

doesn't feel right, it's not natural"  
"GM CROPS WILL UPSET THE BALANCE OF NATURE"  
"Natural ingredients are more healthy"  
"GIVING BIRTH AT 60 IS NOT IN THE NATURAL ORDER OF THINGS"  
"It's playing God"  
"EVERYTHING FOUND IN NATURE"  
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# (un)natural

NUFFIELD  
COUNCIL ON  
BIOETHICS

Ideas about **naturalness** in public  
and political debates about  
**science, technology and medicine**

“ The instinctive desire within many of us not to consume something that is *‘unnatural’* – the fear of so-called Frankenfoods

- The Guardian, 2012

“ How dare you refer to my beautiful children as *‘synthetic’*?

- Elton John, 2015

us – it’s playing God”  
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When people describe science, technology or medicine as natural, unnatural or linked to nature, they can be making moral claims about it being good or bad, or right or wrong. We hear these terms every day and they appear when new technologies are being discussed in the media and in Parliament.

People’s ideas about naturalness may influence the degree to which advances in science, technology and medicine are embraced or opposed by the UK public.

The Nuffield Council on Bioethics examines the ethics of advances in bioscience and medicine. In 2015, we decided to delve deeper into what people really mean when they talk about naturalness. We enlisted poets to help us to explore these ideas in a creative way.

The findings of our work are summarised in this booklet.

Full details, including a detailed report and films of the poets performing poems about naturalness, can be found at

[www.nuffieldbioethics.org/naturalness](http://www.nuffieldbioethics.org/naturalness)

## WHAT WE FOUND

We found many examples of the terms natural, unnatural and nature being used by journalists, Parliamentarians, campaigning organisations, manufacturers and members of the public to convey something good or bad about science, technology and medicine.

These examples are found in discussions about genetically modified food, assisted reproduction, cosmetic procedures, cloning, stem cell research, mitochondrial donation, sports science, alternative medicine and death and dying, and in descriptions of food, cosmetics and other products.

“ Foetal and embryonic stem cell research is *unethical, unnatural*.

- Daily Mail, 2010

Many other words are used to convey ideas about naturalness, such as normal, pure, real, organic, unadulterated and unprocessed, and artificial, fake, abnormal and synthetic.

What is considered to be natural or unnatural can change over time. Things that were criticised for being unnatural in the past, such as heart transplants, are now widely seen as normal and acceptable.

It is not easy to define exactly what is a natural or unnatural thing or process. Equally, it is not straightforward to classify natural things as good and unnatural things as bad. For example, vaccines and contraception – arguably unnatural, man-made interventions – are thought by many to be good, and there are plenty of examples of poisonous or dangerous natural plants and diseases.

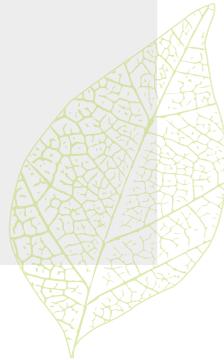
Some believe that the terms natural or unnatural do not carry any real meaning or value and tend not to use them. Organisations representing scientists, for example, rarely use these terms to convey a moral judgment.

However, we found the terms natural, unnatural and nature are often used as placeholders for a range of different values or beliefs that are meaningful and important to people.

## (UN)NATURAL POETRY

I eat strawberries in November,  
ripened by a lamp in my kitchen  
brighter than the sun. I turn the night on  
when the moon is sick, and bite apples  
bigger than their grandmother.  
I hear apples will keep me from fading  
into my father's shaking ribs, I hear ribs  
grow in metal drawers, locked by men  
in white coats.

Extract from *Aubergines in Acton*  
by Sophie Fenella



Some learned the grace of clippers,  
the better to keep their edges in check,  
others would get the barber to shape  
them up with a razor blade so the skin  
stung and the stubble stayed hidden.  
But for all we tried to hide our natural  
hair it came back, rising unbidden  
from our scalps as if each follicle  
knew that soon we would covet shaved  
lines in sideburns, eyebrows, anything  
to set ourselves apart, betray our selves.

Extract from *Ode to Natural Hair*  
by Kayo Chingonyi



# FIVE UNDERSTANDINGS OF NATURALNESS

Many different ideas, associations, anxieties, hopes and fears underlie different people's uses of the terms natural, unnatural and nature. Here we set out five broad understandings of naturalness.

People don't necessarily fall into one category or another, and we do not say which, if any, might be a correct understanding of naturalness. Our aim is to show the different ways that these terms are used.



Tampering with nature is dangerous – it's playing God” “It's disturbingly unnatural to clone an animal  
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## 1 Neutral/sceptical

Some people are sceptical about the existence of any real distinction between natural and unnatural things. Some also don't believe that naturalness always equals goodness since there are natural things, like poisons, that are generally bad and unnatural things, like medicine, that are widely thought to be good.

We found many examples of people questioning the idea that nature or natural things are always good.

“ The organic creed is founded on the principle that synthetic chemicals are bad and dangerous, while *natural* chemicals are safe and good. That is, of course, a scientific howler. It ignores the fact that a molecule is a molecule, whether man-made or *natural*.

- Parliamentary debate, 2007

## 2 Wisdom of nature

This understanding is linked to ideas about nature and natural processes having found the correct or best way of doing things.

New technologies that fail to respect the wisdom of nature or Mother Nature are seen to be risky and to have potentially damaging consequences.

People with this view may believe we should trust and not interfere with evolved processes, and use natural means of reproducing, eating and healing.

“ The fact is that, for all the blithe rhetoric of the GM companies, we simply do not know enough about the potential consequences of tampering with *nature*.

- Daily Mail, 2012

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### 3 Natural purpose

Some people express the view that humans, animals and plants have a natural purpose that they are meant to fulfil. This purpose may come from the core functions or essences of beings, which determine what is good or right for them and help them flourish.

Scientific innovations may be wrong because they move living things away from their fundamental nature.

“ If people saw the conditions the cows are in, how *unnatural* the intensive environment is, they'd know it wasn't right. A five-year-old knows cows belong in fields.

- Guardian, 2010

### 4 Disgust and monstrosity

Some novel technologies can make people feel disgusted, disturbed or revolted, which may be linked to their view about whether the technologies are natural or not.

These responses can be linked to science fiction, which conjures images of scientists creating monsters or other horrific entities.

“ Personally, I find something *unnatural* and disturbing about cheese that never moulds or milk that never sours.

- The Telegraph, 2011

“ ...the increasing number of images of celebrities with plastic faces and scarily *unnatural* plumped-up features...

- The Sun, 2015

## CONCLUSIONS

### 5 God and religion

Some believe that certain technologies distort God's creation or go against the will of God.

These concerns can be linked to wisdom of nature and natural purpose understandings of naturalness, as people can see nature as an expression of God's will.

“ I don't think that you can just discard an embryo that has been fertilised, or change that in any way because I just don't believe that that is the way God intended it to be.

- Member of the public taking part in research, 2005

The diverse values and beliefs associated with naturalness may mean that people are talking at cross-purposes when discussing science, technology and medicine.

It is important that policy makers understand these values and beliefs if they are genuinely to take account of the views of the public when developing policies for science, technology and medicine.

The use of the terms natural, unnatural and nature to express values and beliefs, for example in the media and in advertising, can be ambiguous and potentially confusing.

## (UN)NATURAL POETRY

I am watching my husband write again-  
he is dead but he is writing,  
flesh morphing from grey to warm  
as capillaries pulse new life back in.

His finger prints live on,  
phantom limb revived  
in a surgery séance  
for the patchwork man  
Mary Shelley predicted,

but this is not monstrous.  
More the delicious agony  
of a last letter arriving  
a month after he went,  
or a backdated cheque  
unburdening as his flesh  
is accepted, converted  
into a new currency-  
integrating your gestures.

Extract from *Sharing bodies* by Laila Sumpton



*'Sometimes' he said 'I feel it's all going  
too fast.*

*We shouldn't mess with laws of Nature or  
worship at the altar of technology.  
We've lost our way.'*

*'We've lost our way?'* she said.  
She shook her head, the mantra of her  
childhood ringing in her mind:  
*'Mother Nature is cruel. She needs to be met  
with compassion.'*

And she smiled to herself,  
Grateful that his parents had been able to  
conceive a son  
Though some had called it unnatural.

Extract from *Walking in the Park on a  
Saturday Afternoon* by Helen Ford



## RECOMMENDATIONS

### For individuals

- To avoid us speaking at cross-purposes, we should all be aware that people can use the terms natural, unnatural and nature as placeholders for a range of different important values or beliefs in relation to science, technology and medicine.

### For organisations representing scientists and other sectors of society

- Organisations that contribute to public and political debates about science, technology and medicine should avoid using the terms natural, unnatural and nature without conveying the values or beliefs that underlie them.
- Such organisations should explore and engage with the values and beliefs underlying use of the terms natural, unnatural and nature in debates about science, technology and medicine to ensure the views of different people are fully understood, debated and taken into account.

### For policy makers

- Policy makers, including Parliamentarians, should avoid using the terms natural, unnatural and nature when talking about science, technology and medicine without conveying the values or beliefs that underlie them.
- Policy makers should explore fully what people mean when they use the terms natural, unnatural and nature when engaging with the general public to inform the development of science and health policy.

### For journalists

- Journalists should avoid using the terms natural, unnatural and nature when talking about science, technology and medicine without conveying the values or beliefs that underlie them.

### For manufacturers and advertisers

- Manufacturers and advertisers of, for example, food, cosmetics and health products should be cautious about describing a product as natural given the ambiguity of this term and that it is unlawful to mislead consumers, and should follow relevant guidance on advertising and labelling.

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