

Map design relies on the role of the graphic designer. Without a better understanding of how the mind interprets and responds to certain shapes and colors, we would not be able to travel with the level of efficiency that we do today. Wayfinding and map design can be found in nearly every public area that we go to. This report will cover the types of wayfinding that are used throughout the world, print or interactive, and what makes for the most successful approach. Ways that mapping systems can become more innovative and aid in better traveling experiences will also be looked at.

Since the beginning of time, humans have been using maps and symbols to help them wayfind. Symbols were first drawn in caves to help guide people thousands of years ago. Paper maps were first created to navigate cities. Now, maps are becoming more innovative with the progression of technology each day. So is there anything left that we have not done? Yes. Maps have most always been about how to get from point a to b. Something that we have yet to really delve into is creating a mapping system that is meant to give options or find us a new pathway. It could give the user better alternative choices or more enjoyable routes based on what the user is looking for that day. How is this possible? We will look at the ways we use and understand navigational materials today, and apply them into this concept for the future.

Through studies of public interest in the community, we can make maps less about point a to b and more about finding a new journey along the way to where you are going. Before one can begin doing that we need to know as much as we can about what routes people enjoy traveling on most. Daniele Quercia has been teaming up with Yahoo to study this very thing.

They digitally crowdsourced images to study which locations were liked best or seen as the happiest. Individuals were shown images of urban scenes around London and surveys were taken on which were the most beautiful or most favorable. They have been working on an interface that will allow these images to be available online for users to provide feedback on. Eventually, their goal is to have a map system similar to Google streetview, but allow users to add different images of these views to provide better feedback to the user. Their study is still being developed but this could be one step closer to achieving a better traveling experience.

I also conducted a study on whether a mapping system should be going in this direction or not. The feedback I was provided with was that it depended on the situation or circumstances an individual was put in that day. Some days, a person may be running late and may just need to get to their location as fast as possible. One suggestion on improving the proposed reroutes during high traffic times could be calculated based on communication or better tracking of those taking different nearby routes at that time. This could help to evenly distribute travelers and help reduce the amount of accidents each year. To better decide which type of day the user was having, the application could allow for the user to choose this option before selecting a route.

How we operate along these routes also important to know in order to break out of the point a to b travel. Learning how each of us navigate can aid in finding the best personalized experience for each user. This can vary greatly depending on familiarity and one's sense of direction. With a low amount of either, navigating can prove to be very difficult for some. Some studies have went so far as to say that even sexual differences can play a role in how we travel. One scientist by the name of

Lawton, found that men navigated easier with mapping systems and women were better with using landmarks to direct them. Information like this is very necessary in creating the most effective navigation system. Knowing this, we can create a better system of signage on the road that could coordinate with the application seamlessly.

When redesigning a wayfinding system, we must also look at how signage is perceived by the public in order to be effective. Those of the elderly population usually tend to experience more problems when trying to comprehend road signs. Timeliness of driver decision making and lack of information can also have a major impact on how effective a sign is. That is why environmental graphic designers, or EGDs are so important. They must figure out the simplest way to direct drivers while also keeping the look of the sign attractive. Keeping a consistent color and type system in place is very crucial, while also using the correct semiotics that the public understands.

Studying effective landmarks and creative wayfinding is just as important as the application we use to guide us. The best type of signage is the one that is placed strategically, can be easily interpreted and almost acts as if it is part of the landscape. Physical maps, street numbers, signs used in hospitals and sports centers all fall under the realm of EGD. Consistency is key when incorporating wayfinding and app design together into one system. Including the same color as well as good descriptors into a map application can provide an extra level of ease for the user. A universal design system for all hospitals is an important example that could help us also better recognize centers for emergency and cause less confusion amongst the public.

Google is one of the most advanced mapping systems we have to this day. Before the year 2004, we used printed maps from mapquest or we bought maps from the store to guide us along the road. Each year since then, Google has slowly integrated better and more innovative technology into their system. Currently, they are working on incorporating AR into their map interface. One aspect of this would include real-time walking mode to give turn-by-turn directions.

How have they continuously improved? Through studying users search information and how people use their mapping system while using some of the best developers out there. Some studies that have been conducted so far show that mobile wayfinding is used collaboratively, or with more than just one person. More often than not, there will be a narrator and a scout. The scout is the one doing the driving and the narrator will read off the device and direct. The level of communication while navigating can also greatly impact the ease of travel. The pair could interpret the map or one other differently.

Once we have all of the research successfully conducted, we can enjoy the benefits this new form of navigation could bring us. Getting away from the same basic path could amount to a mini vacation for some. It allows us to explore new places without having to go too far away. Getting away and taking breaks or small vacations have been proven to increase productivity and happiness of most individuals. Allowing for a mapping system that can give a new experience each time we are on the road could benefit our overall health. Various studies have shown that travel is an important factor in reducing work and family related stress. Many Americans are putting more hours into their career each year and some are not able to afford an extended vacation. Getting the chance to have a mini break can also

help us to learn more about the city in which we live in while we are preventing burnout from life's everyday duties. In the process of finding new places to go, this can also help to grow the economy and build better business for companies around the world.

As technology progresses each year, we become less focused on enjoying our surroundings and more into what is going on on our phones. Making our traveling experiences more about the journey and less about how we can get somewhere quickly is one way in which we can improve driver safety and our overall quality of life. Making our navigational systems more customized, comprehensible and cohesive for each person is a step in the right direction. I have faith that one day we can reach this advancement in technology and reconnect with the world around us again.

Bibliography:

Cain, K. (2012, June 29). The Negative effects of Facebook on communication. *Social Media Today RSS*. Retrieved from <http://socialmediatoday.com>

Owen, William. (2008). Mapping Graphic Navigational Systems. *Rockport Publishers*. pp. 2-10.

Emmett, Robert. (2011). Interacting with Maps: The Science and Practice of Cartographic Interaction. *Robert Emmett Roth*. Retrieved from https://etda.libraries.psu.edu/files/final_submissions/5139

Prestopnik, Jilian L. & Ewoldsen Beverly Roskos. (2000). The Relations Among Wayfinding Strategy Use, Sense of Direction, Sex Familiarity, and Wayfinding Ability. *Journal of Environmental Psychology*. Retrieved from http://www.academia.edu/18167623/THE_RELATIONS_AMONG_WAYFINDING_STRATEGY_USE_SENSE_OF_DIRECTION_SEX_FAMILIARITY_AND_WAYFINDING_ABILITY

Burns, Peter C. (1998). Wayfinding Errors While Driving. *Journal of Environmental Psychology*. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0272494498900779?via%3Dihub>

Calori, Chris and Vanden-Eynden, David. (2015). Signage and Wayfinding Design. *John Wiley & Sons, Inc.* pp. 12-15.

Quercia, Daniele. (2014). Happy Maps. *TED*. Retrieved from https://www.ted.com/talks/daniele_quercia_happy_maps?language=en

Reilly, Derek, Mackay, Bonnie, Watters, Carolyn and Inkpen, Kori. (2008). Planners, navigators, and pragmatists: collaborative wayfinding using a single mobile phone. *Springer-Verlag London Limited 2008*. Retrieved from https://www.researchgate.net/publication/220141509_Planners_navigators_and_pragmatists_Collaborative_wayfinding_using_a_single_mobile_phone

Muehlenhaus, Ian. (2013). Web cartography: map design for interactive and mobile devices. *CRC Press; 1 edition* pp. 15-16, 24.

Gibson, David. (2009). The Wayfinding Handbook: Information Design for Public Places. *Princeton Architectural Press*. Retrieved from

<https://ratnacahayarina.files.wordpress.com/2014/02/david-gibson-the-wayfinding-handbook.pdf>

Gabriel Henrique de Almeida Pereira, Kristin Stock, Luciene Stamato Delazari & Jorge Antonio Silva Centeno (2017) Augmented Reality and Maps: New Possibilities for Engaging with Geographic Data, *The Cartographic Journal*, 54:4, 313-321, DOI: [10.1080/00087041.2017.1411417](https://doi.org/10.1080/00087041.2017.1411417)

Kilday, Bill. (2018). Never Lost Again: The Google Mapping Revolution That Sparked New Industries and Augmented Our Reality. *HarperBusiness*. pp. 10-39,

Durko, Angela & Petrick, James. (2013). Family and Relationship Benefits of Travel Experiences A Literature Review. *Journal of Travel Research*. 52. 720-730. [10.1177/0047287513496478](https://doi.org/10.1177/0047287513496478).

Dolnicar, Sara. (2012). The Contribution of Vacations to quality of life. *Faculty of Commerce*. Retrieved from <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=2002&context=commpapers>