




# Manchester's DNA

The building blocks of the city

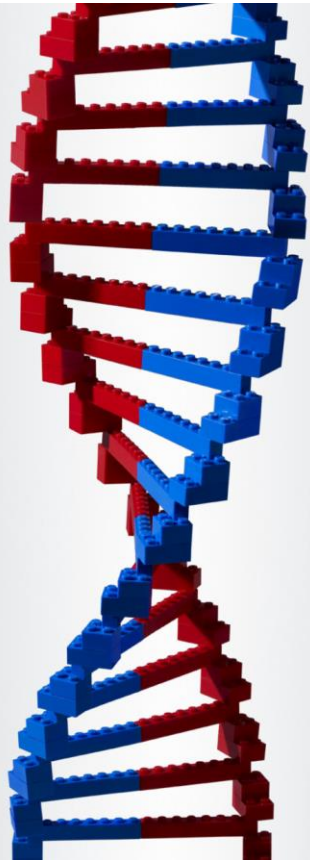


## history and humanness

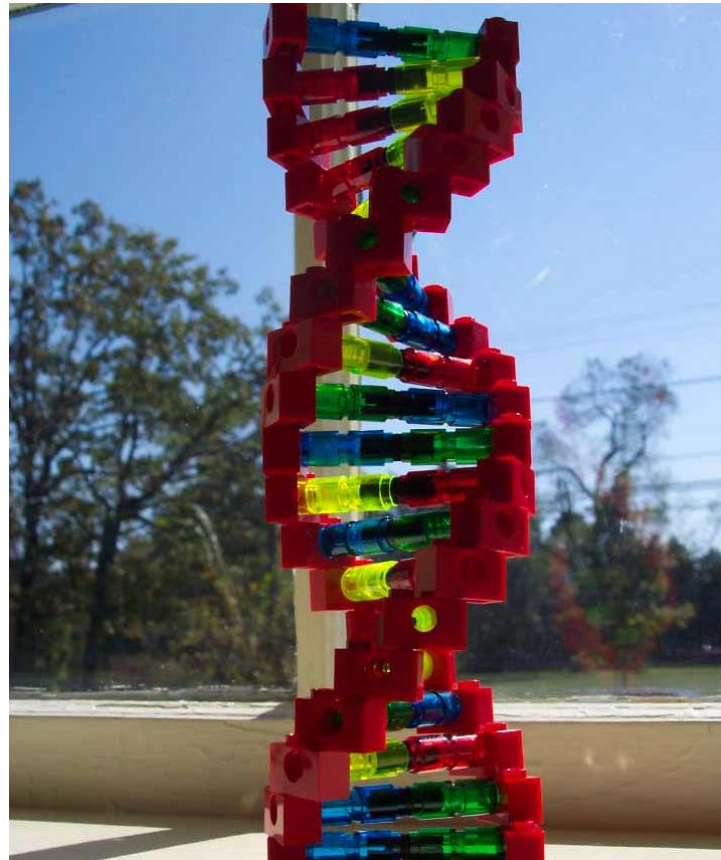
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- What makes us up?
- What are our roots?
- What is our family history?
- How do we imagine ourselves in relation to the past?


# DNA: the 'building blocks of life'



*Building blocks for life.*



- DNA – molecule that encodes genetic instruction for an organism
- Genes – sequences of DNA that contain instructions for the wider organism
- Chromosome – structures of DNA
- DNA replicates through the action of enzymes



## What does DNA do?

- Tells cells how to grow and what to grow into
- Is a 'blueprint' of the whole body of the creature
- Provides the 'building blocks' of life
- All life on earth has DNA
- Humans share 60% of their DNA with bananas!
- Humans share 90% of their DNA with cats!!
- Humans share 61% of their DNA with fruit flies!!!

# We now know a lot about DNA

- This allows us to understand how it works ... how it replicates ... and how to analyse it
- We can look at DNA in real detail and compare it
- My DNA differs from yours, and so this comparison can be very useful in understanding how humans develop
- ‘With the coming of biotechnology, not only new subjectivities and new apparatuses but also new life-forms cross divides nineteenth-century social thinkers convinced themselves were unbridgable’
  - Paul Rabinow, *French DNA*, p. 9

# Using DNA to investigate the past

‘searching for my ancestry was always a fraught process, always a mix of joy, frustration and outrage, as the reconstruction of their history – individually and collectively – must always be for any African American’

‘when the paper trail would end, as it inevitably did, in the horrid darkness of slavery, we traced our African roots through our DNA’

- Henry Louis Gates, Jr.
- *In Search of Our Roots: How 19 Extraordinary African Americans Reclaimed their Past* (New York: Random House, 2009), p. 11.

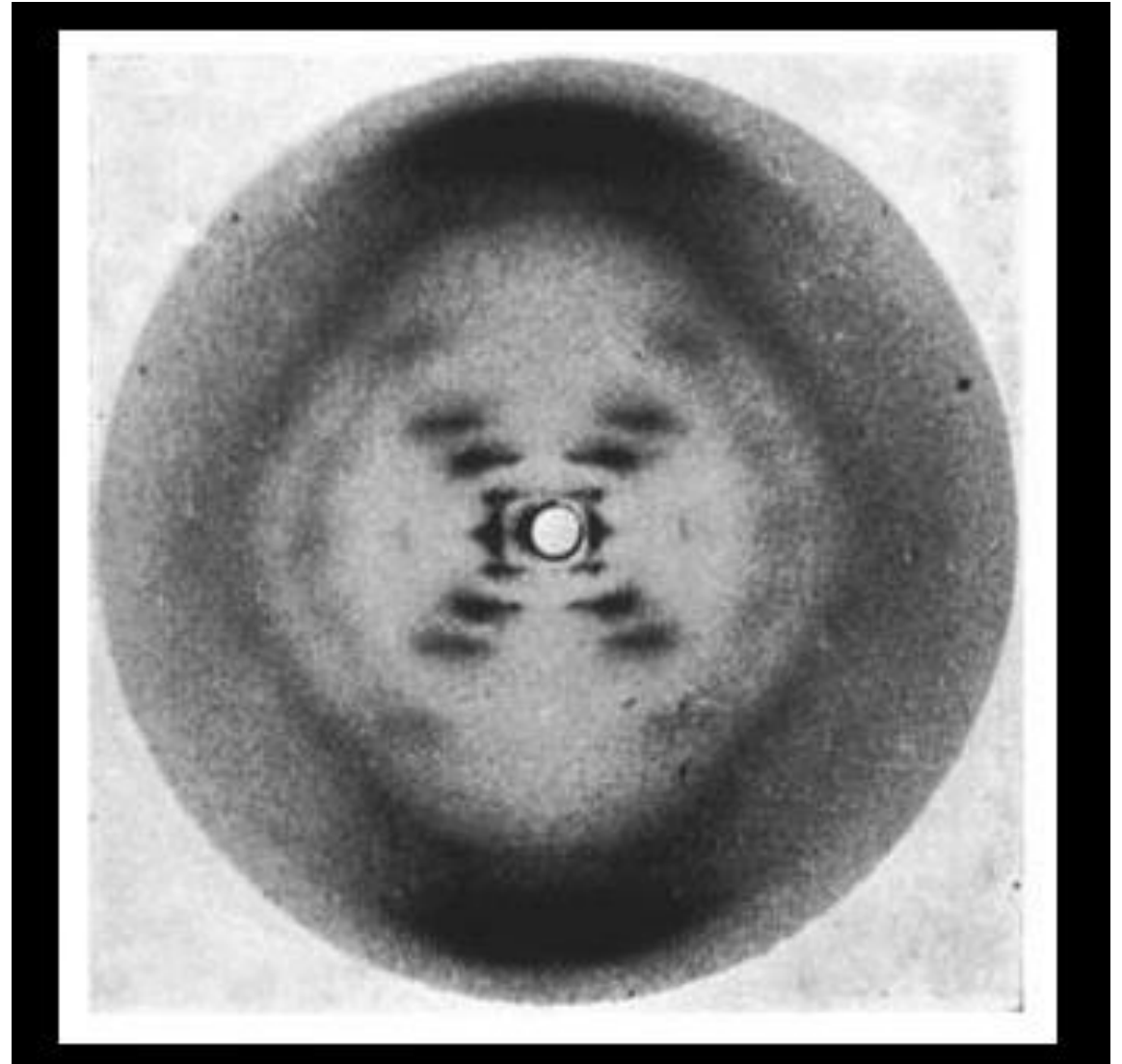


# The impact of DNA

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‘DNA analysis is re-creating **how we know the past** and even how we now define the social world’

- Keith Wailoo, Alondra Nelson and Catherine Lee, ‘Introduction’ in Keith Wailoo, Alondra Nelson and Catherine Lee, eds., *Genetics and the Unsettled Past* (Rutgers UP, 2012), p. 7



Quick example: bone powder from the femur of a 430,000 –year old ‘Sima’ skeleton





**Q: What does the 'first Brit' look like?**

This!



# Cheddar Man



- 10000 years old – oldest hominid remains in Europe
- DNA reveals (probable) dark skin pigmentation
- **‘No way is this true. It's PC gone mad’ Nigelr60, comment on *Daily Mail* website**
  - >> not totally wrong >>
  - historical specificity of investigation

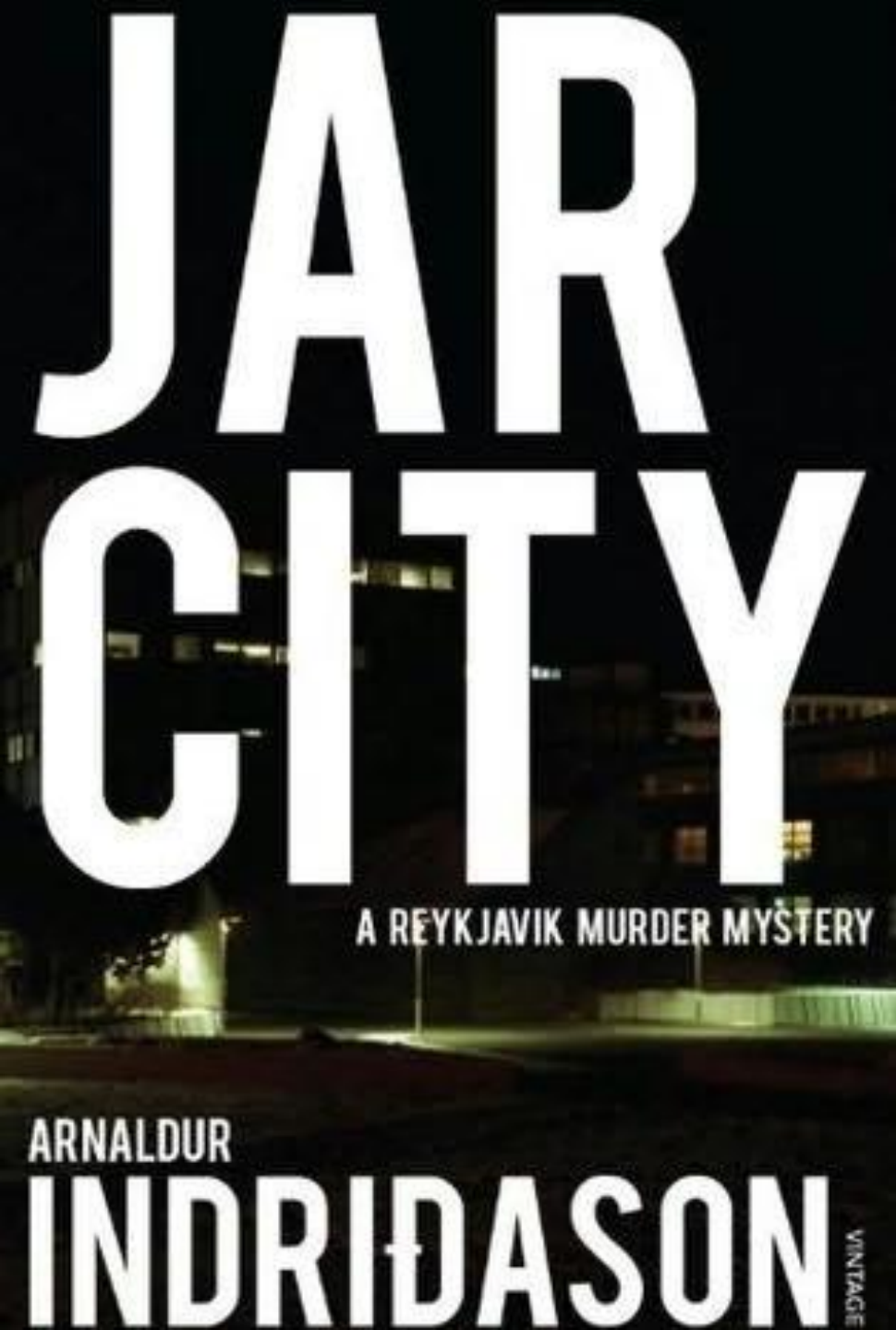
# Not Danish: 'Egtved Girl' (1370 BC)

- 'Our study provides evidence for long-distance and periodically rapid mobility. Our **findings compel us to rethink European Bronze Age mobility** as highly dynamic, where individuals moved quickly, over long distances in relatively brief periods of time.' 'Tracing the dynamic life story of a Bronze Age Female', *Scientific Reports* 5 (2015), [http://www.nature.com/articles/srep10431?WT.ec\\_id=SREP-20150526](http://www.nature.com/articles/srep10431?WT.ec_id=SREP-20150526).



# The 'impact' of this science?

- Do we think differently about **ourselves**?
- Are we related to these **species**?
- How does this make us feel as '**humans**'
- Does this change us in the **now**?



## The ethics of DNA and the past

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- “This is all so new for us. People don’t understand exactly what can be done with all the information that’s been collected. What it contains and **what you can read** into it.” (p. 328).
  - Arnaldur Indriðason, *Jar City*, trans. Bernard Scudder (London: Vintage, 2010; first published in Iceland in 2000),

News > Science

# Woolly mammoths: Japanese scientists take 'significant step' towards bringing prehistoric giants back to life

Cells extracted from carcass of frozen mammoth injected into mouse tissues

Harry Cockburn | 3 hours ago |



Like Click to follow The Independent



Compelling discussion now!

# Sum up:

- DNA is means for understanding the 'building blocks' of the human
- DNA is a way of understanding the human in the past
- DNA knowledge is changing our understanding of the human past





## Family history and place

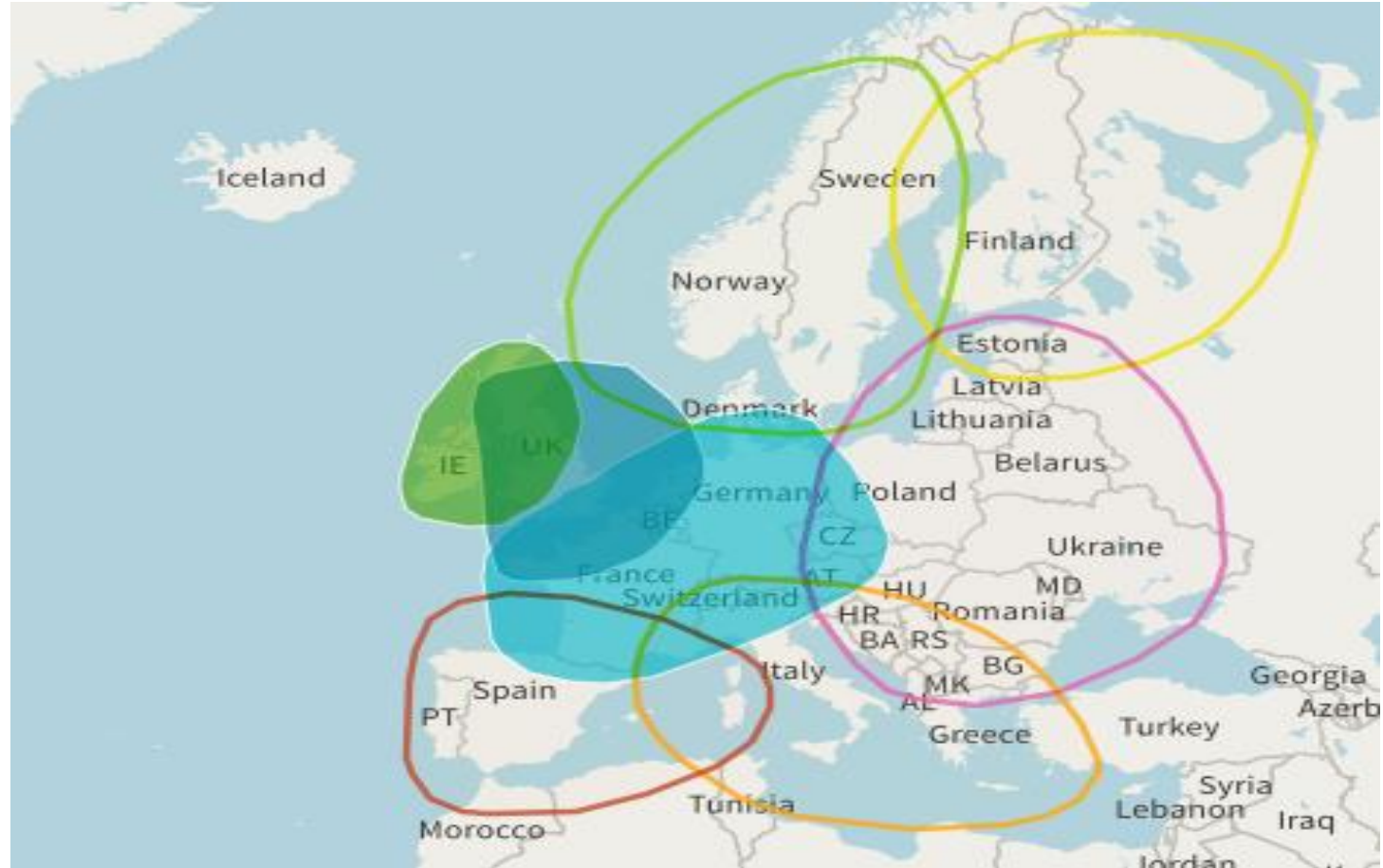
- What makes you up?
- How much of your family do you know?
- How much does your family influence the way that you are?
  
- How much does place change the way that you are?
- How important is the place that you grow up in?



# DNA and family history

- Development of cheaper testing through the early part of the 21<sup>st</sup> century
- Over past couple of years – massive upsurge in testing (cheaper and easier technology, public opinion swing toward DNA sequencing)
- Huge growth in online databases for family history

# de Groot ethnicity map – family history via DNA

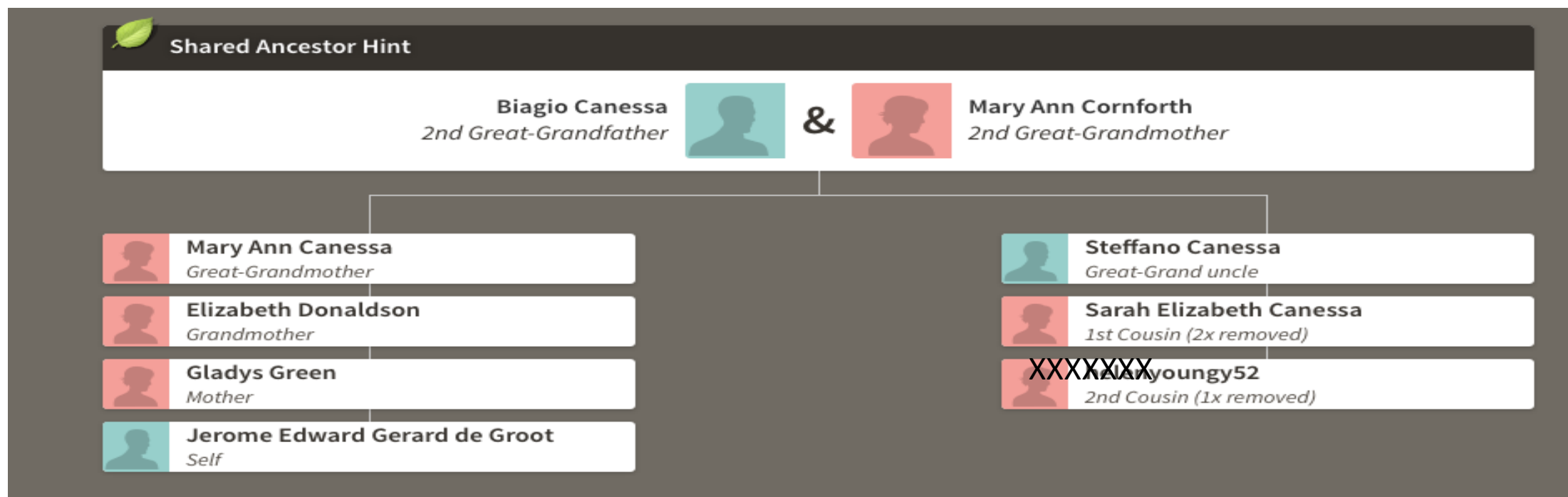


# de Groot ethnicity estimate/ my Gran at 18

REGION	APPROXIMATE AMOUNT
Europe	100%
■ Great Britain	40%
■ Europe West	28%
■ Ireland	15%
⊖ Trace Regions ?	17%
■ Finland/Northwest Russia	6%
■ Italy/Greece	6%
■ Iberian Peninsula	3%
■ Scandinavia	1%
■ Europe East	< 1%



# Shared ancestry 'revealed' online via DNA



# The current explosion of responses

SCIENCE

## A Man Says His DNA Test Proves He's Black, and He's Suing

A case in Washington questions how the government defines race.

SARAH ZHANG SEP 19, 2018



Genealogy

## 'Your father's not your father': when DNA tests reveal more than you bargained for



Elle Hunt

@mle\_elle

Tue 18 Sep 2018  
06.00 BST



1319 611



- >> challenged by indigenous groups
- >> seems to confirm popular understanding of ethnicity and DNA (and is potentially dangerous?)

# Contested histories: Elizabeth Warren

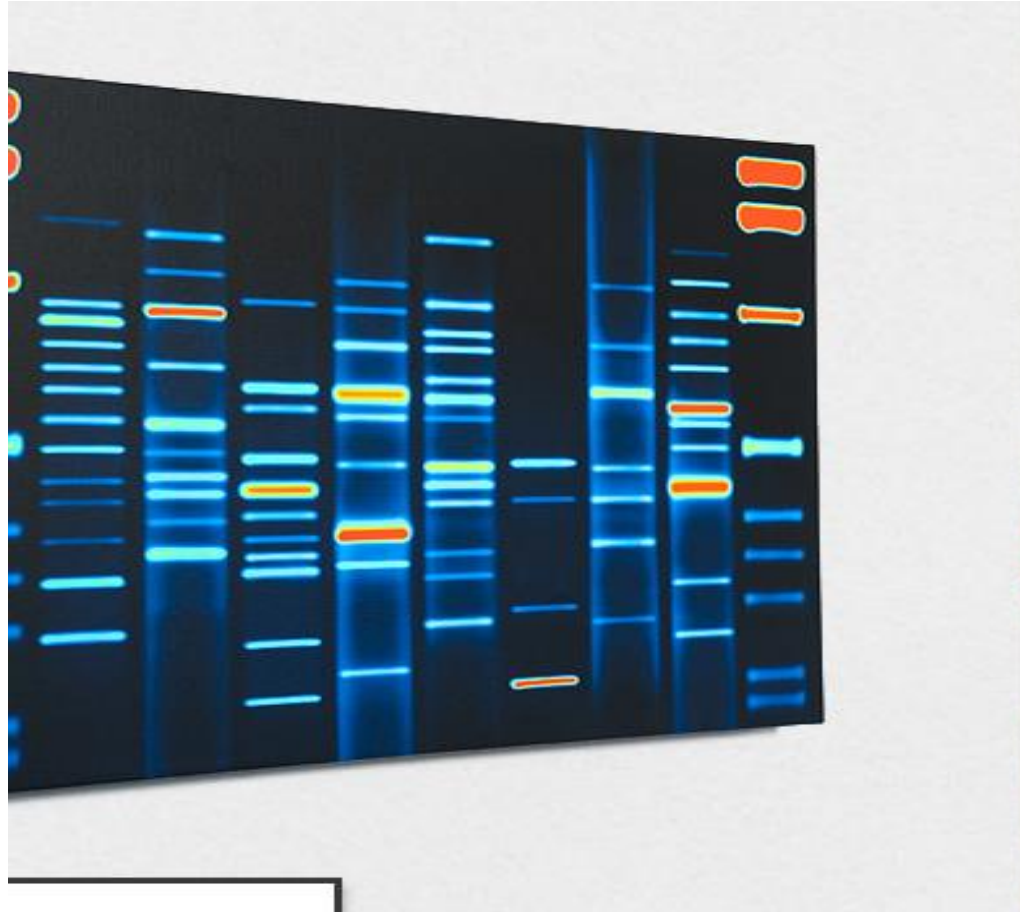




# DNA-linked wine...



# DNA Art



# The DNA Portrait

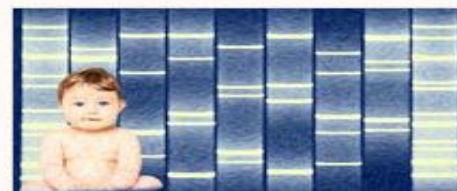
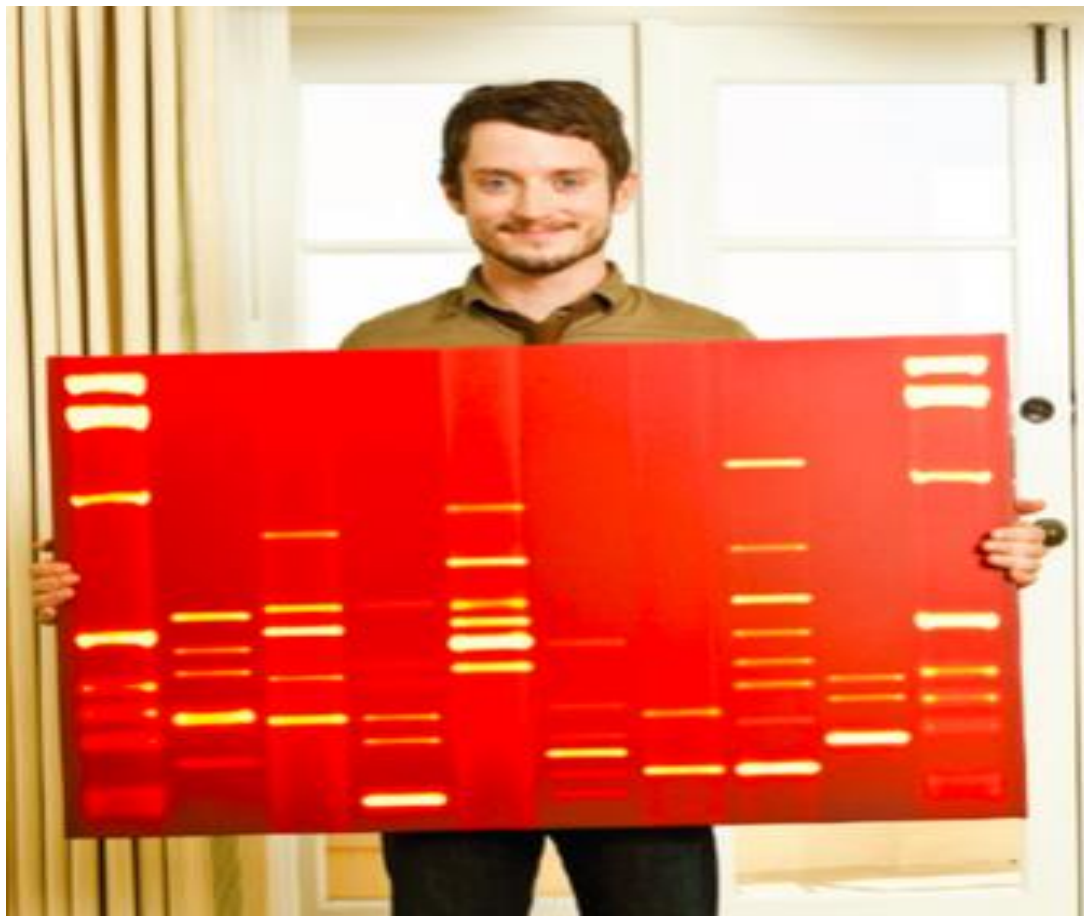
Art as unique as you are. Starting from only

[Start creating your portrait](#)

[▶ HOW IT WORKS](#)

A modern living room with a wooden table, a sofa, and large windows. The room is bright and airy, with natural light streaming in from the windows. The furniture is contemporary and minimalist.

...interestingly, not necessarily a double helix



Deep Blue Newborn Port...

\$ 399.00



Newborn Portrait DNA A...

\$ 399.00



Newborn Portrait Girl ...

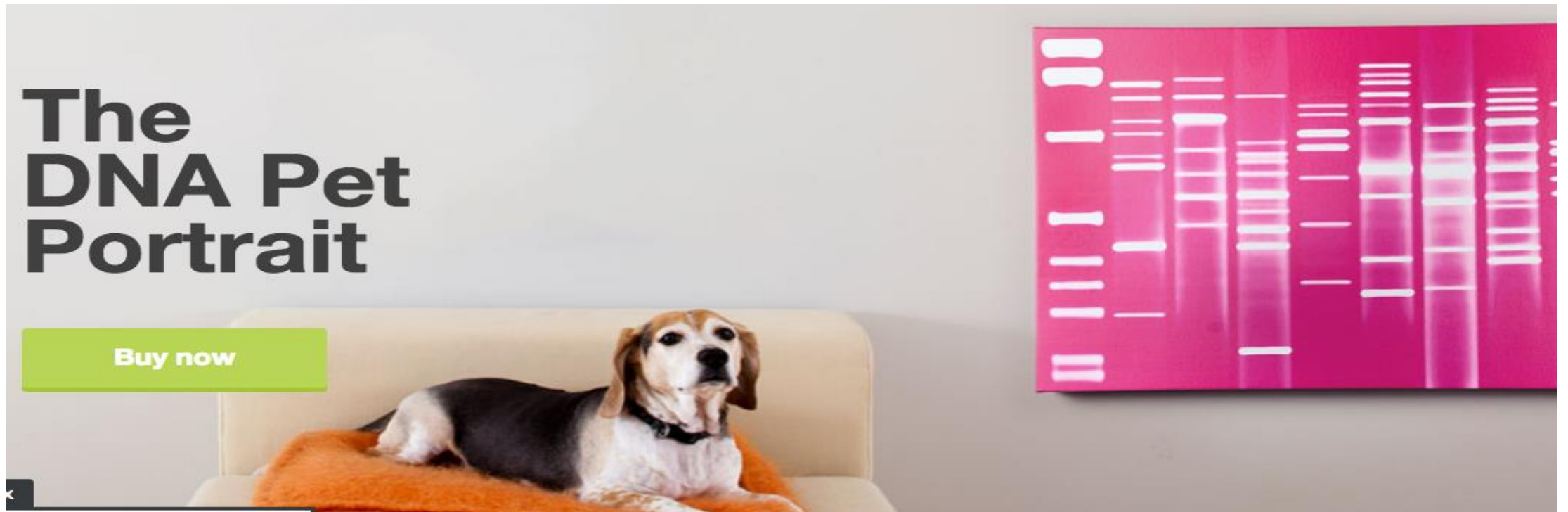
\$ 399.00



Newborn Portrait Boy D...

\$ 399.00

No comment



**The  
DNA Pet  
Portrait**

Buy now

The advertisement features a beagle dog lying on a light-colored sofa with an orange blanket. To the right of the dog is a large image of a DNA gel electrophoresis result, showing multiple lanes of white bands on a pink background. A green button with the text 'Buy now' is positioned below the main title. A small black square with a white 'x' icon is located in the bottom-left corner of the advertisement area.

# Can also make art (a bit creepy)

## Artist creates faces from DNA left in public

By Natalie Angley, CNN

🕒 Updated 1910 GMT (0310 HKT) September 4, 2013



### News & buzz



Trump truly dese  
'Person of the Ye



Pistorius' senten  
doubled; slain gir  
family...

WANT TO MEET  
RIGHT PARTNER  
ACCELERATE YO  
SUSTAINABILIT

# The body of the rapper

A little blood, a sample of saliva  
Send it to the lab and get it back and see  
them try to declassify  
A deoxyribonucleic gas just from one fiber  
Scientists can separate a strand  
Tell you in percentages descendancies you  
long to understand  
Send you to lands of ice dirt and sand  
A map of the world in the lines of your  
hand

- Residente, 'AND/ DNA '(ll. 14-20)



# DNA = 'Building blocks'

- What 'makes' you up?
- > what is 'original'
- > what is 'added', and how?

THE ENGLAND DNA

## THE PLAYING & COACHING PHILOSOPHY OF ENGLAND TEAMS

### THE ENGLAND DNA CONSISTS OF 5 CORE ELEMENTS

The long-term aim of the England DNA project is to produce winning England teams at senior level.

Interview

## Lovecraft Country's Jonathan Majors: 'Jim Crow America is literally in my DNA'

Ellen E Jones





SHADAWEAR.COM  
african clothing company



## Foundations

- I got power, poison, pain and joy inside my DNA  
I got hustle though, ambition flow inside my DNA
  - Kendrick Lamar, 'DNA'





# Manchester

- What makes up the people of this city?
- What are the fundamental parts of their existence?
- What are the building blocks of the city?
- **What is in Manchester's DNA?**