draperBot theory | whitepaper

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1 why draperBot?

Before we answer that, let's talk globalization for sec...

Modern globalization has been a macro-economic trend that has been developing for decades since the end of World War II in the 1940s starting with the introduction of the multilateral trade agreement, General Agreement on Tariffs and Trade (GATT)[1]. This agreement and its child organization that formed in 1995, the World Trade Organization (WTO), have been paving the way for trade and commerce across borders to expand for decades now. With such barriers to international trade having progressively opened, many businesses spread their wings in the 1960s and 1970s to grow into what we now call multinational firms, firms that operate smaller clones of their organizations in multiple countries. Companies viewed the ability to spread into more territories almost in the same vein that the European explorers did back in the 15th and 16th centuries. Despite this trend to expand for expansion-sake, some firms, typically those with a more consumer focus instead decided to pioneer solutions around the then uncharted space of global brand development and marketing. Once low cost communication networks and the formation of widespread internet capabilities came to be in the 1990s, more businesses sought to globalize their business and their operations than ever before.

In today's world when companies decide to enter new markets, they are accompanied by an army of business consultants wielding field-tested business models that quantify the potential profits, losses, PR impacts, talent pool challenges, political stability and other such factors entry into a new market might have on the business. While these models provide great insight into understanding whether an emerging market makes logical business sense, they often do not factor the more amorphous aspects of business, in particular consumer behaviour, into the math. But how can the nature of consumer behaviour be quantified into a math equation when each person's emotional reaction to brand interaction is different? Whether by geography, demographic, socio-economic grouping, there is no single answer to the challenge of understanding how consumers will react to a brand or a branded experience. In fact, with this uphill challenge of understanding the consumer, many organizations simply operate as though "global consumers", a consumer that marketers can reach beyond the borders of a country or territory, don't really exist and that they are better off marketing to those in a localized methodology, effectively customizing brands, branded products, packaging, and in some cases the products themselves to cater to the needs of consumers in each market. There is logic to this strategy, but ignoring that there is global consumer and how that influences marketing and branding decisions should be considered.

But however compelling it is to learn about the history of globalization and the modern day narrative of how brands and consumers interact, it is important to understand why this is matters. There are troves of papers written on marketing in the global era, so what is special about draperBot; why should you continue reading these words?

The true goal of this project is for us to devise a quantitative framework for understanding consumers regardless of their homeland and overcome some of the marketing challenges caused by the 20th century globalalization. For this to become a reality though we must truly understand the 1:1 relationship consumers have with products. But today's most advanced marketing technologies that attempt to solve this challenge are based on tracking one's behavior, and classifying individuals based on this behavior. This is inherently good and bad—It means that our privacy, in the eyes of marketers, is not important. In effect, the demand to sell more more product causes marketers to think the best solution is just to watch our every move, our every step. While the potential insight this can give marketers is huge, perhaps there are other ways that we can strive for this success and draperBot's aim is create a potential alternative. So what is draperBot then?

What if we could build a framework that catalogs the underlying meaning of our marketing communication, messaging, symbols and words? Then instead of storing a behavioral log of individuals, we develop a more

privacy-friendly personality index that combines together with this catalog of potential meaning/significance would give marketers a data-driven predictive tool guiding their choices without the potential big-brother tactics being employed today. Currently companies are storing massive amounts of personal behavior information and whether this information is stolen by hackers for identity theft or used against them like in the case of Chinese citizens, who voicemails have been used to convict them of sedition, the simple fact is that we as marketers still don't seem know that much about our audience. Understanding the impact our messaging or communication will have all across the globe will enable us as marketers to know more than recording the last 100 websites someone has visited. Its almost a case of technology outpacing the people using it, in that we have the ability to track and store behavior, but we still don't know what significance our advertising will have in 40 different countries until after we have spend money on the media.

So draperBot's aim is to become a collection of data-driven methods and tools, really a framework that can understand the meaning of our messaging and provide marketers and maybe, given its open-source nature, others *[hint: I'm thinking of people who might build Star Trek communicators*] with the capability of understanding what will happen when they send their messages, before they send them.

2 Making Sense Of It

2.1 The Hypothesis

So if the goal is to understand the meaning of our communication to the individuals living all across the world, then the hypothesis should be something like this:

<hypothesis>

By using a holistic framework of multi-cultural semiotics we can effectively understand the emotional connection individuals living in all parts of the world would, could and/or should have with brands.

</hypothesis>

2.2 Wait, Semiotics?

You might be asking yourself, what is **semiotics**? Well I certainly invite you to visit the multiple sources of great information on the subject, such as this great Wikipedia article, but suffice to say it is basically the study of meaning-making. And meaning-making is what we need if we are to set out to understand the impact of our words, symbols, communication in a predictive multi-cultural sense.

So let's unpack semiotics a little before we continue; It is comprised of multiple key areas of study: **semantics**, **syntactics** and **pragmatics**.

2.2.1 Semantics

We've likely all heard someone tell us "That's just semantics…", suggesting that someone is being persnickety about word selection, but semantics actually refers to relation between words and their significance to us, not someone being overly picky about similar words. So next time someone tells you that, you can say "*yes, I actually care what my words mean…*"

Semantics is a large area of study attempting to find the multiple meanings that words have and also their different meanings across different cultures. Simple examples of common semantics are words with multiple meanings like the word crash; 'Crash' can mean auto accident, a drop in the Stock Market, to attend a party without being invited, ocean waves hitting the shore or the sound of a cymbals being struck together. Other common examples are words that have no defined or "real" meaning, like in the phrase "Go for the *gusto*".

So in addition to handling basic definitions and meanings of words, to truly tackle semantics requires understanding context enough to recognize the implied word meaning being used in a particular instant, as well as understand fringe or slang words and their meanings as well.

2.2.2 Syntactics

Syntactics is about the rules we use to arrange our words. These rules can often impact the implied meaning that a set of words brings. Obviously if we mix our words up it can make a sentence sense not make… okay, I did that just to check if you were still reading, but the point here is that word order can make or break the meaning our communication has.

While a broken sentence may be the worst case, changing the order (but not making a phrase nonsensical) can significantly alter the potential meaning that a phrase has to recipient. Again, Wikipedia has devoted an enter article to this, entitled Syntactic Ambiguity, although they also refer to it as amphibology.[2] Here is one of the examples they reference as demonstrating this linguistic phenomenon:

Flying planes can be dangerous.

> Either the act of flying planes is dangerous, or planes that are flying are dangerous.

Clearly understanding how we put words together to form meaning is critical to understanding how recipients of that message will react emotionally.

2.2.3 Pragmatics

Pragmatics is the most complex of the sub-studies within semiotics. Its primary objective is to understand the significance context has in the meaning of words and phrases. Pragmatics in fact pulls together multiple disciplines including speech act theory, conversational implicature, talk in interaction, and other language behaviour theories within philosophy, sociology and anthropology.[3] The focus areas of pragmatics are the context of the speech (or an utterance as it is often referred to), the intent of the speaker, and any pre-existing knowledge of those involved.

Each discipline involved, such as speech act theory, is its own deep theoretical study with published theories and approaches, making the broader study of pragmatics as a parent entity a lesser explored area. In fact, only one published framework for pragmatics exists from Carlo Dalla Pozza who was an Italian philosopher of science and linguistics.[4] His theory suggests that it is possible to connect semantics with contextual intuition or intent to understand meaning. In addition to Pozza's theory, there is a large volume of research written surrounding speech act theory that informs on the direction that pragmatics as whole is heading.

So suffice it say that the given information and level of research available in the area of pragmatics is developing, and that incorporating it into draperBot might be premature at this time (2015, in you are reading this in the future). Nevertheless, once pragmatics reaches a place of practical maturity, it will be a significant addition to the tools and methods offered in draperBot.

2.3 The Adjusted (For Reality) Hypothesis

So while our ultimate goal here is to understand all meaning aspects of our communication, across multiple languages, as marketers (and maybe others too), through the use of these various branches of semiotics, that is not going to be the first milestone. We will set a more achievable first milestone of trying to first of all build some of the core framework needed to connect these bits of information together and second attacking a small subset of our semiotic Everest mountain of work. So for today, the adjusted hypothesis is:

<hypothesis>

By using a shared semantic framework, we can more effectively understand the emotional connection individuals have with brands.

</hypothesis>

There is another implied nature to this goal, which is that the focus is building this framework to work for any language, but that English will be the first one we test. So where do we begin?

Well in 2010, Josh Kaufman published the book, *The Personal MBA: Master The Art Of Business*, which details out 5 core human drivers.

- Drive to Acquire
- Drive to Bond
- Drive to Learn
- Drive to Defend
- Drive to Feel

If we take Josh Kaufman's drivers and leverage intelligence about people living in different parts of the world, with the way in which brands present their interactions to consumers, then perhaps we can understand if there is in fact a truly global consumer that marketers can reach. While this is limited intelligence by the standards set from our original hypothesis, it still can help us understand how brands connect to the consumer through data-driven methods. Ultimately predicting the potential intent consumers have with a brand could result in businesses not only understanding whether they should enter a new market from a product demand perspective, but how they market their products to the consumers that are in that market.

3 State of The Bot

3.1 ~~Bringing~~ Graphing The Hypothesis To Life

So what does a shared semantic framework look like? The 5 core human drivers mentioned in section 2.3 could be used as a shared framework if we connect both brands and a global audience together around them. But the simple fact here is that if you google "core human drivers", you will find that there are multiple such frameworks that claim to be the quintessential framework for our human needs. Theories like Maslow's hierarchy of needs, have actually been published and spread for decades, but there when you examine the needs listed in Maslow's theory there are multiple banal needs, like breathing and sleeping, that don't carry significance will *all* brands and marketers. So this has led to two conclusions around the topic of frameworks. One—Any framework built into draperBot should be a variable that can changed later by the user; Two—For the purposes of making success with the adjusted hypothesis, we will assume that the 5 core human drivers Josh Kaufman's book mentioned will suffice, changing only the last driver from "feel" to "experience" for the purposes of clarity. So the 5 core drivers or human desires being used by draperBot are:

1. Learn
2. Bond
3. Defend
4. Experience
5. Acquire

But 5 words alone will not be able to quantify how a brand is communicating, so the first technical aspect of draperBot is to extend these 5 core drivers using a node concept as outlined in **Figure 1** into something more meaningful.

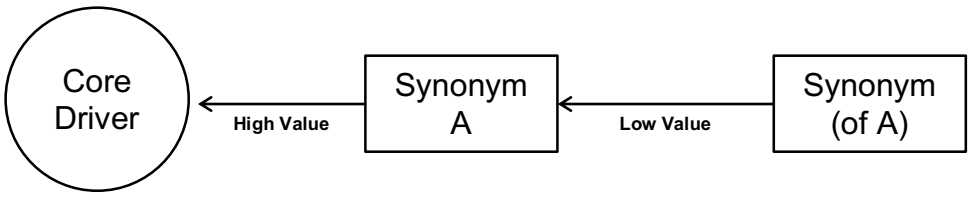

Figure 1

This concept can be implemented easily using a graph database, so draperBot leverages the open sourced graph database, Neo4j, to do just this. And while manually finding and recording the synonyms for 5 words would be reasonable, the goal here is to develop a recursive framework, to tease out more subtle semantic meaning association. With this in mind, a programmatic approach has been adopted using Merriam-Webster's Dictionary.com API service, which includes a thesaurus entry. By recursively loading synonyms of synonyms of the 5 core desires, a word graph comprised of 4,491 and 22,120 relationships (of varying value) can be built as illustrated in **Figure 2**. Variations in this base word intelligence could be adjusted through adjusting the interpretation of the synonyms coming in from the API service.

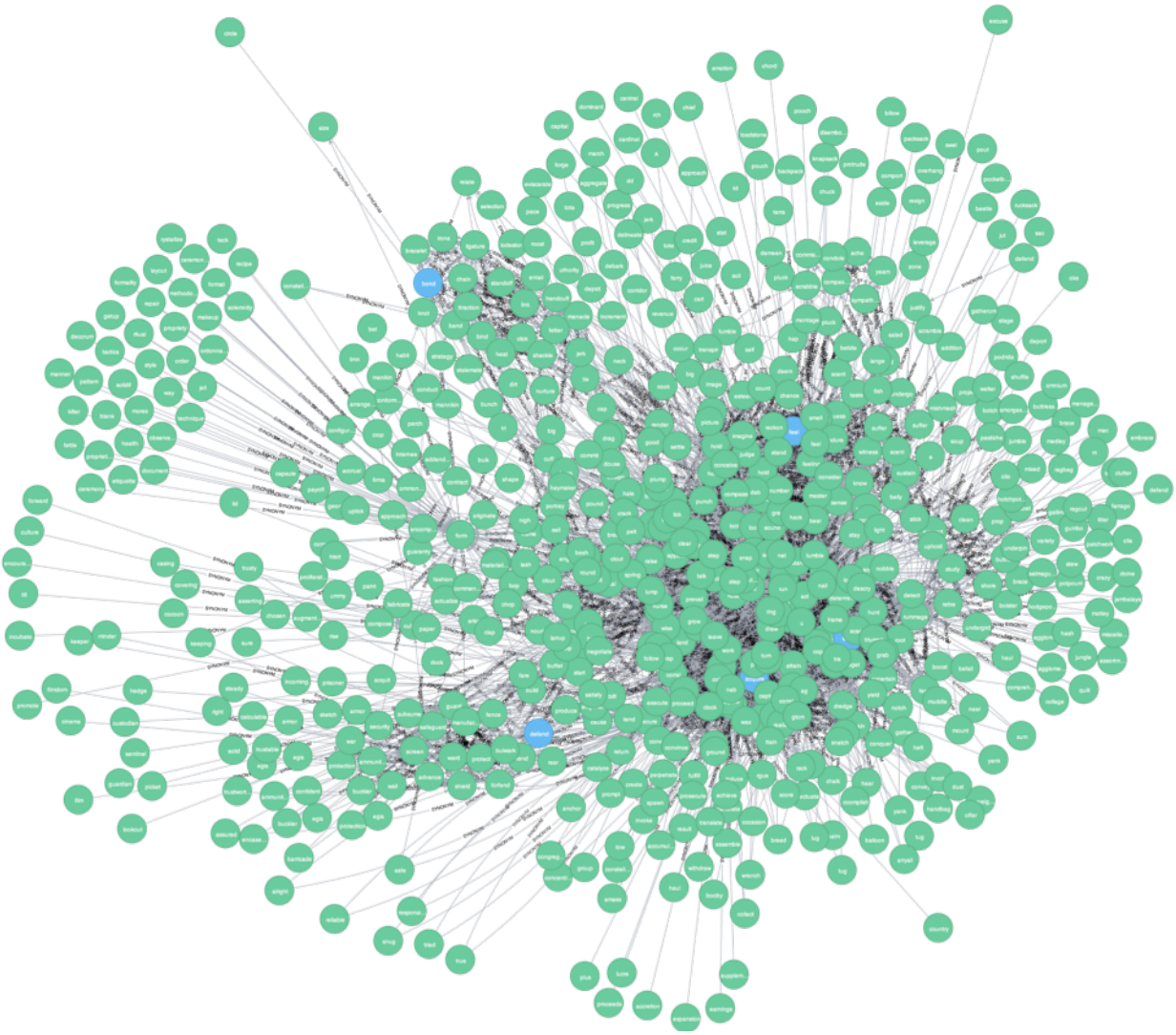

Figure 2

3.2 Looking At The Whole Set

TODO: Talk about the aggregate data set, show imagery, output

3.3 Clusters of Data

TODO: Talk about the need for clustering, the K-means work, and reveal the clusters this data shows and talk about those.

3.4 Now, Let's Build The Brand Profile

TODO: Talk about the methodology for building the brand profile, reveal the results of building the brand profile for 5-10 brands.

3.5 Bringing the Data Together

TODO: Talk about comparing the brand profiles to the clusters of people (of the global consumer). Talk about examples Apple (mass), Talk about Mercedes (niche).

3.6 What Does It All Mean?

TODO: Draw some conclusions around the value of this mechanism (even in its present form). But elude to the future of the tool needing to harness more meaning making.

4 Tomorrow's Journey

4.1 Open Source Thinking

TODO: Talk about need for more meaning making, for this project to continue beyond my efforts. In a sense, we are trying to create an artificial intelligence system to filter our marketing messaging through that will tell us the emotions, the reactions and the acceptance of our messaging before we put it out there. It will take hundreds or thousands of iterations to get the system to where it needs to go for realizing this ultimate goal, but we all have to start somewhere. Call for open source community to take over and turn this into "the" solve for big brother marketing tactics, by creating a supercomputing technology that allows us to bypass massive data collection and truly get inside our heads from a meaning and emotion perspective.

4.2 A Framework For More Meaning

TODO: Talk about the structure of the software design, as to allow more meaning-making to be plugged into this system, more adaptations to the scoring thinking. Reiterate the call to open source volunteers.

4.3 TODO

Bibliography

[1] “General Agreement on Tariffs and Trade”. Wikipedia. 23 March 2015.
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