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Why Travelers Go South: North Seems Uphill

By [Bruce Bower, Science News](#) ✉ June 14, 2010 | 6:51 pm | Categories: [Brains and Behavior](#)

People making travel plans may unwittingly heed a strange rule of thumb — southern routes rule. In a new experiment, volunteers chose paths that dipped south over routes of the same distance that arched northward, perhaps because northern routes intuitively seem uphill and thus more difficult, researchers suggest.



Volunteers also estimated that it would take considerably longer to drive between the same pairs of U.S. cities if traveling from south to north, as opposed to north to south, says psychologist and study director Tad Brunyé of the U.S. Army Research, Development, and Engineering Command in Natick, Mass., and Tufts University in Medford, Mass. For journeys that averaged 798 miles, time estimates for north-going jaunts averaged one hour and 39 minutes more

than south-going trips, he and his colleagues report in an upcoming *Memory & Cognition*.

“This finding suggests that when people plan to travel across long distances, a ‘north is up’ heuristic might compromise their accuracy in estimating trip durations,” Brunyé says.

Only individuals who adopted a first-person, ground-level perspective treated southern routes as the paths of least resistance, he notes. From this vantage, one moves forward and back, right and left.

No southern leaning characterized those who assessed routes from a bird’s-eye view. This type of navigation uses the directional terms north, south, east and west.

Real-world experiences underlie avoidance of northern routes, Brunyé proposes. Young children learn that as objects and locations get higher, they become harder to attain. Examples include reaching for a toy on the counter, climbing the stairs and jumping.

An ingrained notion that “up is difficult” then gets applied to other situations. When someone imagines traversing a northern and a southern path, the northern way feels higher and more physically demanding, Brunyé suggests.

Another phenomenon might account for the new findings, remarks psychologist Stella Lourenco of Emory University in Atlanta, who was not involved in the study. From infancy on, people categorize different quantities — say, the numbers 2 and 4 or a big and a small object — as instances of “less than” and “more than.” Also, adults tend to associate larger numbers with “up” and smaller numbers with “down.”

If volunteers equated a northern route’s greater height on a computer screen with “more than” and a southern route’s lower position as “less than,” that could explain a southern bias, Lourenco says.

Brunyé’s group first presented 160 college students with a series of maps on a computer screen showing parts of Pittsburgh or Chicago. Each map contained icons for various fictional landmarks, including an information booth and subway stops. Different-colored lines portrayed routes from one landmark to another, going north to south, east to west, or at angles.

An experimenter asked participants to choose the shorter, faster route to a destination. Some participants took whatever perspective they wanted; others were instructed to take a first-person or a bird’s-eye outlook.

Participants who assumed a first-person stance chose southern routes two-thirds of the time. Most reported no awareness of having favored southern routes.

Students had no preference for eastern or western routes, or for routes that angled in any particular direction.

Further experiments ruled out the possibilities that participants favored left or right turns, perceived northern routes as longer than southern routes or chose southern routes because they liked information located toward the bottom of the computer screen.

Instead, participants rated northern routes as potentially more scenic and requiring more calories to

walk or fuel to drive than southern routes — all signs of perceiving northern routes as elevated, Brunyé suggests.

His team is now examining whether volunteers wearing head-mounted devices that place them in virtual settings prefer southern over northern routes.

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azaraith 6 months ago

Wouldn't some of those be explained partly by which side of the road people drive on? I would take a clockwise route around either example there - If at the "i" and going to the "fork and knife" I would take the Western option. It's all right-hand turns, faster and more efficient.

Like

Reply



engineerd 7 months ago

I'd take all possible paths simultaneously and converge on a destination best suited by the integral of my histories.

Like

Reply



Sanby 7 months ago

"Only individuals who adopted a first-person, ground-level perspective treated southern routes as the paths of least resistance, he notes. From this vantage, one moves forward and back, right and left.

No southern leaning characterized those who assessed routes from a bird's-eye view. This type of navigation uses the directional terms north, south, east and west."

This has me confused. I thought the point was that when something is viewed as 'North' it is perceived to be uphill. So people navigating using the terms north, south, east and west SHOULD show a southern bias. And when taking a first person perspective, there should be no bias. So I'm confused. Are you sure you don't have this backwards?

Like

Reply



ohsoolde 7 months ago



1st

2nd

3rd

4th

5th

6th

Like Reply



ohsoolde 7 months ago

Methinks the directional bias is implanted into the study. Of course people think north is up. Typically that is how north is presented. Lord knows I wish my gottam iPhone would let me rotate the map so it aligns with the direction I am facing.

But back to this study, take away the directional markers, tags, etc., then how do people behave? For instance, most people have at least a modicum of sense of direction when the sun is out, so do people display this southern bias then too? And is it because of directional bias or light bias? There are more interesting and helpful items to learn from a study than how people read maps.

Like Reply



AJ 7 months ago

I find navigating a lot easier if I just remember that the enemy's gate is down.

Like Reply



delahaya 7 months ago

I would think if this is real, it is real for those of us in the northern hemisphere.

Like Reply



malain 7 months ago

I live in Quebec, north of Mass where this study was done. The density of roads here is notably better in Montreal than in the North of the province, and notably less than South of the border. So in this region, if you want to go east or west, the more southern your route, the more alternatives you will have and the straighter your trajectory.

Like

Reply



TiggyTow 7 months ago

OK, that makes a lot of sense when you think about it.

anonymity.au.tc

Like

Reply



johannesvc 7 months ago

A map laying on a flat surface in front of you might generate other behaviour than in an upright position.

Some maps don't have north up, and others are designed in a way that makes turning them around and changing perspective feels more natural. Those are essential parameters as well no?

I can imagine that an upright positioned map engenders this bias, but this shouldn't be generalised (except if you say "AMERICANS feel like North is uphill" hahah).

Like

Reply



johannesvc 7 months ago

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Like

Reply



catchersmitt0 7 months ago

Is this southern bias observed in Chile or Australia? Or do people in the southern hemisphere exhibit a northern bias? Or didn't the researchers think of checking?

Like

Reply



pts 7 months ago

I don't feel this way at all about elevation. Coming from the Northern Hemisphere (Canada) however, north does feel "cold" vs the feeling of "warmth" in the south. Now that I am living in Australia, I am able to make the switch quite naturally on the temperature scale.

-PTS

www.partimescholar.com

Like

Reply



RobWhittlestone 7 months ago

"An ingrained notion that "up is difficult" then gets applied to other situations. When someone imagines traversing a northern and a southern path, the northern way feels higher and more physically demanding, Brunyé suggests." -- Surely this only applies to the MAP (north is up). Landscape has no intrinsic upness other than higher (hill)/lower (valley).

Does this apply only to the northern hemisphere? Is the behaviour of people in the southern hemisphere reversed?

Were the people tested in unfamiliar or fictional territory with maps where south is up? IMHO this study appears to lack scientific rigour.

@onlyonetimeuse BTW "only right turns" is only advantageous under US traffic rules.

Like

Reply



DJ 7 months ago

Absolutely - here in the UK, driving north to Yorkshire always feels uphill. South to Cornwall definitely an easier way down.

However, west and south, is not only downhill, but is also heading to the sun, probably an even stronger motivation, at least in my case.

I'd like to live south of the equator for a while, to see if north feels downhill. I suspect I'd be travelling NW instead of SW.

Like

Reply



purvisa 7 months ago

It's probably related to the idea of moving toward lower latitudes. After all, lower = down, right? People likely take longer when

traveling through the doldrums, as well. We have to account for language. We really need to consider re-orienting (literally and historically) our maps; that way people will all come to the West and alleviate the overcrowding in Asian countries.

Like Reply



GabachoMike 7 months ago

And to think these people have a license to drive too...unescorted, IN public.

Like Reply



samagon 7 months ago

I usually go south when I travel cause it is colder the farther north you go.

Like Reply



netmask 7 months ago

Well down here in Australia most travelers go North towards the warmer climes - so maybe it's about climate rather than up hill down hill? (PS it still seems uphill going North!)

Like Reply



oiseeyou 7 months ago

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Like Reply



Xylenz 7 months ago

Are people really this dumb?

Like Reply



onlyonetimeuse 7 months ago

Which ones are the starting points and which ones are the ending? I would take the red routes (in east vs west going from i to eatery, and in north vs south going to old town) since that is the most optimal driving route (only right turns) :)

Like Reply



stagolee 7 months ago

Better still. Put real people in real environments and see if the patterns persist.

Like Reply



stagolee 7 months ago

"Participants who assumed a first-person stance..."

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Lame.

.

"His team is now examining whether volunteers wearing head-mounted devices that place them in virtual settings prefer southern over northern routes."

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That's more like it. Report back with THESE findings.

Like

Reply

Reactions



sgnpkd 7 months ago



From [Digg](#) via [BackType](#)

That's why I use Google Earth.



nimendeshijie 7 months ago



From [Digg](#) via [BackType](#)

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robotlovemachine 7 months ago



From [Reddit](#) via [BackType](#)

I'm guessing they used maps displayed on a computer screen. Place the map flat on a table, repeat the experiment, and then interpret the

results.



diegoconfuego 7 months ago

 From [Digg](#) via [BackType](#)

I wonder if people in the southern hemisphere tend to drive north?... and do the people who live on the equator just tend to drive in circles?



jaysont34 7 months ago

 From [Digg](#) via [BackType](#)

I think he was joking about the weather being the reason...



stoicsmile 7 months ago

 From [Reddit](#) via [BackType](#)

I didn't really get the idea from this article that it had anything to do with going "uphill" or "downhill". Just that people tend to choose Southern routes. It seems like the author drew the uphill/downhill conclusion and then found a psychologist who agreed with him. You'll note that the psychologist he spoke to was not involved in the study he is citing.



GMofOLC 7 months ago

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No, it's because the only thing north is Canada.



mai9 7 months ago

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also, people who want to travel in time, start walking backwards.



Spire3660 7 months ago

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and unimaginably fantastic at the same time.



darkstar107 7 months ago

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The real reason is that they can't fathom the awesomeness that is Canada. :)

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