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Opening Extract from...

On the Map

Why the World Looks the Way it Does

Written by Simon Garfield

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Foreword by Dava Sobel
For the Love of Maps

Simon Garfield has chosen an apt double entendre as the title for his delightful paean to maps: To be *On the Map* is to have arrived. To discourse *On the Map* is to ponder cartography's course through history and throughout the cultural milieu. With pleasure, I accept the invitation he offers any reader of this book – to lose oneself in map perusal.

I love maps. I do not collect them, unless you count the ones in the box under my desk, which I've saved as souvenirs from the cities they walked me through or cross-country trips they guided. The maps I covet – early renderings of the known world before the New World came to light, mariner's portolans bearing wind roses and sea monsters – are all beyond my means, anyway. They belong where they are, in museums and libraries, and not confined to the walls (or condemned to the humidity) of my house.

I think about maps a lot. When working on a book project, I must keep a map of the territory at hand, to help the characters find their roots. Even at odd moments, say while clearing spam from the junk folders of my email accounts, it occurs to me that 'spam' is 'maps' spelled backward, and how maps,

the true opposite of spam, do not arrive unbidden, but only beckon.

A map will lead you to the brink of Terra Incognita, and leave you there, or communicate the comfort of knowing, 'You are here.'

Maps look down, as I do, watching my step. Their downward perspective seems so obvious, so familiar as to make one forget how much looking-up they entail. Ptolemy's rules of cartography, written out in the second century, descended from his prior study of astronomy. He called down the moon and stars to help him align the world's eight thousand known locations. Thus he drew the tropic lines and equator through the places where the planets passed directly overhead, making his best guess of east–west distances by the light of a lunar eclipse. And it was Ptolemy who set North at the top of the map, where the pole pointed to a lone star that held still through the night.

Like everyone else these days, I rely on quick computer-generated maps for driving directions, and often find my way on foot or public transportation via the maps app on my smart phone. But for serious travel preparation I need a plat. Only a map can give me a sense of where I'm going. If I fail to see, before setting off, whether the destination is shaped like a boot or a fish tail or an animal hide, I will never gain a sense of the place once I'm there. Seeing ahead of time that streets obey a grid layout – or they circle around a hub, or follow no discernible plan – already tells me something of what wandering them will be like.

If I'm not really going anywhere, then travel by map of course provides the only possible route – to everywhere, to nowhere in particular, to the folds of the human genome, the summit of Everest, the paths of future transits of Venus for the next three thousand years. Even buried treasure, lost continents and phantom islands are all accessible by map.

What difference does it make if I never reach my map-dream destinations, when even the most admired map-makers of old stayed home? I think of Fra Mauro, immured in his Venetian monastery, spinning the thin yarns of untrustworthy travellers into his own gorgeous geography.

I revel in the visual luxury of maps. The so-called four-colour map conjecture, which defines the minimum number of pigments required for constructing a world map, sets no upper bounds on artistic licence.

The language of maps sounds no less colourful to my ear. Words like 'latitude' and 'graticule' rattle out of the mouth to cast a net around the world. And 'cartouche', the map's decorative title block or legend, whooshes off the tongue with a breeze. Some names of places yodel; others click or sing. Gladly would I go from Grand-Bassam to Tabou along the coast of the Côte d'Ivoire, if only to say so out loud.

Maps are guilty of distortion, it's true, but I forgive them for it. How could one wrestle the round world down to a flattened image on the page without sacrificing some proportion? The various methods of map projection, from the eponymous Mercator to the orthographic, gnomonic or azimuthal, all cause one continent or another to morph. Just because I grew up seeing Greenland the equal of Africa in land mass doesn't mean I believed them to be that way, any more than I fretted over the misnomer of Greenland, a place white with ice, near Iceland, green with flora. Maps are only human, after all.

Every map tells a story. The picturesque antique ones speak of quest and conquest, of discovery, claim and glory, not to mention the horror tales about exploitation of native populations. Story lines may blur in modern maps, under a welter of natural and manmade features, yet up-to-date maps make great templates for new stories: swept clean of their topographical details, and with various data superimposed, they can make a statement about the voting patterns in the

latest election, say, or the spread of disease at epidemic's first threat.

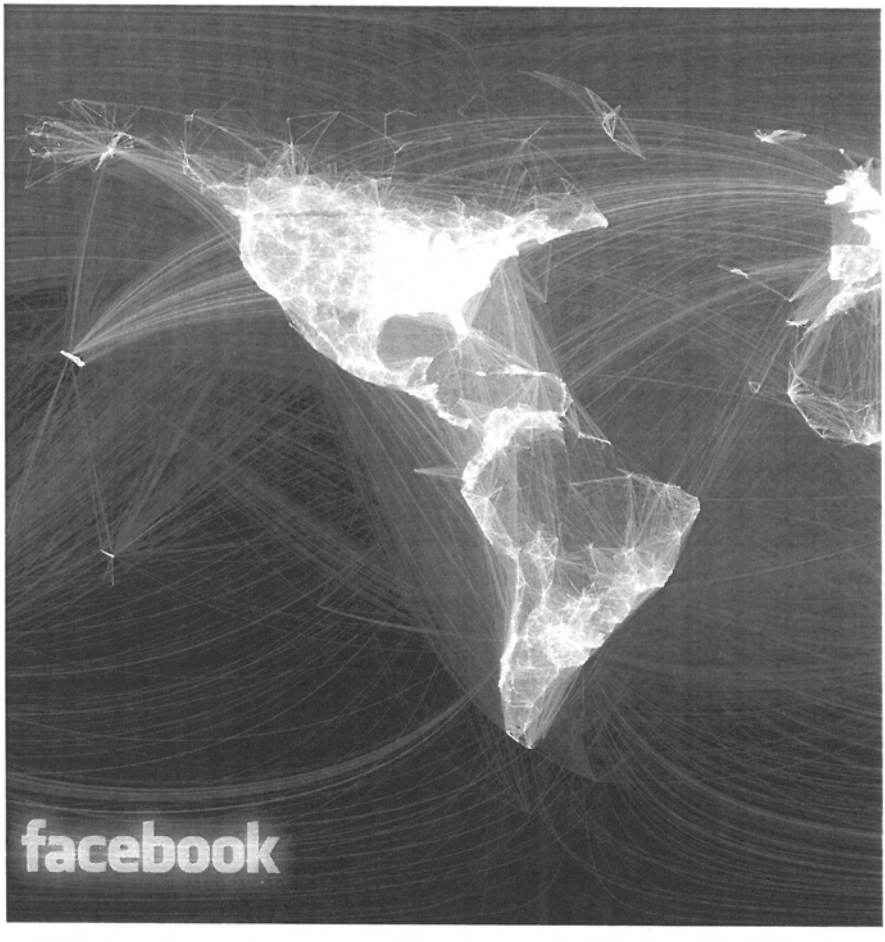
The only thing better than a map is an atlas. Atlas himself, the Titan who once held the heavens on his shoulders, has lent his name to a family of rockets as well as to book-length compendia of maps. I own several of these worthy Atlas namesakes, all requiring strong arms to bear them from shelf to table.

I could enthuse about globes, too, especially the bygone ones built and sold in pairs, one orb for earth and one for sky (also depicted from *above*, with the geometry of all constellations reversed). A globe, though, is merely an inflated, reincarnated map. It starts out flat, as a series of painted or printed gores, and these need to be fitted around and pasted on a ball to make the ends of the earth meet. If maps be the fuel of wanderlust, read on.

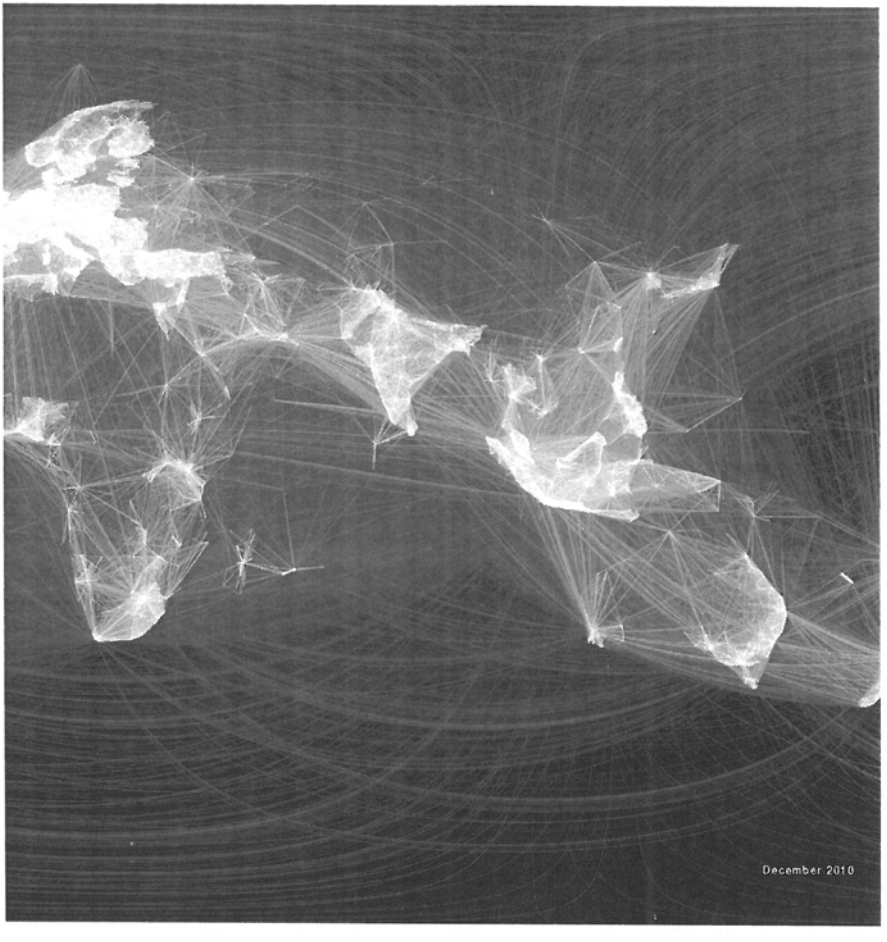
Introduction
The Map That Wrote Itself

In December 2010, Facebook released a new map of the world that was as astonishing as it was beautiful. It was both instantly recognisable – the standard projection produced by Gerard Mercator in the sixteenth century – and yet curiously unfamiliar. It was a luminescent blue, with gauzy lines spread over the map like silk webs. What was odd about it? China and Asia were hardly there, while East Africa seemed to be submerged. And some countries weren't quite in the right place. For this wasn't a map of the world with Facebook membership overlayed, but a map generated by Facebook connections. It was a map of the world made by 500 million cartographers all at once.

Using the company's central data on its members, an intern called Paul Butler had taken their latitudinal and longitudinal coordinates and linked these to the coordinates of the places where they had connections. 'Each line might represent a friendship made while travelling, a family member abroad, or an old college friend pulled away by the various forces of life,' Butler explained on his blog. Facebook had about 500 million members at that time, so he anticipated a bit of a



mess, a crowded mesh of wires (like the back of those early computers) that would culminate in a central blob. Instead, Butler recalled, 'after a few minutes of rendering, the new plot appeared, and I was a bit taken aback. The blob had turned into a detailed map of the world. Not only were continents visible, certain international borders were apparent as well. What really struck me, though, was knowing that the lines didn't represent coasts or rivers or political borders, but real human relationships.'



It was the perfect embodiment of something Facebook's founder Mark Zuckerberg had told me when I interviewed him the year before Butler created that map. 'The idea isn't that Facebook is one new community,' he had said, 'but it's mapping out all the different communities that exist in the world already.'

The digital revolution – so neatly encapsulated by that Facebook map – has transformed mapping more than all the other innovations of cartography's centuries. With our phone

maps in our hands and Google Earth on our computers, it is increasingly difficult to recall how we managed without them. I seem to recall we used to buy maps that folded, or maps that once folded when they were new and then never again. Or that we used to pull down shoulder-dislocating atlases from shelves and thumb through their index, and perhaps wonder at how many Springfields there were in the United States.

That these simple pleasures are becoming distant memories is no small change. For physical maps have been a vital part of our world since we first began finding our way to food and shelter on the African plains as hunter-gatherers. Indeed, Richard Dawkins speculates that the very first maps came about when a tracker, accustomed to following trails, laid out a map in the dust; and a recent finding by Spanish archeologists identified a map of sorts scratched on a stone by cave dwellers around fourteen thousand years ago. Dawkins goes on to speculate as to whether the creation of maps – with their concepts of scale and space – may even have kick-started the expansion and development of the human brain.

In other words, maps hold a clue to what makes us human. Certainly, they relate and realign our history. They reflect our best and worst attributes – discovery and curiosity, conflict and destruction – and they chart our transitions of power. Even as individuals, we seem to have a need to plot a path and track our progress, to imagine possibilities of exploration and escape. The language of maps is integral to our lives, too. We have achieved something if we have put ourselves (or our town) on the map. The organised among us have things neatly mapped out. We need compass points or we lose our bearings. We orient ourselves (for on old maps east was at the top). We give someone a degree of latitude to roam.

Maps fascinate us because they tell stories. The ones in this book tell how maps came about, who drew them, what they were thinking, and how we use them. Like any map, of course, the selection is highly selective, for a book about maps

is effectively a book about the progress of the world: sturdier ships in the fifteenth century, triangulation in the late-sixteenth century, the fixing of longitude in the eighteenth, flights and aerial observation in the twentieth century. And then, in this century, the Internet, GPS and sat nav – and perhaps, through them, a second reshaping of our own spatial abilities.

For the Internet has effected an extraordinary and significant change. Before astronomers faced the gallows for suggesting otherwise, our earth stood firmly at the centre of the cosmos; not so long ago, we placed Jerusalem at the centre of our maps; or if we lived in China, Youzhou. Later, it might be Britain or France, at the heart of their empires. But now we each stand, individually, at the centre of our own map worlds. On our computers, phones and cars, we plot a route not from A to B but from ourselves ('Allow current location') to anywhere of our choosing; every distance is measured from where we stand, and as we travel we are ourselves mapped, voluntarily or otherwise.

Earlier this year, a friend of mine noticed an odd thing on his Blackberry. He was walking in the Italian Alps and wanted to check out contours and elevations. When he turned on his phone his Transport for London bicycle app was open: a handy tool where you put in a London location and it tells you how many bikes are available at each docking station. It was less use in Italy, or so he thought. But, in fact, the app was still working and the map over which Transport for London had overlaid its bicycle info actually covered the entire world. The bikes were only the start of it. It could plot a route to Ravello, Cape Town or Auckland. Wherever he went, my friend *was* the map, the pivot around which the world diligently spun. And the app was no doubt tracking him, too, so that someone knew which Italian mountain he was on, as well as who was riding the bike he had docked the day before.

How on earth did we get to this point? This book is intended as an answer to that question, but it could also be

viewed as a journey around an exhibition. It is by necessity an imaginary show, for it contains things that would be impossible to gather in one place: long-destroyed impressions of the world from Ancient Greece, famous treasures from the world's universities, some jaw-dropping pieces from the British Library and the Library of Congress, rare items from Germany, Venice and California. There will be manuscripts, sea charts, atlases, screen grabs and phone apps. Some exhibits are more important than others, and some are just displayed for amusement. The range will be extensive: poverty and wealth maps, film maps and treasure maps, maps with a penchant for octopuses, maps of Africa, Antarctica and places that never were. Some of the maps will explain the shape of the world, while others will focus on a street or on the path of a plane as it flies to Casablanca.

We'll need a lot of space for our guides: boastful dealers, finicky surveyors, guesswork philosophers, profligate collectors, unreliable navigators, whistling ramblers, inexperienced globe-makers, nervous curators, hot neuroscientists and lusting conquistadors. Some of them will be familiar names – Claudius Ptolemy, Marco Polo, Winston Churchill, Indiana Jones – and some will be less well known: a Venetian monk, a New York dealer, a London brain mapper, a Dutch entrepreneur, an African tribal leader.

You hold in your hand the catalogue to this show, and it begins in a library on the coast of Egypt.