

A decorative network diagram in the top-left corner of the slide. It features a complex web of interconnected nodes and edges. The nodes are represented by small circles, some of which are solid blue, some are solid grey, and some are hollow with a blue outline. The edges are thin grey lines connecting the nodes. The overall structure is a dense, interconnected graph.

IDS564

Social Media and Network Analysis
Project

Refugee Immigration Network

Siddhesh Tiwari

A decorative network diagram in the bottom-right corner of the slide. It features a complex web of interconnected nodes and edges. The nodes are represented by small circles, some of which are solid blue, some are solid grey, and some are hollow with a blue outline. The edges are thin grey lines connecting the nodes. The overall structure is a dense, interconnected graph.

Agenda

Motivation

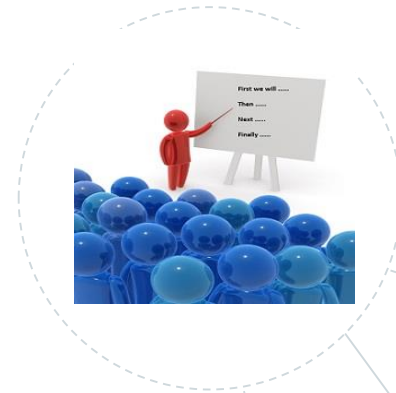
Data & Network Description

Big Picture

Network Measures Employed

Insights – Communities

Takeaways



Motivation

Identify the Migration patterns in Refugees across the World

Identify Key Nodes (Countries)

Shifting focus to actual





206

Total # Countries between '80 and '14

153

With at least 1000 Migrating Refugees

12+ Million

Migrated from **Afghanistan** between 90 and 91

Data & Network Description




Data

Column
Year
Country / territory of asylum/residence
Origin
Value
lat_dest
lon_dest
lat_org
lon_org
weight

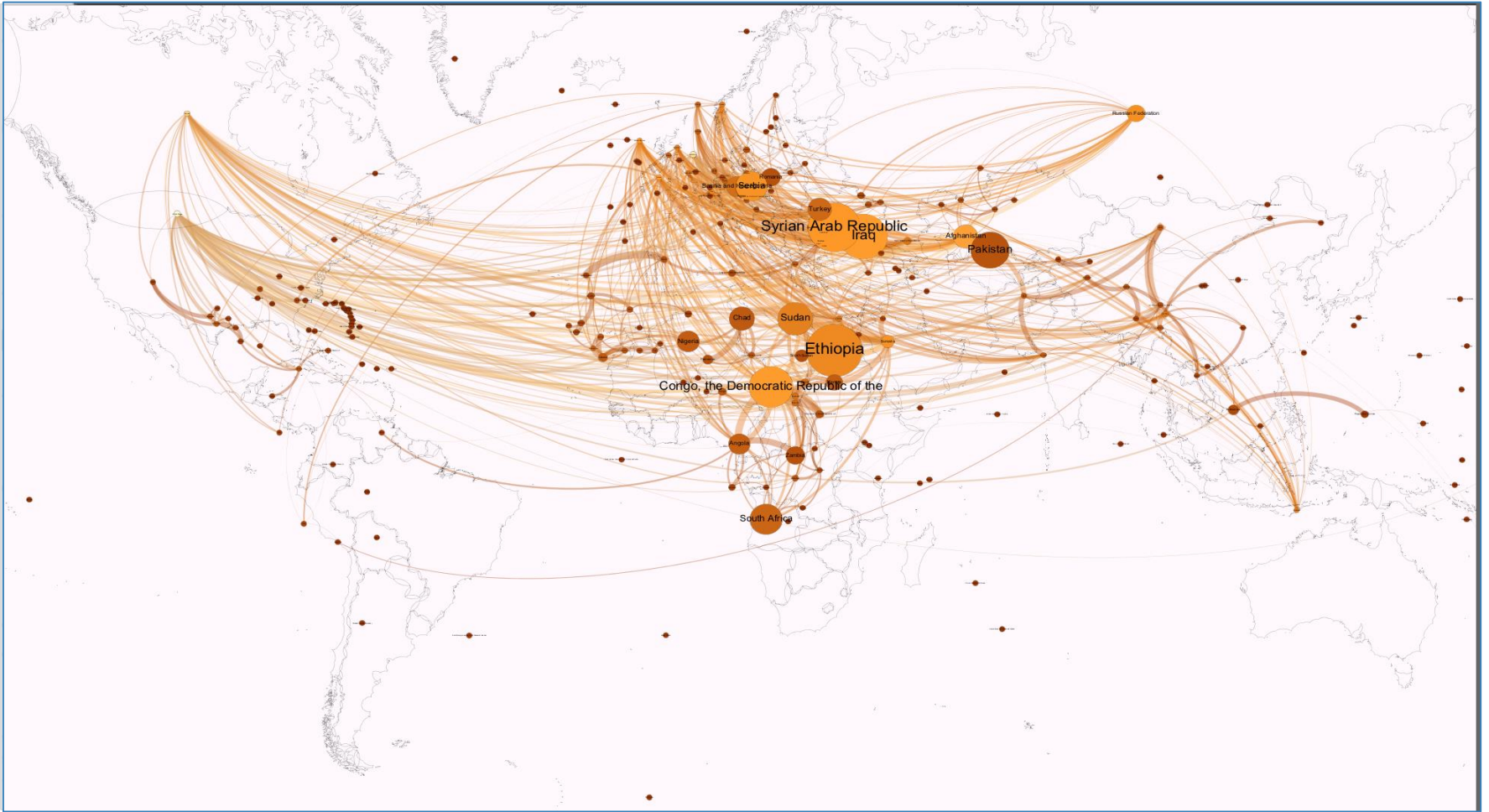
Network

UN Refugee agency has data since it's inception has information regarding movements/displacement of people across the globe

We are looking at the subset of refugee data from 1980 - 2014



Origins of Return Migrants since 1980



Over Time

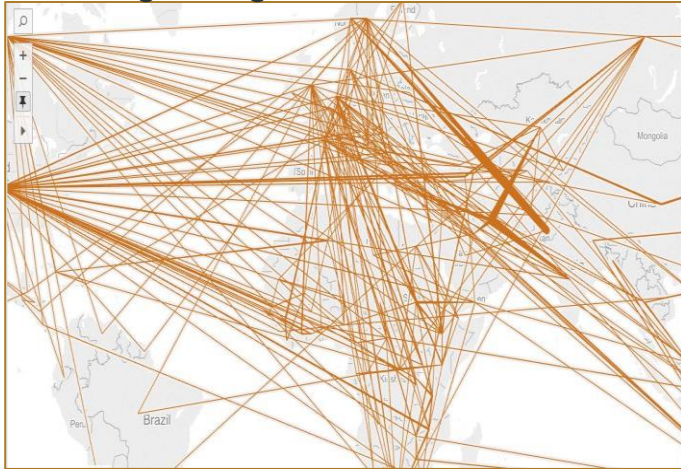
Refugee Migrations from 1980 to 1985



Refugee Migrations from 1980 to 1990



Refugee Migrations from 1991 to 2000

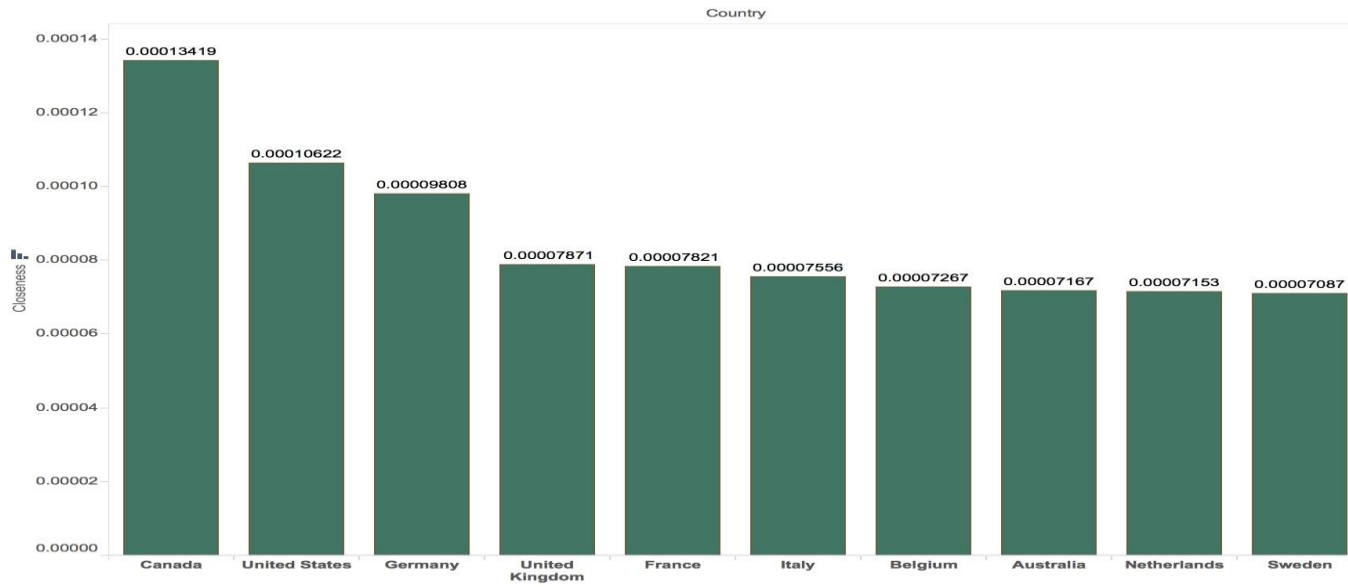


Refugee Migrations from 2001 to 2014

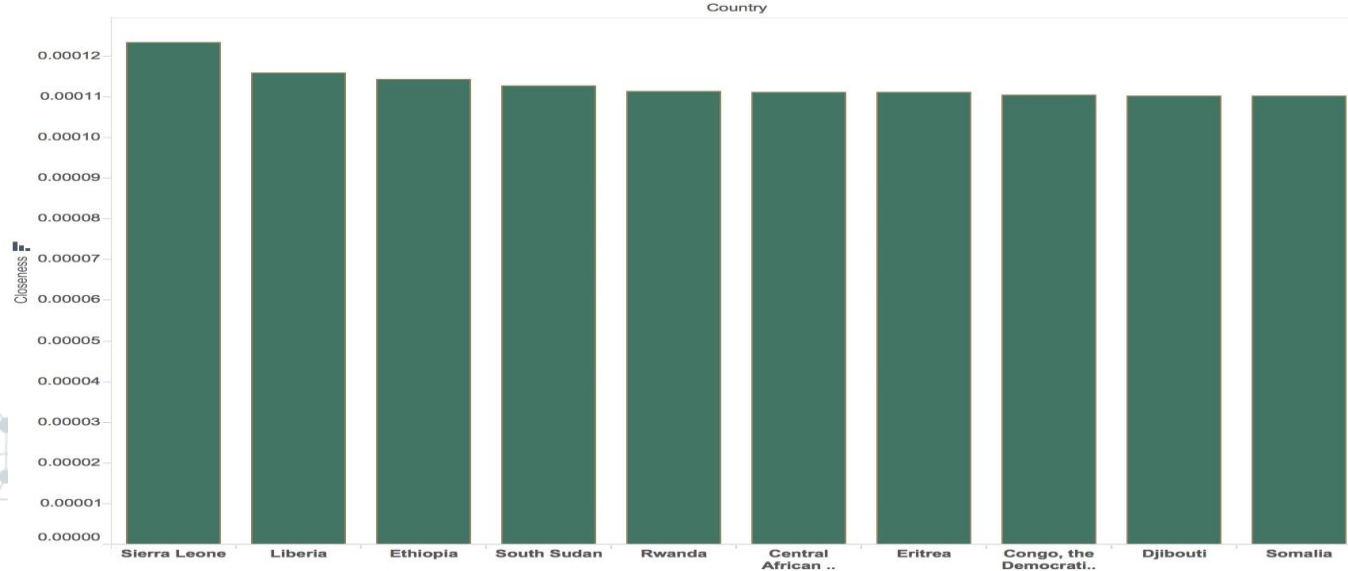


Top 10 Countries By: -

Closeness In:

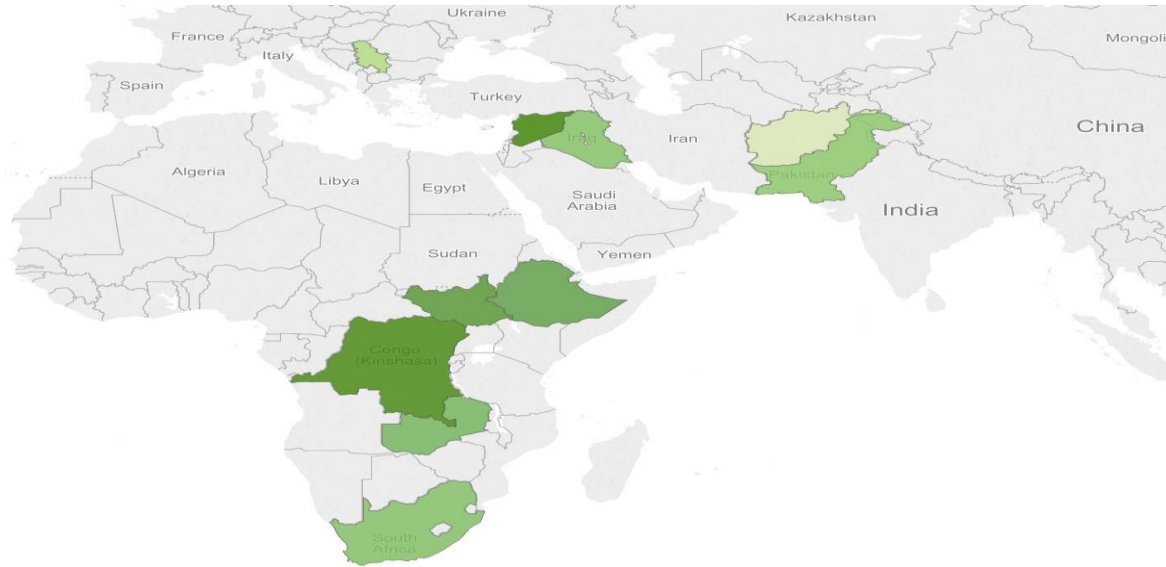


Closeness Out:

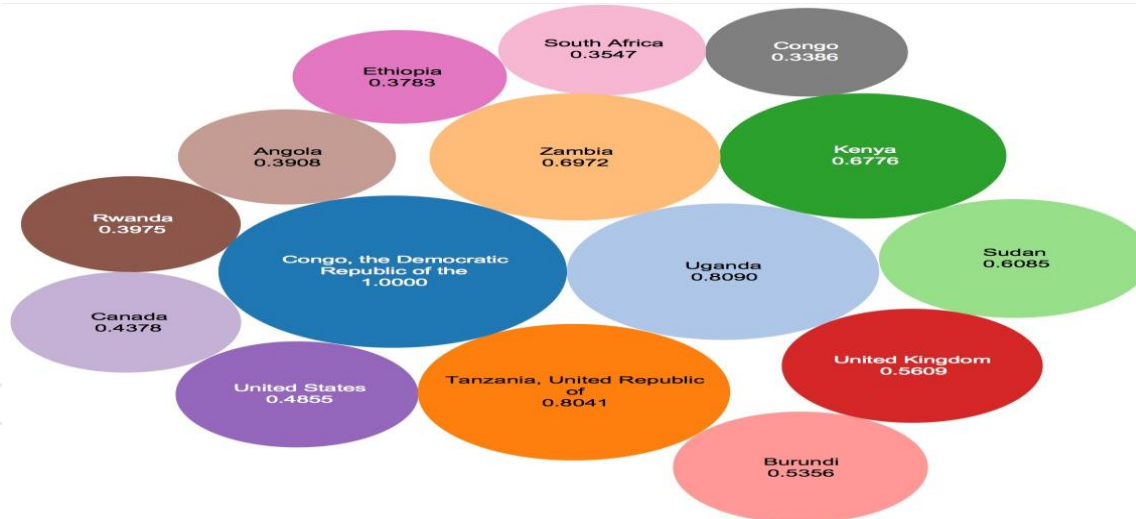


Top 10 Countries By: -

Betweenness:



Eigenvector

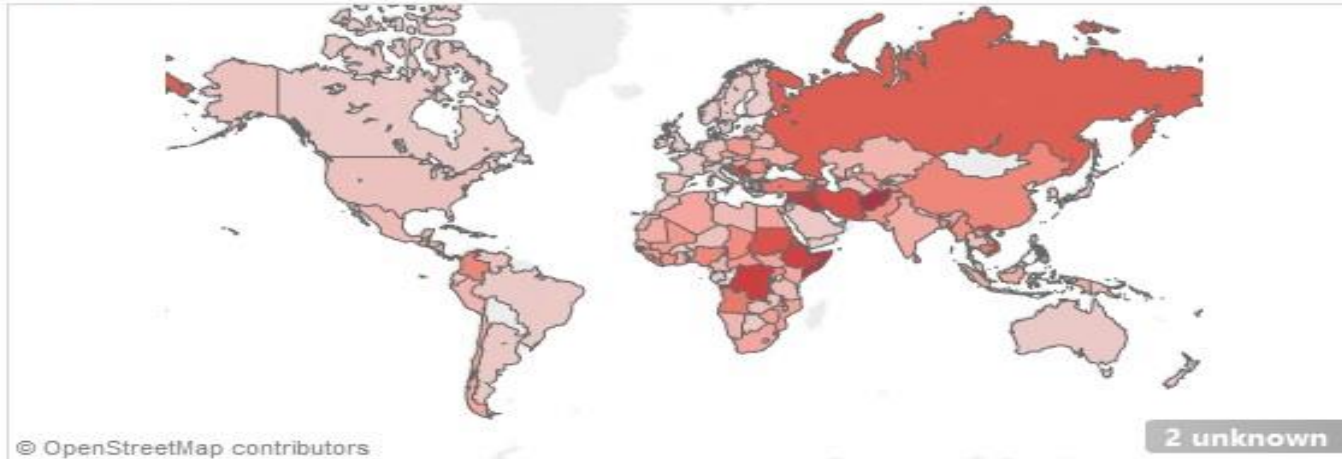


Betweenness

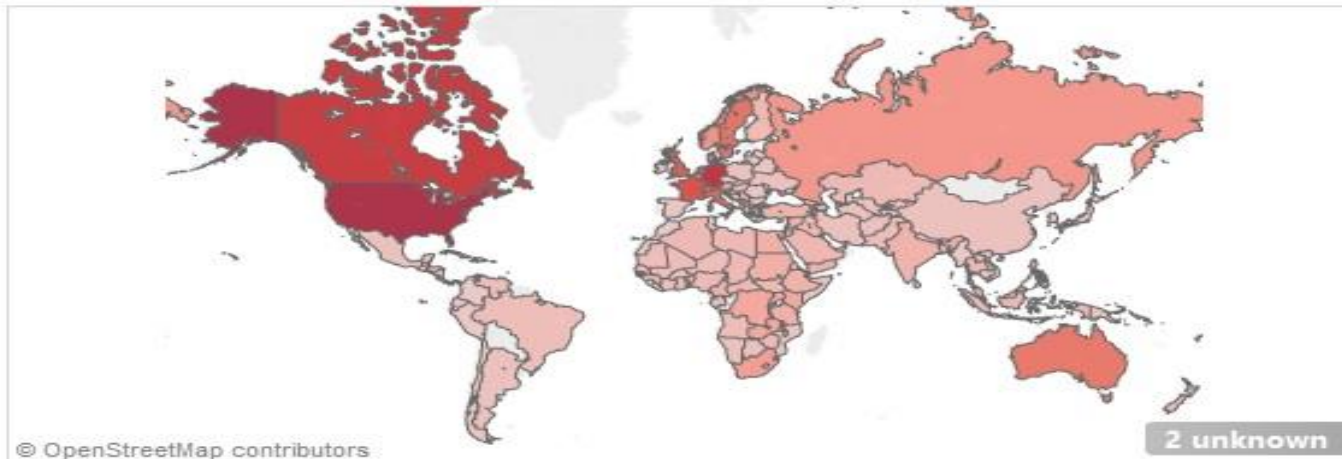
Syrian	1703
Congo	1660
South Sudan	1526
Ethiopia	1443
Zambia	1270
South Africa	1169
Iraq	11156
Pakistan	1097
Serbia	887
Afghanistan	702

Degree Centrality

DegreeOut



DegreeIn



Network Centralization Index

A decorative network diagram in the top right corner of the slide. It features a complex web of interconnected nodes and edges. Some nodes are represented by solid grey circles, while others are hollow circles with a dot inside. The edges are thin grey lines, some of which are solid and others are dashed, creating a sense of depth and connectivity.

The network centralization index confirms some structural differences between senders and receivers

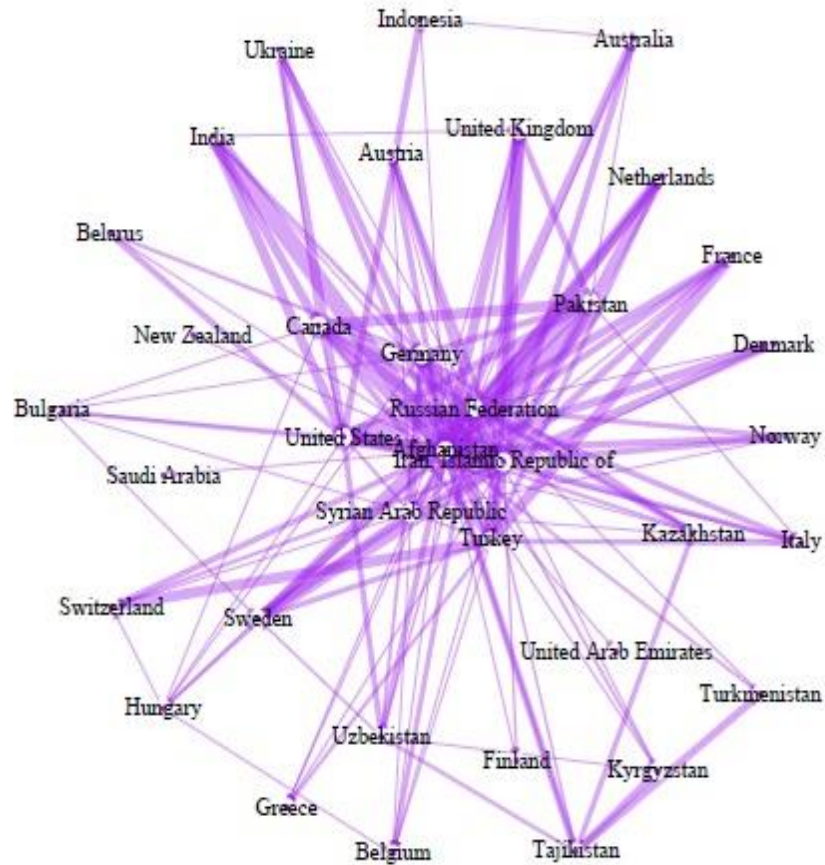
Out-degree centralization of **19.58%**

In-degree of **40.63%**

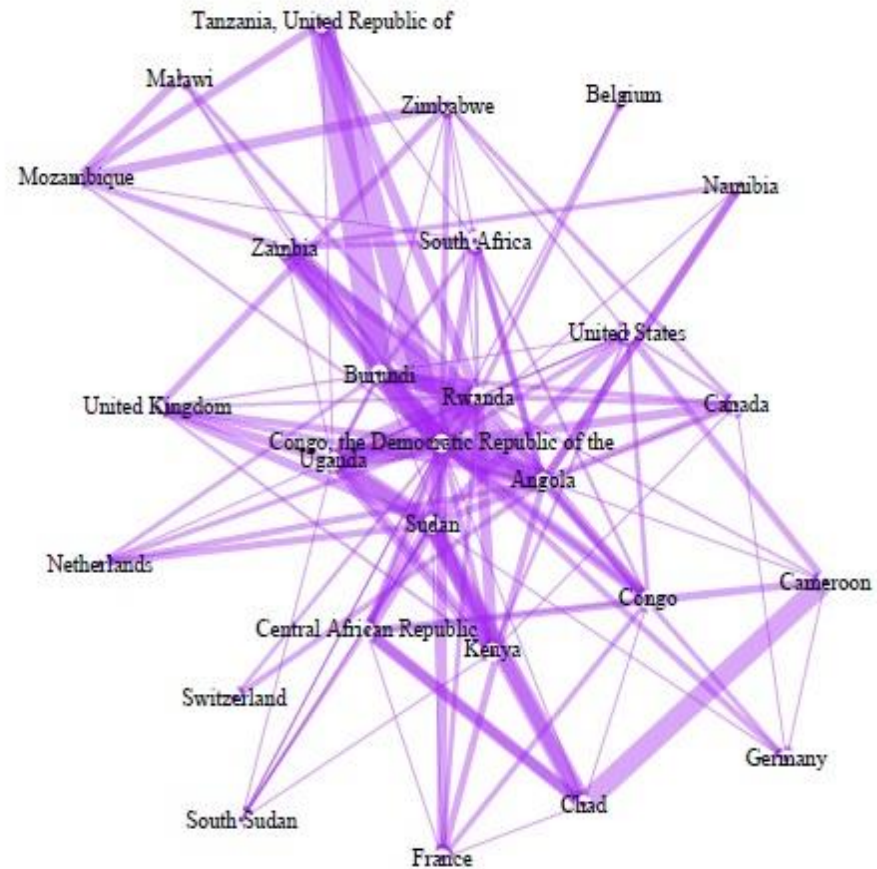
A decorative network diagram in the bottom left corner of the slide. It shows a smaller, more localized cluster of nodes and edges compared to the one in the top right. The nodes are a mix of solid and hollow circles, and the edges are thin grey lines, some solid and some dashed.

Comparing two key Nations

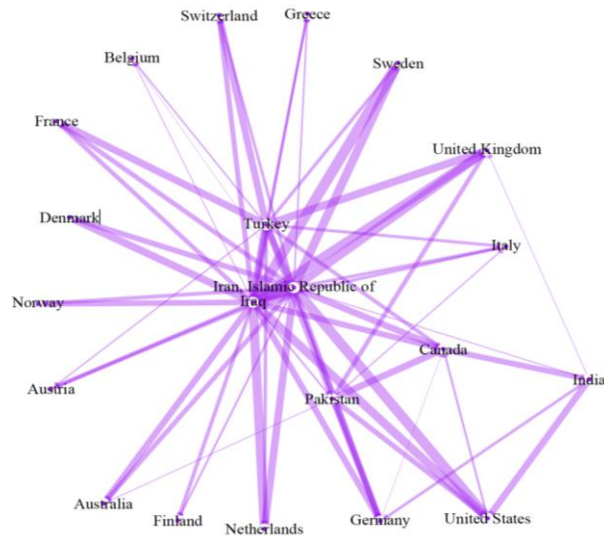
Afghanistan



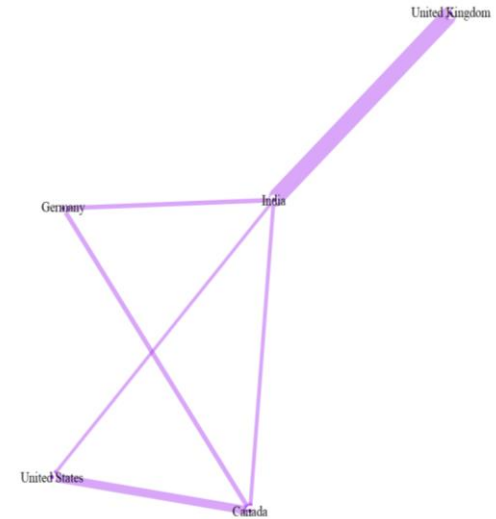
Congo



Neighboring Nets– Developing Nations



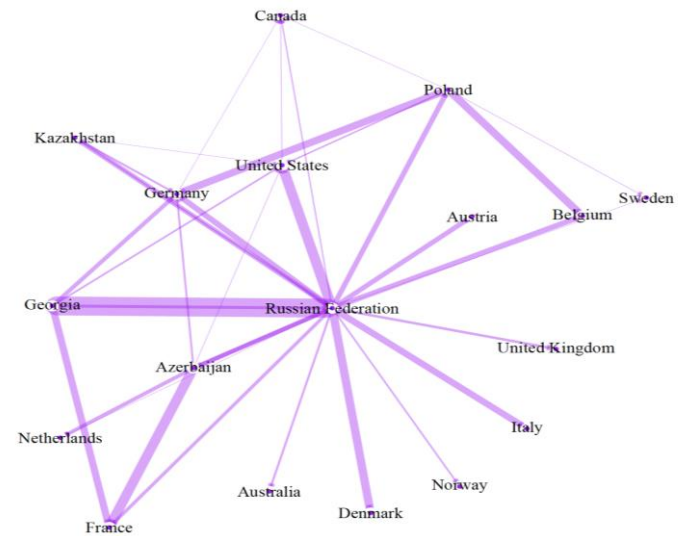
Iran



India

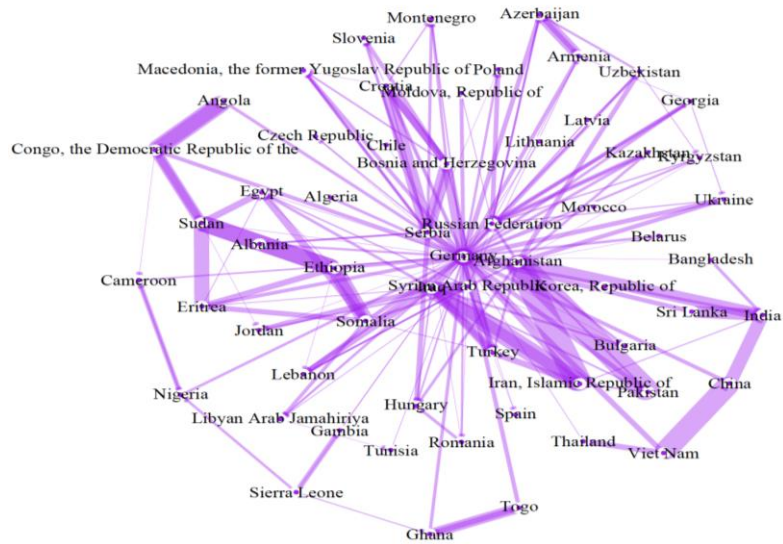


China

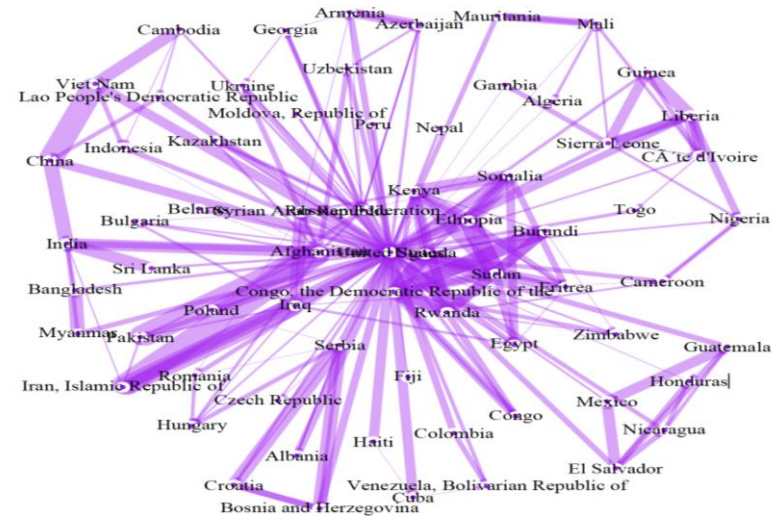


Russia

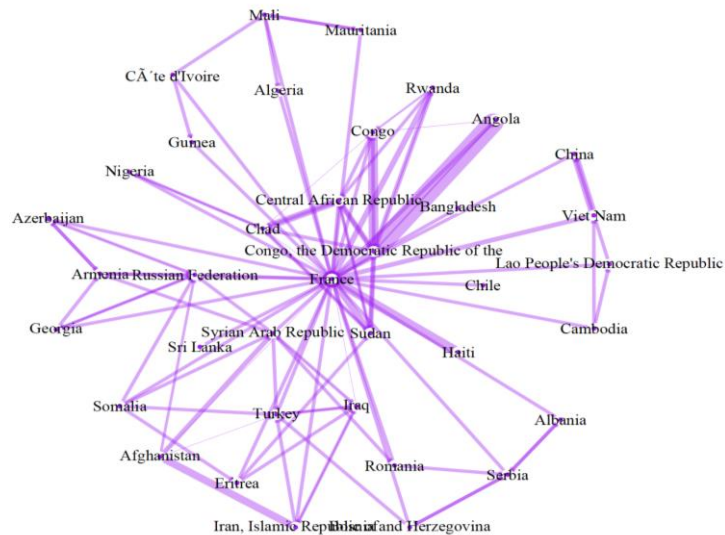
Neighboring Nets– Developed Nations



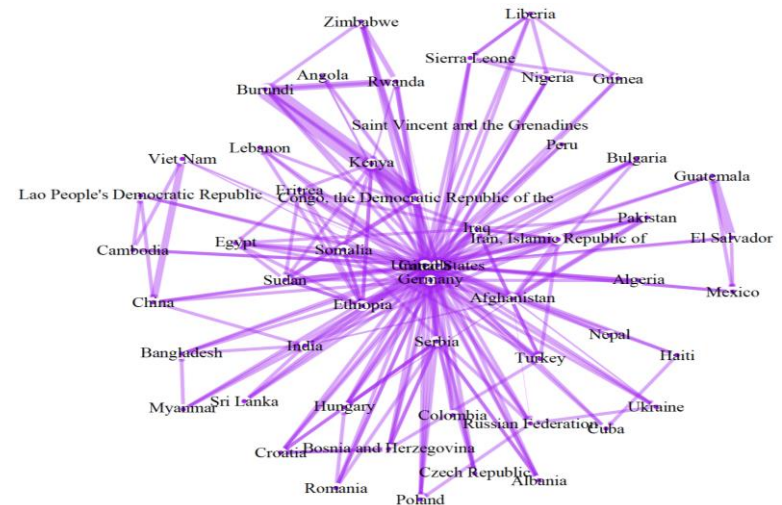
Germany



United States



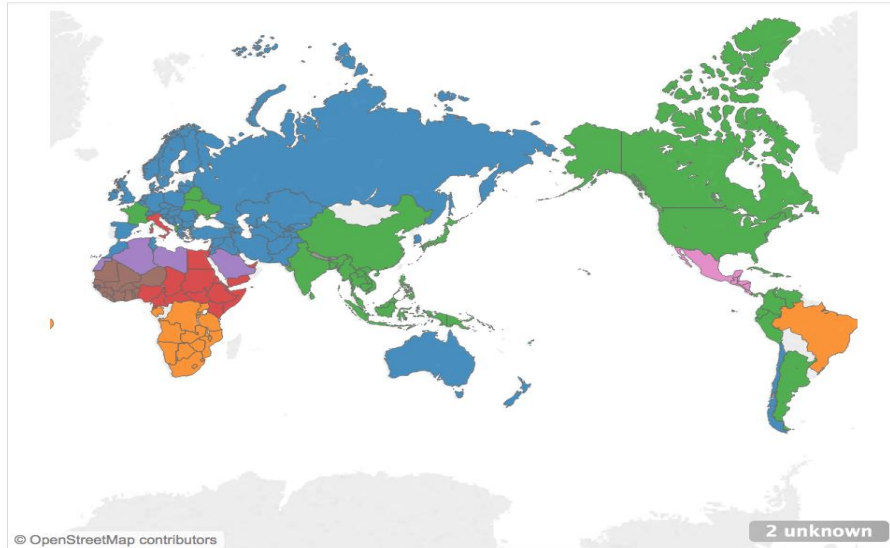
France



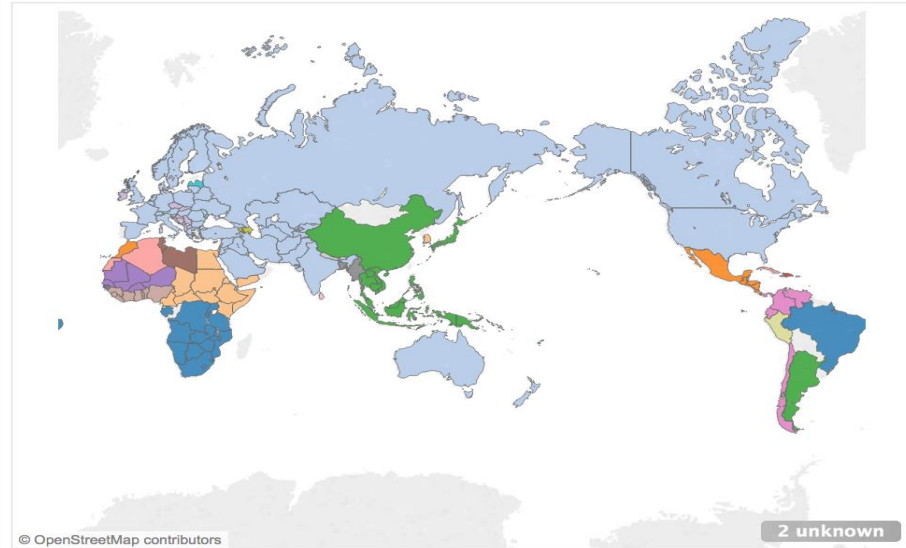
Canada

Communities

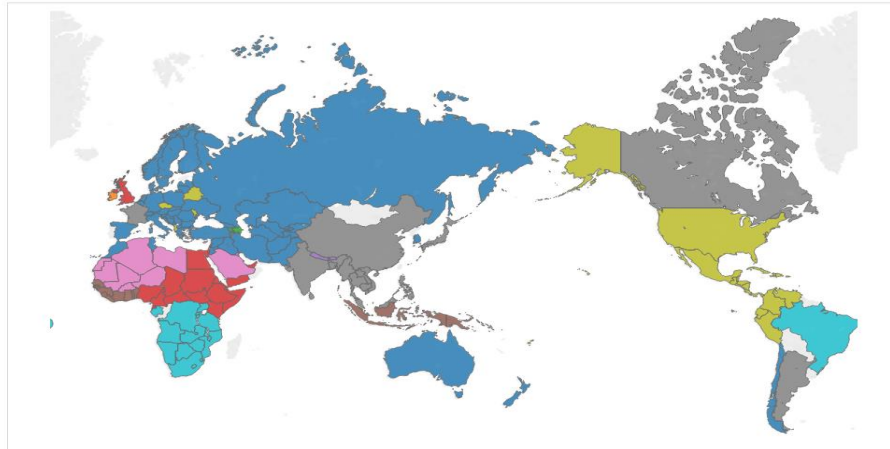
Fast



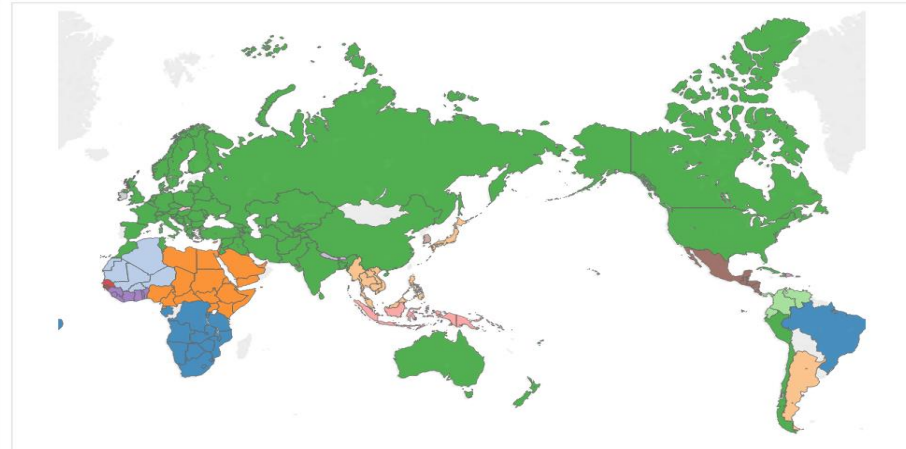
LabelProp



SpinGlass



WalkTrap



Takeaways

Geo-political and Military factors:

Multinational conflict

Social revolution

State implosion (postcolonial conflicts, mainly)

Other categories :

Bureaucratic choices made by governments

Diplomatic international relations

The absorption capacity of the local host community

National security considerations





Thanks!

Any questions?

