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Common ancestors of all humans

It has been known since [Darwin's work](#) in the 19th century that all of humanity (indeed all of life) is on one family tree. In other words, there existed in the past animals who are common ancestors of all humans now living. What this page is about is when was the *most recent* common ancestor of all living humans. A number of new strands of evidence indicate it was surprisingly recent, even within recorded history.

Definitions

Let us define the terms:

CA
> Common Ancestor of all living humans - There are trillions of these, stretching from [the origin of DNA-based life 4 to 3.5 billion years ago](#) to a lot more recently - perhaps even within historical times, as we shall see. Most of these are pre-human animals, but the recent ones are human.

MRCA
> Most Recent Common Ancestor of all living humans - This is a human, perhaps even within historical times, as we shall see.

Background reading

For ignorant reasons, the origins of life and humanity are often not discussed in schools, so you may need some background reading before you start:

- [Introduction to evolutionary biology](#)

- [Introduction to human evolution](#)

The MRCA is human

[O'Connell, 1995] is wrong to suggest there is any doubt about the existence of CAs. Their existence is certain, as is the fact that the MRCA is human. The existence of genes for human abilities (e.g. language acquisition) in all humans is proof of this.

Ways to find the MRCA

In general, there are a number of ways to estimate the MRCA:

1. **Genetics** - These suffer from the problem of only focusing on *the ancestors from whom you have inherited DNA, not all your ancestors*. You can descend from someone without having inherited their DNA at a specific location on the genome, or even without having inherited their DNA *at all*. By focusing only on common ancestry of DNA that gets inherited at a specific location on the genome, DNA studies push back the Common Ancestor much further than the MRCA. All CA's found in genetic studies will be much older than the MRCA. **Why DNA can't tell us the MRCA.**

2. **Archaeology** - The MRCA does not imply any sort of *population bottleneck* at the time, or any sort of "first couple". The MRCA would have co-existed with a huge human population, many of which are ancestors of many, but not all, living people. In the future, these too will become CAs and there will be a new MRCA. Since the MRCA keeps changing, it is obvious that it does not have to exist at any important moment in the fossil record. The MRCA is a "statistical artefact", and is unlikely to be significant (or *at all* noticeable) in archaeology. **Why Archaeology can't tell us the MRCA.**

   The above 2 methods can't tell us the MRCA.

   The following 3 methods can, and they all *agree*. They all say the MRCA is in historical times:

3. **Mathematical models** - These are better for looking at whether someone *actually* descends from someone else, irrespective of DNA. They suggest an MRCA in historical times, as recent as c. 1200 AD, if mating is random (we know that it is not). The main limitation of mathematical models is this issue - the difficulty of modelling in any clean way the complex, *non-random mating* patterns caused by geography, population movement, religion and social status. To model the quirks of the history and geography of the world, or just of the West, you really need a computer simulation.

   The other thing noted by mathematical models is that *not much longer* before the MRCA, everyone in the population is either the ancestor of *everyone* alive today or the ancestor of *no one* alive today.

   Non-random mating would push the MRCA further back. See following.

4. **Computer simulations** - These can take into account all the quirks of local geography and history. These suggest that even with a high degree of non-random mating, the MRCA is still in historical times, perhaps c. 300 AD.

   If we restrict just to the *West*, rather than the whole world, then the MRCA comes forward: (a) because it is a smaller area, and: (b) because the West, with its constant intermarriage and migration, is *closer* to a random mating model than the world as a whole is, with its extreme geographical isolation like populations in Australia, the Pacific, etc. Hence the West will have a *lot* more recent MRCA than the world. See following.

5. **History** - Genealogy, like my Royal Descents page. This has the problem of only focusing on the ancestors for whom records survived, not all your ancestors. However, despite the sketchy records, it still provides strong support for the suggestions above from mathematical models and computer simulations of an MRCA in historical times. The huge number of *proven* descents of people from common European royal ancestry in historical times, when considered with the *vastly* greater number of descents that must *exist* but are not among the rare few that can be *proven*, suggest strongly that *everyone*, in the West at least, is descended from an MRCA in historical times. They suggest, for example, that everyone in the West is descended from Charlemagne, c. 800 AD.

Conclusion

The conclusion of the above lines of evidence is the following.

The world

1. It would seem possible that, even with a *lot* of geographical separation, the MRCA of the *entire* world is still within historical times, 3000 BC - 1000 AD.

2. **Quite likely the *entire* world is descended from the Ancient Egyptian royal house, c. 1600 BC.**

   We pick them as an example because they left proven descents for centuries, so it seems likely their descents did not die out, and they are ancestors of *some people* alive today. Hence probably ancestors of *all people* alive today.

The interbreeding world

1. The MRCA of *almost all* of the world is in historical times, quite possibly in classical times, even AD.

   By "almost all" I mean over 90 percent of the world, including all of the West, almost all of Asia, and most of Africa. Only cases of *extreme* geographical isolation could prevent this being the *whole* world,

leaving some aboriginal populations out of this recent family tree. If populations were truly geographically isolated for thousands of years then the MRCA of the *entire* world may be thousands of years ago. Though even that is not certain since there has been a certain amount of interbreeding since these populations were re-contacted in the last few hundred years. And we only need a *small* amount of interbreeding to get everyone descended from Europeans. That is, we just need to get them *genealogically* descended, even if it doesn't show in the DNA - even if the European DNA has been swamped by the rest.

2. **Quite likely *almost* everyone in the world descends from [Confucius](#), c. 500 BC.**

   We pick him as an example because he is the proven ancestor of *some people* alive today. [Hence](#) probably the ancestor of *all people* alive today.

The West

1. The MRCA of the West is in historical times, quite possibly as recent as 1000 AD.
2. **Quite likely everyone in the West descends from [Charlemagne](#), c. 800 AD.**

   We pick him as an example because he is the [proven ancestor of *some people* alive today](#) (for example, he is a proven ancestor of my children). [Hence](#) probably the ancestor of *all people* alive today. By the same reasoning, as well as from Continental/pre-Norman figures like Charlemagne, quite likely *everyone* in the West descends from figures like:

   - The English/Saxon/pre-Royal [Cerdic](#), c. 500 AD.
   - The Irish/Celtic [Niall of the Nine Hostages](#), c. 450 AD.

Discussion

There are some interesting consequences of this world view.

Islam, Christianity and Judaism

1. **Quite likely *every* Muslim in the world today descends from the Prophet [Muhammad](#), c. 600 AD.**

   The Prophet is the proven ancestor of *some* Muslims alive today, hence probably ancestor of *all* of them.

2. **Quite likely everyone in the West descends from the Prophet [Muhammad](#), c. 600 AD.**

   There are also many known or suspected Muslim-Christian crossovers, in particular in medieval Spain. Even if *specific* ones, such as [Zaida, dau of the Emir of Seville](#), are disproved, our model suggests that

there *will* be others. With the Muslim population of medieval Spain descended from the Prophet, it is almost impossible for the Christian population to stay separate. All we need is a *tiny* amount of interbreeding and fairly soon all the Christian population are descended from the Prophet too, and hence *most* or *all* of the West today. And, as we just said, we even have some actual *candidates* such as Zaida, or Mawiyah, dau of the Caliph of Cordoba. The number of *actual* Muslim-Christian matings must be *much* higher than the few that we can prove. Religious barriers can't seriously push back the MRCA, only geographical barriers can.

It is interesting to think that the World Trade Centre attack was almost certainly *some* descendants of the Prophet killing *other* descendants of the Prophet.

3. **Quite likely almost every Jew in the world today descends from the Prophet Muhammad, c. 600 AD.**

   By the same logic, there were Jews in medieval Spain, and it's hard to see them staying separate from the gradual descent of all of Muslim and Christian Spain from the Prophet. Again, all we need is a *tiny* amount of interbreeding for this to happen. And later the Jews of Spain were expelled, and are probably hence the ancestors of much or most of the world's Jews today.

   It is interesting to think that every Palestinian suicide bombing attack on Israel is almost certainly *some* descendants of the Prophet killing *other* descendants of the Prophet.

4. Of course ultimately the *whole world* will descend from the Prophet. In fact, this may *already* be true!

Alternative History

If you have a line of descendants that doesn't die out, eventually you are the ancestor of the *whole* future world. Through this, you affect *all* future world history. If the humblest Ancient Egyptian peasant had done anything different (even just had sex five minutes earlier), there would have been no Jesus, no St.Paul, Muhammad, Copernicus, Newton, Darwin, Marx, Freud, Lenin, Stalin, Hitler or Mao.

There would have been no Christianity, Islam, Marxism, Freudianism, communism, Nazism or Maoism. - These are *belief systems*, collections of beliefs accepted due to charismatic founders.

There would still have been Copernicanism, Newtonianism and Darwinism. - These are *discoveries* about the world, that would be made no matter what.

Science would still be here, but the religions and totalitarian systems would be different. There may have been no Holocaust. There may have been global nuclear war. Humanity might be extinct.

- *The 100: A Ranking of the Most Influential Persons in History* by Michael H. Hart

- alternative history

Links

- [Jones, 1996, Ch.I] suggests the MRCA could be as recent as 700 BC, but provides no real support for this.

- Gary Boyd Roberts
  - Comments on Royal Descent - *"probably sixty percent or more of the American people are descended from kings"*
  - Roberts also says *"anthropologists claim everyone on earth is a 40th cousin"* (i.e. any pair of 2 people can find at least 1 common ancestor since about 800 AD).

- Jack Lee
  - Everyone is Descended From Charlemagne

In the future, there will be a new MRCA

Finally, remember that all these CAs are moving targets. These CAs are defined relative to the world *in the state it is in now*, i.e. in 2000 AD. If we were living in 1000 AD, we would be talking about a completely different MRCA. Similarly, someone alive today (maybe you, maybe me) is an MRCA of the world at some future date.

"Mitochondrial Eve" is only defined relative to AD 2000. In 1000 AD there was a different Mitochondrial Eve, and in 1000 BC there was a different one still.

Return to Royal Descents of famous people.

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