



# When and wear: the prehistory of clothing

AUSTRALIAN NATIONAL UNIVERSITY 31 AUG 2008

Ask Ian Gilligan about his research project, and he'll begin with a contradiction.

"My great interest is in clothing, because I think it's our most important invention," he says. "But the next thing I'm going to say is that I'm not interested in clothing at all."

Is this the sign of a confused mind, or a rampant contrarian? Far from it.

The doctoral researcher from the School of Archaeology and Anthropology at ANU is simply making it clear that he's not concerned with the vicissitudes of fashion: the latest outpouring of haute couture or prêt-à-porter.

Instead, he's fascinated by how humans came to develop clothing, and how that innovation might have in turn given our species an evolutionary edge over other hominids.

Gilligan has had to transverse several disciplines to satisfy his interest in clothing as a social technology. He has credentials in medicine, psychology, prehistoric archaeology, and is completing a thesis in biological anthropology.

This complicated curriculum vitae makes sense in light of Gilligan's project: his drive to understand the physiological, psychological and prehistoric aspects of clothing.

"I'm interested in clothing in a fundamental, novel sense, particularly its prehistoric origins and why it came into being.

"The reason that it is so important struck me very early on. Clothing is the thing that separates us from nature, literally and symbolically.

"It's the one invention that we have with us almost all the time. It's not just a passive reflection of our personality and our culture. It actually affects us in the way we perceive ourselves and our environment.

"It's a large part of what distinguishes modern-day humanity from everything else."

In addition to distinguishing humans from other things, Gilligan argues that clothing separates humans from our environment and from our physical selves.

These ideas of separation have implications for how we think about ourselves in relation to other things, but also in how our bodies interact with the world.

“Over the last five to 10 thousand years there has been a lot of enormously big changes in the way humans live,” Gilligan says.

“Most of our so-called civilised behaviour is now independent of clothing. We’ve fabricated a whole artificial environment, which is a kind of externalised clothing. Many aspects of modern existence insulate us from the outside natural world.”

Clothing itself is a form of insulation, shielding our primary sense organ – the skin – from the environment. This assists us in heat regulation, but it also affects our experience of the world.

“I’m no nudist,” Gilligan confesses. “I think that with most people it’s good that they wear clothing, and some people should probably wear more – if only for aesthetic reasons. I’m not being judgemental about clothing. At the physiological level, wearing clothes routinely from birth will have profound sensory consequences. Our skin is what fundamentally connects us to the physical world and makes us aware of our bodily existence, and clothing disrupts those connections. Looking at a lot of trends in basic human behaviour, we have become increasingly distanced from our natural surroundings. Instead we become more attached to the material substitutes we create and this began, in my view, when our ancestors became accustomed to being fully clothed. Yet the strange thing is that virtually all of this is now almost totally unconnected to our clothing.”

In a sense, Gilligan is arguing that we’ve been wearing clothing for so long that it has become fully incorporated into human behaviour, to the point that it seems perfectly natural and conceptually invisible to us. The fact that no other living species has developed clothing is proof of the special status of *Homo sapiens*, right?

But it hasn’t always been like this. Our earliest ancestors were not born clothed, and nor are we. It makes sense that at some point we had to develop different kinds of clothing and the technology to produce it. So when did this happen, and why?

It’s these kind of questions that make Gilligan’s research into the history of humans so pertinent.

“Modern humans have been around 200,000 years, and near-modern humans have been around for a few million years, but what we see as modern civilised existence began very recently, only in the last five to 10,000 years.

“We can’t assume that we’re all that different from pre-modern humans. The advantage of that perspective from prehistory is that it raises the question: if clothing

is a natural consequence of us being modern biologically, why didn't it happen earlier and more universally in modern humans.

"Anthropology also shows us that some groups of modern humans were happy to wear nothing unless they were cold, which suggests we didn't invent clothes in the first place for decorative or social purposes. Aboriginal Australians are a prime example of this.

"The other important thing that prehistory tells us is that the natural environment we're used to is fairly recent as well – it's the post-glacial environment of the last 10,000 years. For all of the time humans have been around, the world has been going through a series of ice ages."

So we humans have spent most of our time on this planet coping with extreme temperature shifts, which would have presented a particular problem.

As Gilligan points out, *Homo sapiens* are thermally very vulnerable, having at some point lost the thick fur covering of other mammals. The idea that this might have occurred in response to heat doesn't really hold up, as fur can also insulate animals in warmer environments. Gilligan's guess is that human hair loss came about as a side-effect of a slowing of the expression of the genetic code in our species, meaning that we're essentially juvenile mammals in physiological terms, if not in mental capacity.

"Once the process of body hair reduction starts happening, you'll be okay as long as you're living in a warm place," Gilligan says. "But if the environment suddenly changes, then that feature can become very disadvantageous."

So if the once-warm environs of early *Homo sapiens* began to cool, especially during ice age winters, why didn't the species revert back to being hairy and stocky, like the Neanderthals?

"Even during the ice ages in the lower latitudes, summers remained hot. Biologically it's difficult to develop adaptations to the cold if you're still under selection pressures to adapt to the heat. That's why I think *Homo sapiens* favoured behavioural adaptations to the cold more than Neanderthals."

In other words, humans opted for changing their behaviour over changing their biology to deal with the chill. And one of the most crucial behavioural adaptations was the development of fitted clothing.

"We have no clothing from the ice age, which ended about 10,000 years ago," Gilligan says. "The oldest clothing remains in the world in the Middle East dated to around 9,500 years ago. That's one reason archaeologically that we haven't been looking at clothing from prehistory – it's just not there.

“But we can be quite specific about the conditions in which multi-layered, fitted garments would have been needed. We can learn about climate conditions in the past. If humans were there in that part of the world at that time, then they would have needed or not have needed clothing, and we can even stipulate in some instances they would have needed more than a simple draped cloak over their shoulders.”

We may not have records of clothing from before 9,500 years ago, but we do have evidence of the kinds of tools required to make fitted garments – primitive hide-scraping and cutting devices and needles.

Indeed, Gilligan believes the development of the first needles probably reflects the advent of underwear. “You don’t need an eyed needle to have holed garments,” he says. “A pointed tool will suffice for sewing. But eyed needles would have been very useful for the finer sewing needed to make comfortable undergarments.”

Such technology would have allowed *Homo sapiens* to develop what Gilligan has termed ‘complex clothing’: layered garments that are fitted to protect the limbs and the torso. This kind of apparel is likely to have been crucial in enabling our species to survive the last ice age. And it might have been what gave us the evolutionary edge over Neanderthals.

“Neanderthals didn’t need to develop complex clothing,” Gilligan says, although he does suspect they would have worn simple, draped furs. “They were more thermally adapted to the cold biologically. Living in the middle latitudes, they were less exposed to heat stress during summer. They were able to survive in cooler environments. They didn’t need as much in the way of clothing. Until that very last cold period 30,000 years ago, they didn’t bother with specialised cutting and sewing technologies.”

One consequence of this late movement towards complex clothing, Gilligan argues, was the otherwise mysterious disappearance of the Neanderthals just before the peak of the last ice age.

*Homo sapiens*, meanwhile, appear to have flourished in large part thanks to the invention of clothing.

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**Editor's Note:** First published in the [Winter 2008](#) edition of the *ANU Reporter*. For permission to reproduce this article please contact [ANU](#).