



Says

What have we heard them say?
What can we imagine them saying?



Thinks

What are their wants, needs, hopes, and dreams?
What other thoughts might influence their behavior?



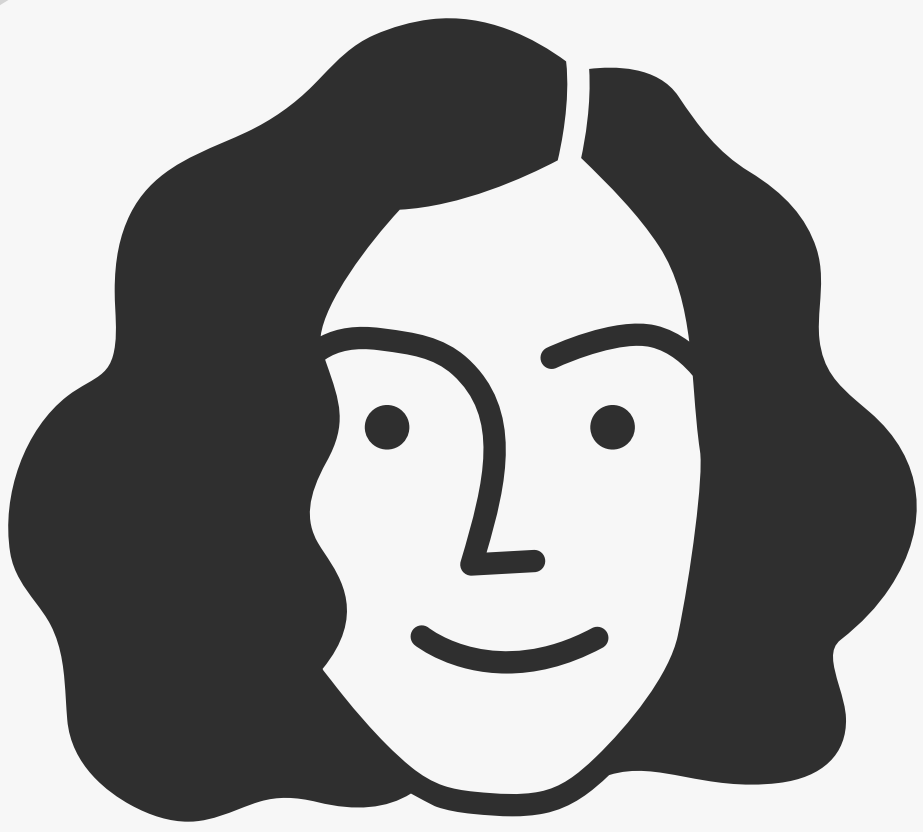
Feels

What are their fears, frustrations, and anxieties?
What other feelings might influence their behavior?



Does

What behavior have we observed?
What can we imagine them doing?



Hariharasudhan

The global air transportation network

The Transportation Clusters infographic is a force-directed map of the 3,275 global airports

Mapping the connections between all the airports worldwide is a fascinating network visualization exercise.

Designed by Martin Grandjean, each bubble represents an individual airport and the bubble sizes represents the number of flight routes (37,153 routes in total)

People travel not just more frequently, but increasingly far and quickly.

This post (which may be followed by further experimentations in this area) is an attempt to make explicit the network behind air transport.

The structure of the relationships has an impact on the spatial distribution of nodes in a graph. Let's see how this landscape is reorganized without geographical constraints.

This "map" is the result of the application of a force-directed layout algorithm on a graph of 3,275 airports (37,153 single routes – the weighted total is higher because many airlines take

Naturally, network geography is not completely disrupted: the continents are mostly visible and regions are generally in their original position

(with the exception of the Pacific islands that connect Asia and America – imagine this graph in three dimensions, with the Pacific Ocean behind), FC

Major observations: India is more connected to the Middle East than to South and East Asia. The Russian cluster is very visible, connecting airports in Russia but also in many former Soviet republics. Latin america is clearly divided between a South cluster and a Central American cluster very connected with the U.S.

The force-directed layout spaces the bubbles apart so there are no overlapping bubbles. The color coding is a color spectrum based on longitude, and generally groups airports from the same continent together

The total number of flights is much higher than the number of routes because many airlines share the same routes. I would like to see a version that weights the connecting lines with the number of flights that share that same route.