-using apes might just be imitating their human care-givers, but there is now growing agreement that orang-utans, gorillas and both chimpanzee species can develop language skills at the level of a two- to three-year-old human child.²⁵

The goal of Project Chantek was to investigate the mind of an orangutan through a developmental study of his cognitive and linguistic skills. It was a great ethical and emotional responsibility to engage an orangutan in what anthropologists call 'enculturation', since I would not only be teaching a form of communication, I would be teaching aspects of the culture upon which that language was based. If my developmental project was successful, I would create a symbol-using creature which would be somewhere between an ape living under natural conditions and an adult human, which threatened to raise as many questions as I sought to answer.

Beginning at nine months of age, Chantek was raised at the University of Tennessee at Chattanooga by a small group of care-givers who communicated with him by using gestural signs based on the American Sign Language for the deaf. Chantek produced his first signs after one month and eventually learned to use approximately 150 different signs, forming a vocabulary similar to that of a very young child. Chantek learned names for people (LYN, JOHN), places (YARD, BROCK-HALL), things to eat (YOGURT, CHOCOLATE), actions (WORK, HUG), objects (SCREWDRIVER, MONEY), animals (DOG, APE), colours (RED, BLACK), pronouns (YOU, ME), location (UP,

²¹ Galdikas, 'Living with the great orange apes', *National Geographic*, vol. 157, no. 6 (1980) pp. 830-53; M. LeMay and N. Geshwind, 'Hemispheric differences in the brains of great apes', *Brain Behavior and Evolution*, vol. 11 (1975) pp. 48-52.

²² W. Furness, 'Observations on the mentality of chimpanzees and orangutans', *Proceedings of the American Philosophical Society*, vol. 55, no. 3 (1916) pp. 281-90; K. Laidler, *The Talking Ape* (Stein and Day, New York, 1980); P. Lieberman, *The Biology and Evolution of Language* (Harvard University Press, Cambridge, MA, 1984).

²³ R. A. Gardner and B. T. Gardner, 'Teaching sign language to a chimpanzee', *Science*, vol. 165 (1969) pp. 664-72; R. S. Fouts, 'Acquisition and testing of gestural signs in four young chimpanzees', *Science*, vol. 180 (1973) pp. 978-80; F. G. Patterson, 'Linguistic capabilities of a lowland gorilla', in F. C. C. Peng (ed.), *Sign Language and Language Acquisition in Man and Ape: New Dimensions in Comparative Pedolinguistics* (Westview Press, Boulder, CO, 1978); H. S. Terrace, L. Petitto, R. Sanders and T. Bever, 'Can an ape create a sentence?' *Science*, vol. 206 (1979) pp. 809-902.

²⁴ H. L. Miles, 'Acquisition of gestural signs by an infant orangutan (*Pongo pygmaeus*)', *American Journal of Physical Anthropology*, vol. 52 (1980) pp. 256-7; H. L. Miles, 'Apes and language: The search for communicative competence', in J. deLuce and H. T. Wilder (eds), *Language in Primates: Perspectives and Implications* (Springer-Verlag, New York, 1983); H. L. Miles, 'The cognitive foundations for reference in a signing orangutan', in S. T. Parker and K. R. Gibson (eds), *'Language' and Intelligence in Monkeys and Apes: Comparative Developmental Perspectives* (Cambridge University Press, Cambridge, 1990), pp. 511-39.

²⁵ H. L. Miles, 'The communicative competence of child and chimpanzee', in S. R. Harnard, H. D. Horst and J. Lancaster (eds), *Annals of the New York Academy of Sciences: Origins of Evolution of Language and Speech* (The New York Academy of Sciences, New York, 1976); Lieberman, *The Biology and Evolution of Language*.

POINT), attributes (GOOD, HURT), and emphasis (MORE, TIME-TO-DO). We found that Chantek's signing was spontaneous and nonrepetitious. He did not merely imitate his care-givers as had been claimed for the sign language trained chimpanzee Nim; rather, Chantek actively used his signs to initiate communications and meet his needs.

Almost immediately, Chantek began to use his signs in combinations and modulated their meanings with slight changes in how he articulated and arranged his signs. He commented 'COKE DRINK' after drinking his coke, 'PULL BEARD' while pulling a care-giver's hair through a fence, 'TIME HUG' while locked in his cage as his care-giver looked at her watch, and 'RED BLACK POINT' for a group of coloured paint jars. At first he used signs to manipulate people and objects to meet his needs, rather than to refer to them. He knew the meaning of his signs the way a pet might associate a can of food or a word with feeding time. But, could he use these signs as symbols, that is, more abstractly to represent a person, thing, action or idea, even apart from its context or when it was not present?

One indication of the capacity to use symbolic language in both deaf and hearing human children is the ability to point, which some researchers argued that apes could not do spontaneously. Chantek began to point to objects when he was two years old, somewhat later than human children, as we might expect. First, he showed and gave us objects, and then he began pointing to where he wanted to be tickled and to where he wanted to be carried. Finally, he could answer questions like WHERE HAT?, WHICH DIFFERENT?, and WHAT WANT? by pointing to the correct object.

As Chantek's vocabulary increased, the ideas that he was expressing became more complex, such as when he signed 'BAD BIRD' at noisy birds giving alarm calls, and 'WHITE CHEESE FOOD-EAT' for cottage cheese. He understood that things had characteristics or attributes that could be described. He also created combinations of signs that we had never used before. In the way that a child learns language, Chantek began to over- or under-extend the meaning of his signs, which gave us insight into his notions and how he was beginning to classify his world. For example, he used the sign 'DOG' for dogs, a picture of a dog in his viewmaster, orang-utans on television, barking noises on the radio, birds, horses, a tiger at the circus, a herd of cows, a picture of a cheetah, and a noisy helicopter that presumably sounded like it was barking. For Chantek, the sign BUG included crickets, cockroaches, a picture of a cockroach, beetles, slugs, small moths, spiders, worms, flies, a picture of a graph shaped like a butterfly, tiny brown pieces of cat food, and small bits of faeces. He signed 'BREAK' before he broke and shared pieces of crackers, and after he broke his toilet. He signed 'BAD' to himself before he grabbed a cat, when he bit into a radish, and for a dead bird.

We also discovered that Chantek could comprehend our spoken English (after the first couple of years we used speech as well as signing). One day when the radio was on, a children's story about a cat was being broadcast. When the narrator said 'cat' or made meow sounds, Chantek signed 'CAT'. We then verbally asked Chantek to sign a number of the words in his vocabulary, which he promptly did, showing that he had developed sign-speech correspondences without intentional training.

Another component of the capacity to use symbols is displacement: the ability to refer to things or events not present. It is an important indicator that symbols are also mental representations that can be held in the mind when the objects to which they refer are not present. This was an extremely important development in the evolution of human language because it freed individuals from the immediate environment and allowed our ancestors to talk about distant times and places. When he was two years old, Chantek began to sign for things that were not present. He frequently asked to go to places in his yard to look for animals, such as his pet squirrel and cat who served as playmates. He also made requests for 'ICE CREAM', signing 'CAR RIDE' and pulling us toward the parking lot for a trip to a local ice-cream shop.

We learned that an orang-utan can tell lies. Deception is an important indicator of language abilities since it requires a deliberate and intentional misrepresentation of reality. In order to deceive, you must be able to see events from the other person's perspective and negate his or her perception.²⁶ Chantek began to deceive from a relatively early age, and we caught him in lies about three times a week. He learned that he could sign DIRTY to get into the bathroom to play with the washing machine, dryer, soap, etc., instead of using the toilet. He also used his signs deceptively to gain social advantage in games, to divert attention in social interactions, and to avoid testing situations and coming home after walks on campus. On one occasion, Chantek stole food from my pocket while he simultaneously pulled my hand away in the opposite direction. On another occasion, he stole a pencil eraser, pretended to swallow it and 'supported' his case by opening his mouth and signing 'FOOD-EAT', as if to say that he had swallowed it. However, he really held the eraser in his cheek, and later it was found in his bedroom where he commonly hid objects.

We carried out tests of Chantek's mental ability using measures developed for human children. Chantek reached a mental age equivalent to that of a two- to three-year-old child, with some skills of even older children. On some tasks done readily by children, such as using one object to represent another and pretend play, Chantek performed as well as children, but less frequently. He engaged in chase games in which he would look over his shoulder as he darted about, although no one was chasing him. He also signed to his toys and offered them food and drink. Like children, Chantek showed evidence of animism, a tendency to endow objects and events with the attributes of living things. Although none of these symbolic play behaviours were as extensive as they would have been in a human child, the difference appears to be one of degree, not kind.

Chantek also experimented in play and problem-solving; for example, he tried vacuuming himself and investigated a number of clever ways to short out the electric fence that surrounded his yard. He learned how to use several tools, such as hammers, nails, and screwdrivers, and he was able to complete tasks using tools with up to twenty-two problem-solving steps. By the time he was two years old, he was imitating signs and actions. We would perform an action and ask him to copy it by signing 'DO SAME'. He would immediately imitate the behaviour, sometimes with novel twists, as when he winked by moving his eyelid up and down with his finger. Chantek also liked to use paints, and his own free-style drawings resembled those of three-year-old human children. He learned to copy horizontal lines, vertical lines and circles. By four and a half years of age, Chantek could identify himself in the mirror and use it to groom himself. He showed evidence of planning, creative simulation, and the use of objects in novel relations to one another to invent new meanings. For example, he simulated the context for food preparation by giving his care-giver two objects needed to prepare his milk formula and staring at the location of the remaining ingredient.

The above examples show evidence of intentionality, premeditation, taking the perspective of the other, displacement and symbolic use of language. These cognitive processes require that some form of mental image about the outcome of events be created. A further indication that Chantek had mental images is found in his ability to respond to his care-giver's request that he improve the articulation of a sign. When his articulation became careless, we would ask him to 'SIGN BETTER'. Looking closely at us, he would sign slowly and emphatically, taking a hand to put the other into the proper shape. Evidence for mental images also comes from Chantek's spontaneous execution of signs with his feet, which we did not teach him to do. Chantek even began to use objects in relation to each other to form signs. For example, he used the blades of scissors instead of his hands to make the sign for biting.

Chantek was extremely curious and inventive. When he wanted to know the name of something

²⁶ R. Byrne and A. Whiten (eds), *Machiavellian Intelligence: Social Expertise and the Evolution of Intellect in Monkeys, Apes, and Humans* (Oxford University Press, Oxford, 1988); Mitchell and Thompson (eds), *Deception: Perspectives on Human and Nonhuman Deceit* (State University of New York Press, Albany, 1986).

he offered his hands to be moulded into the shape of the proper sign. But language is a creative process, so we were pleased to see that Chantek began to invent his own signs. He invented: NO-TEETH (to show us that he would not use his teeth during rough play); EYE-DRINK (for contact lens solution used by his care-givers); DAVE-MISSING-FINGER (a name for a favourite university employee who had a hand injury); VIEWMASTER (a toy that displays small pictures); and BALLOON. Like our ancestors, Chantek had become a creator of language, the criterion that two hundred years earlier Lord Monboddo had said would define orang-utans as persons.

We had a close relationship with Chantek. He became extremely attached to his care-givers, and began to show empathy and jealousy toward us. He would quickly 'protect' us from an 'attacking' toy animal or other pretence. He clearly missed favourite care-givers and occasionally asked to see us. When he was eight years old, he became too large to live on campus, and he returned to the Yerkes Center in Atlanta, Georgia, to live. It was a difficult transition, and he missed his familiar companions and activities. One day he sat sadly, and signed 'POINT GIVE ANN' while gesturing toward the front door. He watched the door and the different cars and individuals that passed by - waiting for Ann. His loneliness was somewhat relieved when he was introduced to two female orang-utans at the Yerkes Center. Although he impregnated one of them, the offspring died shortly after birth. In the future, not only is it important that Chantek have an opportunity to continue to interact with other orang-utans, but it is also important that his enculturation not be forgotten. My goal is for our interaction to continue, and for Chantek to have an opportunity to use his signs not only with other humans, but with other orang-utans as well.

We have lived day to day with Chantek and have shared common experiences, as if he were a child. We have healed his hurts, comforted his fears of stray cats, played keep-away games, cracked nuts in the woods with stones, watched him sign to himself, felt fooled by his deceptions, and frustrated when he became bored with his tasks. We have dreamed about him, had conversations in our imagination with him and loved him. Through these rare events shared with another species, I have no doubt I was experiencing Chantek as a person.

Apes, Language and Personhood

How can Chantek's capabilities and our experiences with him help us to better understand how to define a 'person'? There are a number of abilities that have been suggested as necessary to personhood, and just as in the case of language, the definitions of personhood have become increasingly demanding as the boundaries of the abilities of *Homo sapiens* have been breached with the possibility that nonhumans may be persons. Descartes distinguished humans from animals on the basis of language and rational thought. Chantek's capabilities show that our species is not alone in having the ability to exhibit problem-solving intelligence, reason and mental representations. Furthermore, Chantek's language skills show that he was able to master a rudimentary communication system based on shared referential meanings that are conventionalised; abstracted from context; structurally interrelated; and expressed within a community of users to meet his needs, characterise his world, and influence the behaviour of others. This suggests that Chantek has met the Cartesian definition of person, at least at the level of a young human child.

In attempting to define personhood, psychologist Richard Passingham has added the additional requirements of invention, will, consciousness and conscience.²⁷ Michael Corballis²⁸ has suggested that will, consciousness and self-concept are perhaps difficult to define but, based on recent evidence of animal awareness, are unlikely to be unique to humans. Chantek's inventiveness is apparent as he creatively developed novel solutions to problems. Through creating his own signed words, he showed an even higher level of inventiveness, by generating

²⁷ R. Passingham, *The Human Primate* (W. H. Freeman and Company, Oxford, 1982), pp. 331-2.

²⁸ M. Corballis, *The Lopsided Ape* (Oxford University Press, New York, 1991).

symbols understood within the conventionalised framework of his language community. Chantek meets Passingham's requirement of exhibiting will through a pragmatic analysis of his communicative intentions. He clearly uses his signs to make requests, identify objects and comment on his world. His deceptions also reveal his will as he devises contrary means to achieve his goals. Passingham's third requirement, consciousness or self-awareness, has been investigated in animals and children through their ability to recognise themselves in a mirror. Although it became consistent at a later age, Chantek showed a pattern of self-recognition similar to human children.

Conscience is the final element in Passingham's definition, and it has also been stressed by philosopher Daniel Dennett. Dennett adds that self-reflection (the ability to self-consciously think about the self in relation to others), as well as an awareness that others have this ability, is also necessary to establish personhood.²⁹ Obviously, Chantek's childlike reflection and 'moral' behaviour are derivative and based on his enculturation by humans. But Chantek, like human children, did not reinvent nor genetically inherit his culture's ethical system. Over years of training children come to adopt their culture's pre-existing system and internalise it as their own.

Chantek's enculturation was based on the socially accepted behaviours for young children in educated American middle-class society. He was toilet trained, learned to eat with utensils, had to take turns in games and conversations, was distracted from masturbating in public, and not allowed to peek under the toilet doors at others using the facilities. We did not attempt to eradicate the 'orang-utan' in him by dressing him in nonfunctional human clothes or preventing him from exhibiting natural orang-utan behaviours, such as climbing trees or making his natural vocalisations. But he obviously developed a socially constructed self within the general boundaries of our culture. He knew his name and image, as well as the names and images of others. He used mirrors to groom himself and his care-givers. He could hold the existence of himself and others as a mental representation, engage in displaced reference and look for his companions, and occasionally ask for them by name when he was distressed. His deceptions, simulations and empathy showed that he could take the perspective of the other, based on a non-egocentric point of view, which he unquestionably had by four and a half years of age. This perspective-taking is the first step toward creating a concern for others and 'moral' behaviour. Chantek's language ability also suggests that he internalised a minimal value system similar to that of a child. Chantek had several signs for emphasis and emotion, such as GOOD and BAD, which he used in appropriate contexts. The sign BAD is particularly interesting for he not only comprehended its meaning when he misbehaved, but he appropriated it to others and described their behaviour as BAD, as when he chastised noisy people, dogs and birds. He also labelled his own disapproved of behaviour as BAD, and even on occasion signed BAD to himself. Self-signing BAD is particularly interesting since it suggests that his purpose was to self-reflect; to have an internal dialogue about simple values. This reflection is nascent and immature, but Chantek has clearly internalised and exhibited some of the childlike 'morals' of his foster-culture.

With conscience and reflective self-awareness, we are dealing not only with the individual and his or her abilities, but also with the socially constructed self in conjunction with the beliefs and behaviours that form culture, including an ethical system. All human groups have ethical systems that play a role in their cultural adaptation, but the precise values selected and fostered are variable and dependent upon the infrastructural needs of the society. For instance, marrying several wives and ritually eating one's relatives or enemies are highly moral in one culture, but grounds for imprisonment or death in another. Conscience and morality are developed through enculturation, as one generation teaches values to another, otherwise we would not have the variability that we do in human cultures.

²⁹ D. Dennett, 'Conditions of personhood', in *Brainstorms: Philosophical Essays on Mind and Psychology* (Bradford Books, Cambridge, MA, 1976/ 1978), pp. 267-85.

Apes, of course, adhere to their own patterns of behaviour within the constraints of their social order. These patterns are socially complex, rule-governed and based to a large extent on learning. Their acquired behaviour patterns are transmitted from generation to generation with variation from group to group in gestures, politics and social behaviours.³⁰ Although most learning is based on simple observation, there is some recent evidence for actual teaching by apes, as described in Chapter 4 and elsewhere, and for a degree of empathy or identification.³¹ Because of this complexity we are increasingly inclined to describe the lifestyles of monkeys and apes under natural conditions as culture, or at least proto-culture. There is as yet no evidence that apes living freely have developed ethical systems based on extensive empathy. Nor is there yet evidence that apes have a theory of the mind, that is, an understanding that other individuals have beliefs and mental processes similar to their own. Ape 'cultures' tend to be simple, opportunistic, egocentric and pragmatic.³² However, this is also the case for the behaviour of many humans, especially young children. When we decide if apes are persons, we should not require sentient beings to know of a human-based morality if they have not been exposed to one, because like human children, they may have the potential to develop one, however rudimentary.

Another approach to understanding personhood is to examine the definitions used by the law, particularly in terms of murder.³³ Chantek was raised in the states of Tennessee and Georgia; these states and many others define murder as the killing of 'reasonable creatures'. The Tennessee law formerly stated that murder is killing 'any reasonable creature in being', and currently simplifies this to killing 'another person'.³⁴ There have been several court cases in the United States that have addressed the issue of personhood.³⁵ One case in Mississippi discussed whether or not a slave was a person, and concluded that a slave was indeed a person, along with idiots and unchaste women.³⁶ It is interesting to note that these laws do not restrict murder to 'human beings' or '*Homo sapiens*'. Thus, it could be argued that Chantek, or any other reasonable being, would be protected under this law.

In fact, a problem for those who require reflective self-awareness or full rational faculties (or the potential thereof) for personhood, or only the most extensive altruistic social behaviour, is that there are several categories of humans that do not meet this definition. Sociopaths, who can feel compassion for themselves but not for their victims, are self-reflective, but have not internalised a sense of cultural morality; they are familiar with their culture's morality, but their personal morality is purely egocentric. Severely mentally handicapped individuals and people who have extensive brain damage are not always self-reflective, yet we would consider them to be persons and protect them under the law.

We excuse children and mentally impaired people from adult responsibility, but we maintain that killing them (unless it is officially sanctioned by the state) is murder because of their 'potential' to have full human faculties, which may never be realised. Ethically speaking, enculturated apes are analogous to children. This analogy is particularly significant since the law protects children who show less linguistic and mental ability than Chantek.

Psychologists and philosophers search for definitions of 'person-hood', but in fact, personhood is culturally defined by human groups as what feels like 'us', versus the 'other'. What is 'person'

³⁰ Goodall, *The Chimpanzees of Gombe*.

³¹ C. Boesch, 'Teaching among wild chimpanzees', *Animal Behaviour*, vol. 41 (1991) pp. 530-2; Goodall, *The Chimpanzees of Gombe*; D. J. Povinelli, K. E. Nelson and S. T. Boysen, 'Inferences about guessing and knowing by chimpanzees (*Pan troglodytes*)', *Journal of Comparative Psychology*, vol. 104 (1990) pp. 203-10.

³² de Waal, *Chimpanzee Politics*.

³³ R. B. Edwards and F. H. Marsh, 'Reasonableness, murder and modern science', *National Forum*, vol. 58 (1978) pp. 24-9.

³⁴ *Tennessee Code Annotated*, 24:39-2401 (old), 39-13:201, and 39-13-202; see also *Tennessee Jurisprudence: An Encyclopedia of Tennessee Law*, 14:170 (The Michie Company, Charlottesville, VA, 1984).

³⁵ *State versus Jones*, *Mississippi Reports*, vol. 1 (Courier and Journal Office: Natchez, Mississippi, 1821), p. 83.

³⁶ Edwards and Marsh, 'Reasonableness, murder and modern science'.

and what is the 'other' is relative, and varies in accordance with cultural definition. Because we have first-hand experience when we closely observe apes, we recognise those elements that suggest personhood. Chantek is no longer a free-living ape, nor is he a human being. Human language and enculturation have made him something in between - 'a reasonable being' — a person in both the Dyak sense and our own. During my years as an ape language researcher, I have seen many people gasp with amazement as they conversed with Chantek, subjectively experiencing him as a person. If it were possible for all humans to have this experience, this book might be unnecessary.

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It Takes Two to Talk: A Second-Person Neuroscience Approach to Language Learning. The name orangutan, translated in Malay, means "person of the forest." Unfortunately, that forest has been shrinking rapidly, making the great ape critically endangered.
Unfortunately, that forest has been shrinking rapidly, putting the great ape critically close to extinction. Selvi, a human caregiver with the Sumatran Orangutan Conservation Program, teaches Jating, a 1-year-old orphan, how to climb trees. Cece, a 5-year-old orangutan, is weighed at a facility in Sibolangit, Indonesia. Orangutans only live in Southeast Asia, in the rainforests of Sumatra and Borneo. But their habitat is getting smaller and smaller, Schroeder said, because of human development. Rubber and palm oil plantations keep sprouting up. More roads are being built. Other Orangutan Facts: "Orangutan" means "man of the forest" in Malay, the language spoken in Malaysia. (No, orangutans weren't named after the orange(ish) color of their fur, although it's a good way to remember what they're called!) Orangutans spend more time in the trees than any other species of great ape. Meet the Orangutan!
Orangutans are primates that live in rain forests in Southeast Asia. All three orang-utan species are a similar size. In general, Bornean orangutans are more heavily built, and tend to weigh more than Sumatran orangutans. Bornean orangutans prefer lowland rainforests, whereas Sumatran orangutans are also found in mountain forests. Orangutans walk on all fours, but spend little time on the ground.