**To: MIDS W201 RDADA Class, Section 5**

**From: Natarajan Shankar**

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**Subject: Contrasting two visual presentations of “Worldwide Origins/Destinations of Immigrants and Migrants”**

Immigrants and Migrants have recently been prominent in the news thanks to Syrian civil war, Brexit and the upcoming US elections. People movement is a worldwide phenomenon.

In this memo, two Internet presentations on the topic of Immigration/Migration are compared. Both are intended for similar audiences, use interactive maps, and depict total number of international migrants, while qualifying immigrants (one who enters a destination country) and emigrants (one who leaves an origin country). The data in each is granular by country, and covers time series data indicating country wise trends.

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| **Comparison Attribute** | [**Net Number of Migrants by Country, 1950-2015 (by Five-Year Intervals)**](http://www.migrationpolicy.org/programs/data-hub/maps-immigrants-and-emigrants-around-world) **(4th visual graphic on this page)** | **Comments on Migrationpolicy.org presentation** | [**http://www.pewglobal.org/2016/05/17/global-migrant-stocks/**](http://www.pewglobal.org/2016/05/17/global-migrant-stocks/) | **Comments on Pew Group presentation** |
| **User control of dynamic features** | The “keep only” and “exclude” buttons add no useful functionality. | **Clicking on a country on the map does not have the desired effect and ends up masking data**  **The allowed use of the mouse to create a zoom in view makes the image fuzzy and reveals no additional data** | With additional radio buttons that require additional clicks, data on immigration and emigration is clearly available and presented. | **Clicking on a country name provides country specific data.** |
| **Complex data presented with clarity and efficiency, judicious use of color** | The “single finger swipe” causes a zoom in or zoom out that makes the chart unusable. Recovering from this unusable state is not an easy task. | **The use of bar graphs to show multi-year numbers on the same page is useful to visualize long-term trend.**  **The use of a heat band to show contributing countries, is clever.**  **However, the poorly chosen hue dimension dilutes the above advantages.** | Net-number-of-migrants data is very well presented in a table.  **Color codes are not intuitively ordinal.** | **Choosing a more ordinal color scheme (low wavelength to high wavelength) will have added value. Current use of analogous colors is not a positive, Complementary or split-complementary colors would have added a lot more value** |
| **Make these large data sets coherent** | **Lack of sub color schemes for distinguishing Immigration and Emigration** | The major migration types (Immigration and Emigration) are not distinguished. | **Use of different color scales for Immigration and Emigration is nice.**  However, color use is inconsistent but tolerable. | **All major migration types (Immigration and Migration) are identified** |
| **Reveal the data at several levels, top to granular, data and graphics layering and separation** | Optimal number of data layers is available. Top level is intuitive. | **Data visualization levels below the top levels are hard to access but do have granular data** |  | **Optimal number of visualization layers are available. Top level is intuitive, lower levels easy to access and interpret** |
| **Data to ink ratio** | **Use of a hue for the ocean colors is a waste of ink** | **Tufte will have a lot to say about the waste of printer ink to display oceans!** | **Use of clear white for the oceans is a very optimal way to represent** | **Printer friendly!** |

*Footnote 1: Because visual presentations vary depending upon context and usage, in order to make a fair comparison of data visualizations, this paper focuses on the same topic as presented by two independent entities and intended for similar audiences so that only the data visualization parts could be compared.*

*Footnote 2: The use of dynamic web based charts is a great way to clarify and communicate big data. The ability to adjust variables and interpret the data in real time makes this form of data visualization to be very powerful. Many of Tufte’s guidelines have been adapted in this write-up to accommodate the widespread trend towards web (non-printer) analysis. This write-up has gone into the realm of data clarity, visualization clarity and especially visualization clarity issues that are very web centric.*