

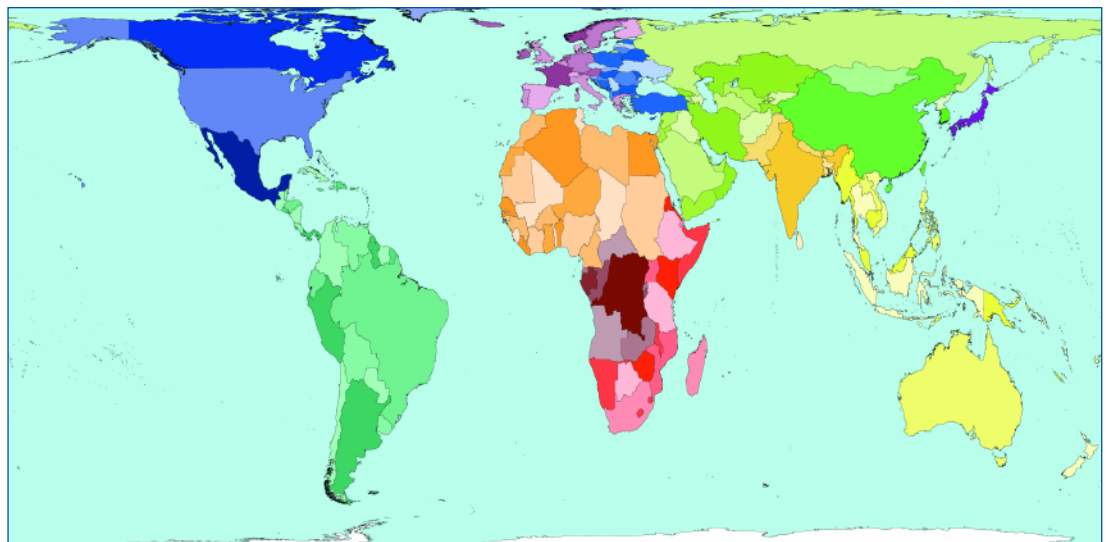
Figure 1 Population map

Re-ordering the world

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and
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An understanding of maps is fundamental to much of the A-level course. This article takes a radical look at cartography, and a way in which it can be used to study globalisation.

Figure 2
Land area map



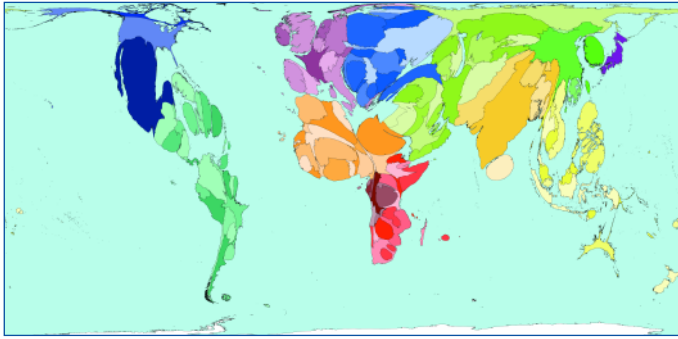


Figure 3 International emigrants

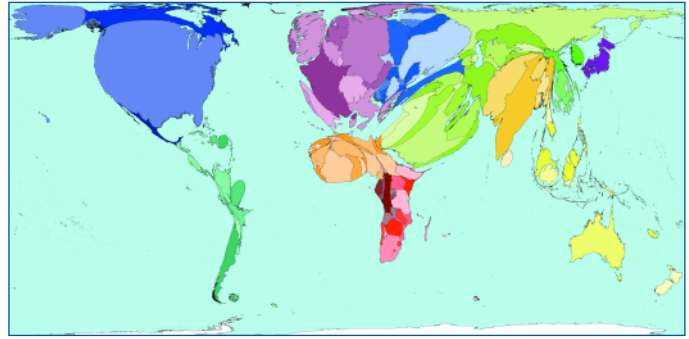


Figure 4 International immigrants

Throughout history, maps have been used to order and re-order people, to design cities, to direct movement. But does mapping itself directly change the world? Not directly. Does mapping change how we see the world? Certainly. Does how we see the world change how we behave in the world, and as a result change the world? Certainly. So, can maps be a catalyst for change? Yes. But maps are usually conservative, preserving the power of old regimes. They show the old roads and contours, presenting the world as fixed and permanent, or, worse, as if there are no alternative choices to be made.

Here, using new world maps (cartograms) which plot a range of topics related to globalisation, we consider the extent of just a few uneven distributions in the world. What impacts does such inequality have, and where? Using data mainly from United Nations agencies, we reshape the world to show factors other than the traditional land area. In the wider project from which this is drawn, we aim to give an update on the present organisation of the world.

Reshaping the world

Figure 1 shows the distribution of population in the world. Thinking of the map as an unusual pie chart helps with map reading. If a territory is large, that means it has a large percentage of the world population. China and India are the largest countries on the map, as more than a billion people live in each territory. The line separating the paler yellow Pakistan from the more orange northwest India is clear to see and much longer here than on a conventional globe.

All the maps in this article should be read in the same way: the larger the territory the more of what is being mapped is found there. The population map is a useful reference map, and maps of other variables can be compared to it. If you find it hard to recognise territories on this map, look at the conventional land area map (Figure 2). Territories stay the same colour on each map so you can cross-reference between maps.

Our distorted planet

We can see how connected we are by looking at maps — these show which people/ places are more connected than others. As these maps are primarily descriptive, our commentary will be limited in order to

allow you to interpret them for yourself. For maps of other connections see the Worldmapper website: www.worldmapper.org

International migration

Maps of migration show which territories people have emigrated from (Figure 3), and

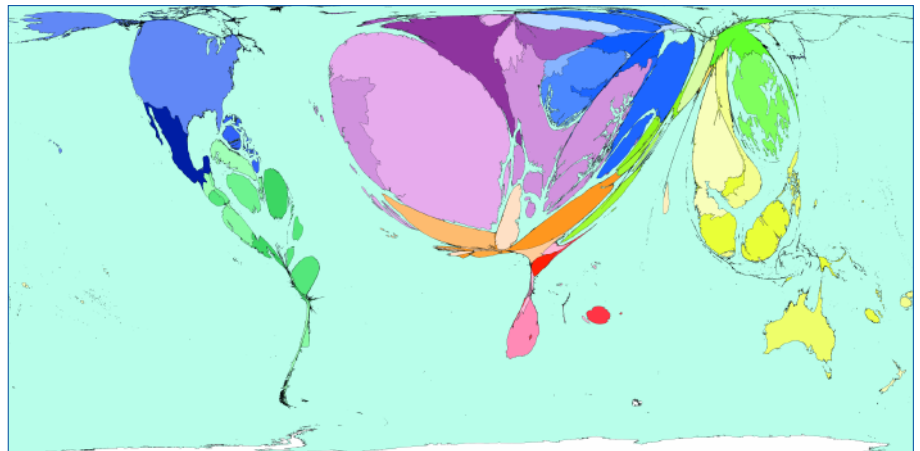


Figure 5 Profits from tourism

Look at Figure 5 and try to guess where this photograph was taken

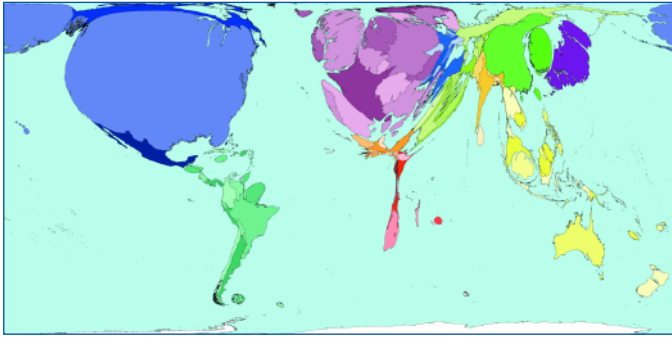


Figure 6 Aircraft flights

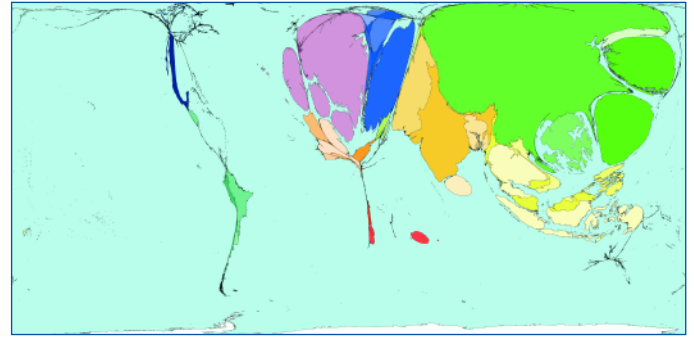


Figure 8 Net clothing exports

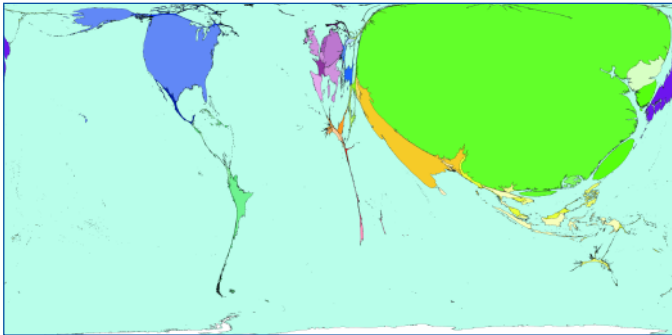


Figure 7 Container ports

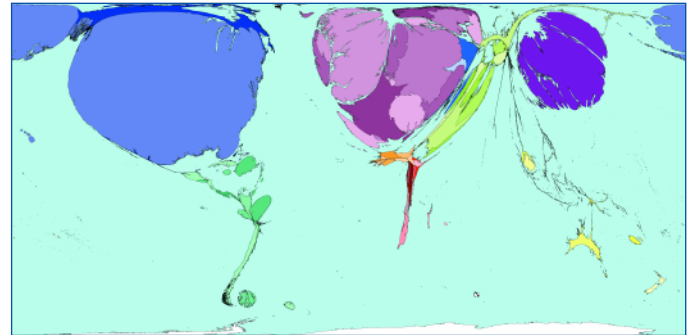


Figure 9 Net clothing imports

where they have migrated to (Figure 4). Large territories on these maps indicate that many people have moved from or to that territory, small territories mean that just a small proportion of all migration has been from or to that territory.

Profits from tourism

Figure 5 shows tourist profits, gained when foreign tourists spend more in a territory than its residents spend abroad (as tourists themselves). Those territories that do not make a profit are not shown on this map.

Aircraft flights

Territory size on Figure 6 shows the proportion of all kilometres flown around the world by aircraft that were registered in that country. Aircraft flights are one way that people and goods are transported around the world. Some people fly thousands of kilometres a year, while others have never been in an aeroplane.

Container ports

On Figure 7 territory size shows the proportion of all shipping containers being loaded and unloaded in that state. The large green territory is China. More shipping containers are loaded and unloaded off the coasts and rivers of China than travel to or from all other territories put together. China accounts for more than three-quarters of this activity globally.

Clothing trade

Figures 8–11 show the net and gross trade in clothes, as measured by their ‘value’ in US dollars. Net exports is exports

minus imports. When imports are larger than exports the territory is not shown on Figure 8. The reverse is true for net imports – it is imports minus exports and again only those countries where imports exceed exports are shown on Figure 9. Gross figures include total imports or exports. These four maps taken together show the international trade in clothes – which countries sell a lot, which buy a lot, and which do little of either. Consider how closely we are connected to people who live on the other side of the world.

Child labour

Territory size on Figure 12 indicates the proportion of worldwide child workforce (aged 10–14) that lives there. The map shows that most child labour occurs in African and south Asian territories.

Do we live in a globalised world?

The maps in this article demonstrate that parts of the world are strongly connected to one another. This is reflected in the movements of people, the money moved with tourists, the infrastructure that connects countries and the trade in clothes. However the world is not ‘globalised’ in one key sense. The maps demonstrate that we have not reached a point of total international integration. Some territories are peripheral while others are highly connected. The peripheral territories are often the poorest.

Peter Taylor (2004) is a well-known geographer who recognises the unevenness of the connectivity between places. His frame

inset 1

Worldmapper

The maps in this article are taken from the Worldmapper project run by researchers at the Universities of Sheffield (UK) and Michigan (USA) (www.worldmapper.org). We reshape territories according to data sourced mainly from United Nations agencies such as the World Health Organization, United Nations Development Programme and the United Nations High Commissioner for Refugees. Much of this material was collected by these agencies as a means of assessing where we are now, in view of the directions of change of the Millennium Development Goals.

Our project uses the data to shrink and expand territories on maps according to how little or how much of whatever we are measuring is found there. The maths behind making these maps was developed by the physicist Mark Newman, building on the work of the geographer Waldo Tobler.

of analysis is the city rather than the territory (or state). Taylor recognises the importance of the state in the ‘world city network’ as it forms the legal context for businesses. In addition cultures and languages vary between (and within) territories. For Taylor ‘cities as nodes within the global space of flows are also cities within countries’ (2004, p.75). By ‘cities as nodes’ he means that cities are focal points of communication. People who live in cities are therefore more connected to other parts of the world (other cities) than people who live in the countryside.

Taylor, like the Worldmapper project, uses cartograms to examine the shape of

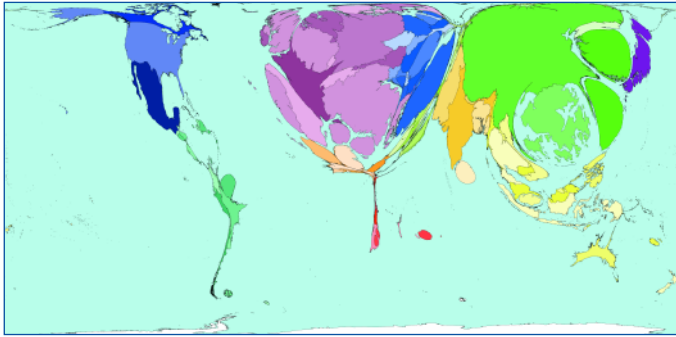


Figure 10 Gross clothing exports

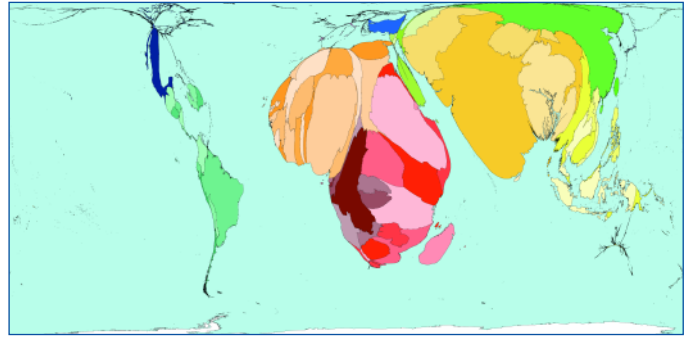


Figure 12 Child labour

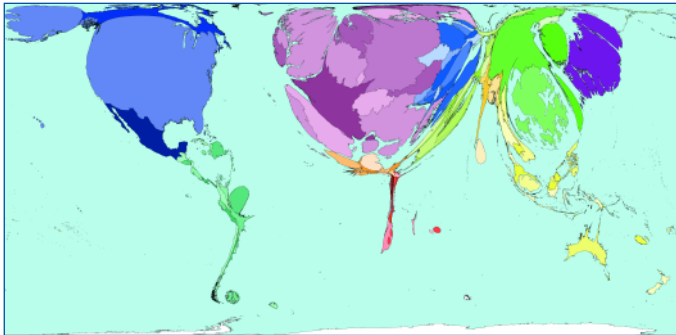


Figure 11 Gross clothing imports

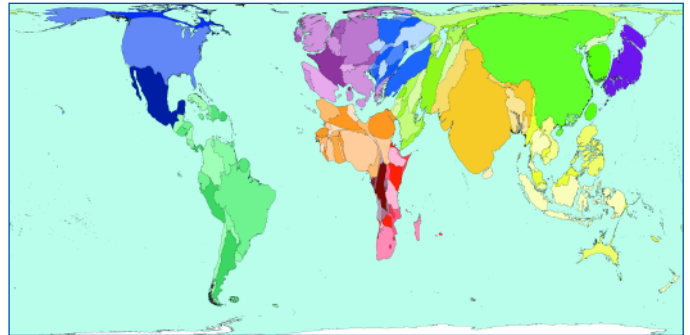


Figure 13 City living

Boy polishing stones, India. Figure 12 shows that child labour is still common in Asia

global interconnections. His cartograms show cities, Worldmapper shows territories. However, recognising Taylor's point that cities are more connected to one another than rural areas are, Figure 13 is a map showing where the urban populations of the world live. Of course, as discussed above, it is not only whether the population is urban, but where it is in the world that population is placed that affects connectivity. Almost no urban area in the continent of Africa features in Taylor's maps because no African cities are that important.

Territory size in Figure 13 indicates the proportion of all urban dwellers in the world that live in that territory.

Conclusions

Our links to other people in the world are remarkable. It has been suggested that there are only seven degrees of separation between you and any other person living in the world. This is certainly true for people living in some territories, but seems unlikely for others. Nevertheless, as we are all linked, perhaps the next big question is how we affect each other and how the benefits of globalisation can be more equally distributed.

Maps can help us to understand our lives and our links to the other 6 billion people living in our world. The nature of those

connections is changing, and as they change you need to think about what you would like to see in the future. Change is inevitable, but understanding it can give it direction and purpose. Historically maps have been navigational tools, arguably they still are.

...if people really have no understanding of people and place, no way to read the world, then we are really lost.

(Barbara Stocking, Director of Oxfam, 2003)

Further reading

Millennium Development Goals website: www.un.org/millenniumgoals/

Taylor, P. J. (2004) *World City Network: A Global Urban Analysis*, Routledge.

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Key points

- Maps are usually conservative.
- Cartograms are maps in which territories are shrunk or expanded in proportion to variables other than the size of the land area.
- Cartograms can be used to help map globalisation.
- Cartograms show that some territories are peripheral while others are highly connected.