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THE ROLE OF BEHAVIORAL ECONOMICS IN THE NAVY DETAILING PROCESS

by

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THE ROLE OF BEHAVIORAL ECONOMICS IN THE NAVY DETAILING PROCESS

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Improvements are needed in the U.S. Navy's enlisted detailing process in order to reduce the number of sailors forced into billets that do not meet their personal or professional desires. This thesis explores behavioral economic concepts, specifically nudge theory, and presents recommendations to help reduce forced billet distribution. Additionally, it proposes comprehensive improvements to be made in the detailing process that will help to incentivize the specific hard-to-fill jobs identified by the Navy as their three challenged areas (location challenge, work condition challenge, and information scarcity challenge). Finally, it explores the mechanism to integrate these non-monetary incentives into the Navy's marketplace detailing model. Reducing forced assignments and allowing sailors to control more of their own destiny when choosing orders will go a long way toward improving morale, increasing retention, and in crafting a more lethal and capable force.

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LIST OF ACRONYMS AND ABBREVIATIONS

FDNF	Forward Deployed Naval Forces
GM	Gunners Mate
LPO	Leading Petty Officer
MIT	Massachusetts Institute of Technology
MNA	My Navy Assignment
NPC	Naval Personnel Command
NPS	Naval Postgraduate School
NRC	Naval Recruiting Command
NRMP	National Residency Matching Program
PRD	Projected Rotation Date
RDC	Recruit Duty Command
USN	United States Navy

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I. INTRODUCTION

A. BACKGROUND

The detailing process in the United States Navy has always suffered from one fundamental problem: Assigning sailors to undesirable billets, potentially in undesirable locations, in order to meet mission requirements. Specifically, Navy detailing and placement officers struggle with three challenges, location, work condition, and information scarcity. The implications of forcing sailors into billets they find undesirable can be far ranging, and can have an effect on recruiting, retention, job performance, and overall sailor/workplace morale. The study of behavioral economics introduces the concept of nudge theory, which can be exploited in order to help mitigate all three of the Navy's challenges and provide specific non-monetary incentives to induce sailors to choose for themselves the billets that have historically been difficult to fill.

The first goal of this thesis is to introduce nudge theory and the field of behavioral economics. The next is to specifically target certain areas in the USN detailing process that can be improved, while providing a cautionary note on the ethics involved in libertarian paternalism. Overall, this research will attempt to provide a way to increase sailor morale and retention by reducing the number of sailors who are forced into accepting jobs they do not want.

B. NAVY DETAILING CHALLENGES

Unlike most civilian companies, the United States Navy has a huge portfolio of differing jobs in multiple locations all around the world. The process of matching an individual sailor with an appropriate job fit that makes both parties happy can be daunting. The three challenges listed below have been identified as the major sticking points when it comes to sailors' unwillingness to select a billet.

1. Location Challenge

The location of a billet has a huge effect on the willingness of a sailor to fill or not fill a job assignment. If sailors perceive that a location has negative qualities, either for

themselves personally, or in general, they will be less likely to choose that job, even if they are the best qualified and would have a high potential of success in that capacity. This is often seen when looking at billets in overseas locations. Historically, the Navy has had difficulty filling billets in our Forward Deployed Naval Forces (FDNF) in overseas locations such as Japan and Bahrain as sailors tend to want to remain in the United States for their billet assignments. The location challenge can also be seen when comparing perceived favorable locations in the United States versus others. The Naval Postgraduate School, located on the central coast of California in Monterey, or the Naval Station in Key West, Florida are excellent examples of what is typically perceived to be favorable duty station locations due to a temperate climate, and an abundance of activities available for sailors and their families. However, the Navy would typically have a harder time convincing a sailor to choose a billet in landlocked and rural Millington, Tennessee, or with the harsh winter weather conditions of Naval Station Great Lakes in Northern Illinois.

2. Work Condition Challenge

Detailing sailors to arduous duty assignments is the second challenge. The work condition challenge arises when sailors have prior knowledge of the difficult and demanding work conditions in certain career fields, and direct their preferences towards another job that offers a less demanding environment. Specifically, recruiting duty is an example of a work condition challenged command. With assignment to Naval Recruiting Command (NRC), sailors are expected to transition from subject matter experts in their chosen rating, and learn a completely new set of skills; sales, pubic speaking, and prospecting for future sailors. This can be a daunting task, and has a preconceived reputation for difficulty. With the understanding that sailors will be required to learn new job duties, work long hours, and not have the scope of free time they would have at other shore duty assignments, sailors tend to shy away from recruiting duty.

3. Information Scarcity Challenge

The third challenge is information scarcity. This occurs when details about the assignment are unknown. Without any way to judge or compare aspects of an unfamiliar billet with more familiar assignments, sailors will tend to fear and avoid the unknown. This

can be seen when new billets are created, and have not yet accumulated the personal experiences that will be shared between sailors, or when knowledge (either good or bad) is not made readily available, and requires the sailor to make their own assumptions.

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II. BEHAVIORAL ECONOMICS LITERATURE REVIEW

A. NUDGE THEORY

In 2008, American academics Richard Thaler and Cass Sunstein wrote a groundbreaking book entitled *Nudge: Improving Decisions about Health, Wealth, and Happiness*. This book popularized nudge theory, which proposes positive reinforcement and indirect suggestions as ways to influence the behavior and decision making of groups or individuals (Thaler & Sunstein , 2008). The most common example of nudge theory comes from the Amsterdam airport, where the cleaning manager was attempting to reduce cleaning costs in the men's restrooms. In Jeff Sommers' 2009 article for the *New York Times,* entitled "When Humans Need a Nudge Toward Rationality," he describes the experiment:

> The images of flies were etched in the porcelain near the urinal drains in an experiment in human behavior. After the flies were added, "spillage" on the men's-room floor fell by 80 percent. Nudging is a harmless bit of engineering that manages to attract people's attention and alter their behavior in a positive way, without actually requiring anyone to do anything at all. (Sommers, 2009, par. 1–3)

The concept of nudging is a subset of behavioral economics, a field focused on studying the effect of psychological, cultural, social and emotional factors on the economic decisions of individuals. Nudge is particularly fascinating as a theory because its central focus is on allowing the individual to retain the right to choose for himself or herself. However, it recognizes the opportunity to influence said decisions and enable better choices. In the example of the fly etched on the urinal, no one was forced to aim toward it, there was no sign directing an action or asking individuals to mind their overflow. It simply assisted the user in making a decision with a beneficial outcome for the cleaning manager, reduced costs.

The book *Nudge* provides another example of a school cafeteria manager who found that she could influence students' healthy or unhealthy school food choices based on the order in which she staged food in the cafeteria line. Placing desserts first prompted the students to make unhealthier choices, while placing healthy options first followed by

dessert at the end reduced the amount of desserts sold, and nudged students to select healthy options (Thaler & Sunstein , 2008). This story again highlights the power that nudge can have in influencing decisions while maintaining the users right to make a personal choice. In the cafeteria as well as in the men's bathroom, nudge was successfully used to reach a greater good: healthier diets and cleaner restrooms, without the overt paternalism of removing all desserts from the school, or forcing users to clean their urinal spillage themselves.

1. The Nature of Humans

To understand why nudge theory is effective, you first have to understand that humans are not good decision makers (Ariely, 2009). Even if our hubris fools us into thinking we are intelligent, well read, and effective at choosing the best outcome, it turns out that our wiring makes this irrational. Economists like to view the world in black and white, where you would never make a decision that makes you worse off, and only strive to better yourself through your choices. However, everywhere you look you see examples of this contradicting itself. Smokers will continue to smoke, even knowing the harmful effects on their health, dieters are consistently temped to break their self-imposed rules and add dessert, and there will always be New Year's resolutions that remain unfulfilled (Ariely, 2009). Despite our best efforts, as humans we are susceptible to making choices that make us worse off, especially when faced with difficult decisions (Ariely, 2009).

2. The Choice Architect

Nudge depicts the people or person responsible for setting up the format and layout of a decision as the choice architect. The architect is charged with organizing the framework in which people make decisions. Almost everyone has been a choice architect at some point in his or her life, whether knowing it or not. A librarian who decided where to place the books on the shelves is a choice architect, as those decisions affect how other people will choose those books. It is a safe bet that the books at the front of the library will have more opportunity to be checked out than those hidden in the rear. When the editor of the newspaper decides what to print on the cover page, that is a meaningful nudge to prompt more reader interest in that story over others. As choice architects, the decisions made do

not force anyone to value one thing over the other, but they absolutely have influence in the end verdict. Thaler and Sunstein describe it best:

> There are many parallels between choice architecture and more traditional forms of architecture. A crucial parallel is that there is no such thing as a "neutral" design. Consider the job of designing a new academic building. The architect is given some requirements. There must be room for 120 offices, 8 classrooms, 12 student meeting rooms, and so forth. The building must sit on a specified site. Hundreds of other constraints will be imposed—some legal, some aesthetic, some practical. In the end, the architect must come up with an actual building with doors, stairs, windows, and hallways. As good architects know, seemingly arbitrary decisions, such as where to locate the bathrooms, will have subtle influences on how the people who use the building interact. Every trip to the bathroom creates an opportunity to run into colleagues (for better or for worse). A good building is not merely attractive; it also "works." (Thaler & Sunstein , 2008, p. 3)

Understanding how influential the choice architect can be in influencing others' decisions is the key concept in nudge theory. Any decision you make, or fail to make, can have real-world effects and skew the illogical decision-making processes of others.

B. ANCHORING

Humans struggle with grasping the problem of unknown values. How are we to decide value if we have never been exposed to a product or service before? How we solve this issue is with comparative value. When I visit a new coffee shop, I know the relative value of a large black coffee because I can compare it with the cost for the same good from a similar shop. Even when things are not the same, we can draw an abstract to the value from past experiences. I do not know how much I should pay for an econometric textbook, but from buying academic books at the $50 to $300 range in the past, I would have great hesitation if faced with a charge of $800 for one book.

Behavioral economics introduces the anchoring effect as a tool humans use to help solve the problem of unknown value. Our minds form a cognitive bias when faced with an unknown, leading us to focus on the first available piece of information we have (Thaler & Sunstein, 2008). The best example of anchoring is shown with new cars and the manufacturers' suggested resale price, MSRP. Car salespeople post this number on the side of the car in large bold text; this shiny new minivan should be sold for $35,000. When they

bring you back inside and tell you can have it at a steal of $29,000, your mind skews to the anchor planted and you think you are getting a deal. This is regardless of the fact that the MSRP is made up number, and has no actual bearing on what this minivan should cost you. David Henderson's article *Libertarian Paternalism: Leviathan in Sheep's Clothing?* provides a great example of how anchoring is used to help guide decisions.

> Imagine that you're asked to estimate the population of Milwaukee. Let's say you live in Chicago and you know that Chicago has about three million people and that Milwaukee is smaller. Three million becomes your anchor and you estimate down to, say, one million. But if you live in Green Bay, population 100,000, and you know that Milwaukee is substantially bigger, you might estimate 300,000. Green Bay's population is your anchor. The Green Bay resident estimates low because of his anchor, and the Chicagoan estimates high because of his anchor (Milwaukee′s population is 599,000.) Availability has to do with ready examples that come to mind. Consider the case of homicides versus suicides. Examples of homicides are more "available" than those of suicides. Homicides are typically reported in newspapers whereas suicides often go unreported. The result is that many people think that homicides are more frequent than suicides. In fact, the opposite is the case. Or take terrorism. Virtually everyone in the United States over about age 19 knows about 9/11, and the "availability" of this example of terrorism causes people to dramatically overestimate the probability of another terrorist attack. (Henderson, 2014, pp. 268–269)

Anchoring is a powerful tool that is successfully used in a large majority of sales and marketing jobs. Future decisions can be and often are influenced by the "anchor" that was set by the choice architect. Without proper attention given to this cognitive bias, humans will use this arbitrary point to interpret all future information and inform their choices.

C. CHOICE ARCHITECTURE

This idea focuses on the presentation and layout of the choices offered and provides an argument that there are many different ways in which one can purposefully or unintentionally structure another's choices that will have an effect on the outcome. In other words, by using the tools listed below, you have the ability to help push the chooser in a direction more favorable to you.

1. Default Option

Preselecting a choice and requiring action to be taken in order to make a change is one way in which behavioral economists have shown that they can influence a decision. The power of the default option is that humans tend to go with status quo when provided. There are many examples of people defaulting to the status quo; one most are familiar with is free trials that will then automatically subscribe you at the end of the test period and begin to charge your credit card. Of course, you may unsubscribe at any time, but companies know the power of the default option and often capitalize on such inertia. The default option can have huge implications when shaping government policy as well. In *Nudge*, the example is given regarding the language written in the No Child Left Behind Act:

> An obscure portion of the No Child Left Behind Act requires that school districts supply the names, addresses, and telephone numbers of students to the recruiting offices of branches of the armed forces. However, the law stipulates that "a secondary school student or the parent of the student may request that the student's name, address, and telephone listing not be released without prior written parental consent, and the local educational agency or private school shall notify parents of the option to make a request and shall comply with any request." Some school districts, such as Fairport, New York, interpreted this law as allowing them to implement an "opt-in" policy. That is, parents were notified that they could elect to make their children's contact information available, but if they did not do anything, this information would be withheld. The Defense and Education Departments sent a letter to school districts asserting that the law required an opt out implementation. Only if parents actively requested that the contact information on their children be withheld would that option apply. Both the Defense Department and the school districts realized that opt-in and opt-out policies would lead to very different outcomes. (Thaler & Sunstein , 2008, pp. 85–86)

Understanding the power behind the default option and structuring your choices to provide or not provide a default option can significantly swing the results received, and have to be accounted for when setting the choice architecture.

2. Framing

The context in which we receive information matters. Choices are easier to make when there are fewer options, bolded text stands out more prevalently then regular font,

and humans typically start lists at the top and read down, paying far more attention to the first and second choices than to an option buried in the middle. There are two classical examples of how framing matters. The first is a backward-designed door. Imagine going up to a building and seeing large handles that are clearly designed to be pulled on the outside of a door next to a sign that reads, "Push." What choice do you make? The designers of this door framed their problem incorrectly, and caused confusion. Flat push pads would have been the right choice, with the large handles installed on the other side of the door where they can be grabbed and pulled to open. The second classical example is a large red stop sign that reads GO. In *Nudge*, Thaler describes the experiment:

> Consider, for example, the effect of a large, red, octagonal sign that said GO. The difficulties induced by such incompatibilities are easy to show experimentally. One of the most famous such demonstrations is the Stroop (1935) test. In the modern version of this experiment people see words flashed on a computer screen and they have a very simple task. They press the right button if they see a word that is displayed in red, and press the left button if they see a word displayed in green. People find the task easy and can learn to do it very quickly with great accuracy. That is, until they are thrown a curve ball, in the form of the word green displayed in red, or the word red displayed in green. For these incompatible signals, response time slows and error rates increase. A key reason is that the Automatic System reads the word faster than the color naming system can decide the color of the text. See the word green in red text and the nonthinking Automatic System rushes to press the left button, which is, of course, the wrong one. (Thaler & Sunstein , 2008 , p. 82)

When designing your choices, you must pay particular attention to where you place your choices, how they look compared to others, and ensure they do not confuse or go against any natural human tendencies.

D. TWO-SIDED MATCHING

In economic terms, matching focuses on who is allotted to receive a scarce good: who is given a job, who is admitted into school, who receives the last piece of pie at the thanksgiving table, etc. With two-sided matching, the focus is on making both sides better off, by aligning their interests. This is most easily explained though the lens of an employer and a job seeker, where the employer has a preference over the employee they select, and the job seeker in turn has preferences in choosing his employer. Both sides have their own

inclinations, and two-sided matching is the process that can align those shared preferences and make a pairing. Without two-sided matching, one side is inevitably made better off than the other, and the door is open for an unhealthy work environment. Matching only works, however, when fed by accurate information. Both sides need to clearly communicate their preferences, with the more information provided the better.

In practice, the success of the national residency matching program (NRMP), where future medical doctors submit preferences and are matched with a residency program in a hospital shows the profound ability that two-sided matching has for making all parties better off. Alvin Roth and Elliott Peranson describe the NRMP in their 1999 article written for the *American Economic Review*. They describe NRMP matching as a process that once a year matches 20,000 jobs with graduating physicians on the basis of rank order lists, from both the residency program and the physician. This data is plugged into a marketplace, with best-fit matches identified and pushed to the users (Roth & Peranson , 1999).

E. PRIMING

Perhaps one of the most interesting and subliminal nudges is the concept of priming. Priming is the idea that you can influence behavior and alter the choices of individuals if you expose them to information beforehand. This concept is discussed in Malcom Gladwell's book, *Blink, the Power of Thinking without Thinking.* He introduced two separate experiments, the first being the John Bargh priming experiment. In this experiment, Bargh used scrambled words in a test given to undergrad students that was laced with certain words that remind the brain of old age. Students were asked to unscramble the sentences as fast as they could to make a logical flow. The priming for old age was inserted with the words Florida, lonely, grey, etc. See Figure 1.

01	him was worried she always
02	from are Florida oranges temperature
03	ball the throw toss silent
04	shoes give replace old the
05	he observes occasionally people watches
06	be will sweat lonely they
07	sky the seamless gray is
08	should now we withdraw forgetful we
09	us bingo sing play let
10	sunlight makes temperature wrinkle raisins

Figure 1. Scrambled Sentence Test. Source: Gladwell (2005).

After reading these words, he observed that his students walked more slowly down the hall then they did before the test (Gladwell, 2005).

The second test had two groups of students answer demanding questions from the game Trivial Pursuit. Half the group was asked to pretend they were college professors and the other half to pretend to be soccer hooligans. Although the group pretending to be professors did not know any more than the soccer hooligans, they got 55.6 percent of the questions correct compared with the pretend soccer hooligans who scored 42.6 percent correct (Gladwell, 2005). This research shows the power of priming the brain prior to making decisions. Although it is often not transparent, humans do make decisions based on priming all the time.

Priming has also been observed by social scientists when measuring people's intentions. *Nudge* discusses the mere-measurement effect, which shows that when people are asked what they intend to do (e.g., "will you vote in the upcoming election?"; "are you planning to lose weight this year?"), they become more likely to act in accordance with their answer (Thaler & Sunstein , 2008).

> Campaign officials want to encourage their supporters to vote. How can they do that? One obvious method is to emphasize the stakes; another is to decrease the cost and burdens, by making it easier for people to get to the polls. But there is another way. It turns out that if you ask people, the day before the election, whether they intend to vote, you can increase the probability of their voting by as much as 25 percent! (Thaler & Sunstein, 2008, p. 70)

F. IRRATIONAL VALUE

The concept of irrational value occurs when humans assign their own personal value, either high or low, based off its assigned status. There are many examples of this, and it can most easily be observed when looking at price disparity. Using coffee as an example, there are obviously many different quality levels across different brands, bean types, and processing steps. However, if you control for all these factors, would an $8 cup from a leading brand really taste better than a $3.50 cup of the same brew? The research would say that yes, as human brains are wired to expect that quality increases as price increases. We expect this and therefore we actually do derive more enjoyment from a high value item. *Predictably Irrational* provides a great example of irrational value based off a study the author administered on students who were given a small shock to simulate pain. They were then provided two painkillers, which were in reality vitamin C tablets, and shocked again. When told the painkiller was valued at $2.50 close to 100 percent reported feeling less pain. However, when repeated with a pill that was only valued at 10 cents, fewer than 50 percent reported a reduced pain level (Ariely, 2009).

The irrational value phenomenon can also be observed when looking at the disparity of value placed on low costing items vs those of a higher price. Ariely conducted another experiment where he asked his students if they would make a 15-minute trip to save $7 dollars. See Figure 2.

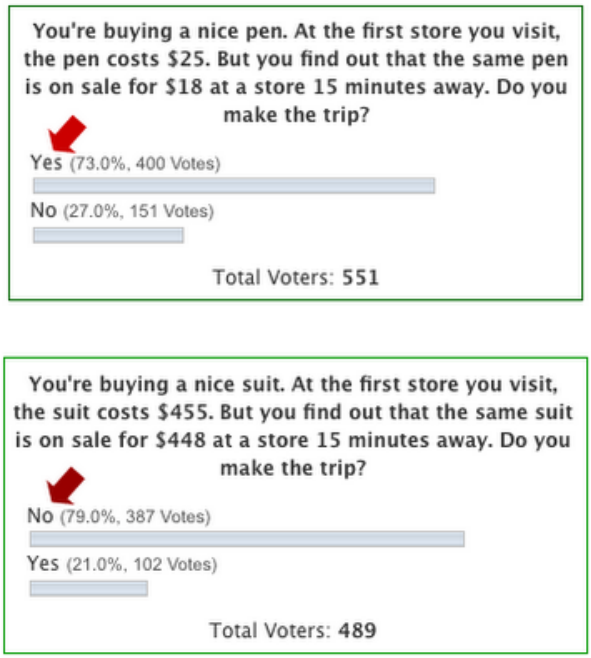

Figure 2. Irrational Value. Source: Ariely (2009).

These results counter what rational-thinking humans would believe. Seven dollars should hold the same value in either situation, yet when the number is inflated to larger levels, the value of the money diminishes. The decisions that people make are not made in a vacuum. They are relative and can be influenced based on the surrounding environment.

G. DOMINATING ALTERNATIVES

This behavioral economic effect is used heavily in the marketing sector as it is a proven method to increase sales. Dominated alternatives is the idea that the span of choices that support a particular decision can influence the outcome. A commonly used example can be seen when restaurants list a $200 bottle of wine on their menu. They do not actually expect people to make this purchase. However, when listed next to a $70 bottle it makes the lower price now seem more reasonable. Without that high- priced bottle, $70 becomes the high point, and people will be nudged toward cheaper bottles at a more realistic price point.

In *Predictably Irrational*, author Dan Ariely offers another example of this effect. He surveyed 100 students from MIT and gave them the choice to pick two options on how

to receive the economist magazine. A digital only version for $59 or a print and digital version for $125. In this test, 68% of the students choose the cheaper version at $59 for digital only. Then he added a third option, print only, at the same price point of $125. When this alternative was added, 84% of the students moved up to the higher price point and picked the digital and print subscription (Ariely, 2009). The reasoning behind this is that people generally do not look at things absolutely. Rather they view the world in relative terms. By providing the context that you are getting a deal, and giving his students another option to compare, Ariely was able to nudge his students into picking the higher priced product, despite many of them already proving they did not value it by not picking it in the first run. See Figure 3.

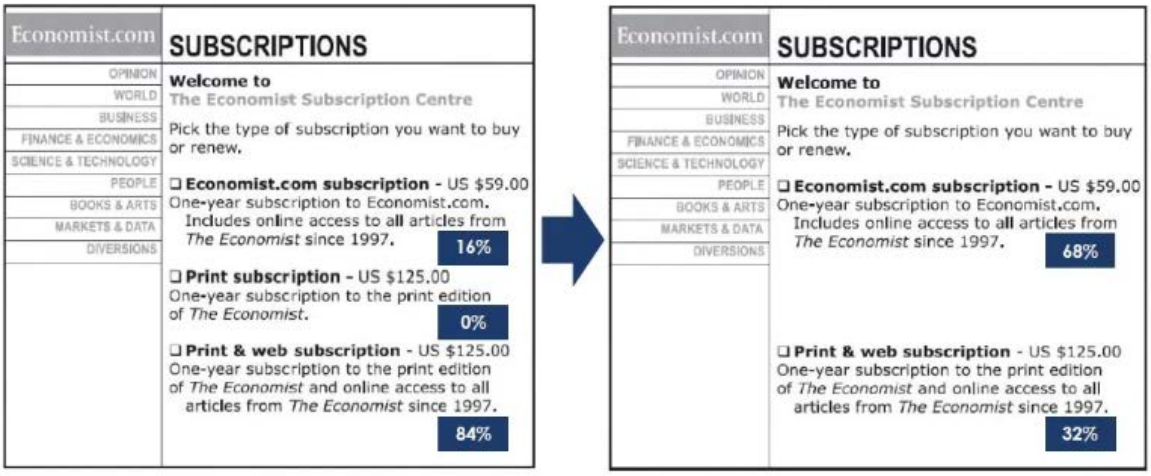

Figure 3. Dominating Alternatives Study. Source: Ariely (2009).

As shown in Figure 3, the span of choices provided can have a huge impact on the decision that people make. Just by adding a third choice, the magazine was able to generate almost $3,500 more in sales revenue. They added no additional content, but were able to drastically increase their profit, just by understanding the power of dominating alternatives and human behavior.

H. SOCIAL PROOF HEURISTIC

We understand that humans are social creatures; we build cities and communities together, construct schools and churches to learn and worship jointly, and find comfort in sharing experiences with others. The concept of a social proof heuristic focuses on the idea that humans rely on shared opinion to form their own views and influence personal choice. This is even more prevalent in today's society. The expansion of the internet and explosion of social media make us more connected now than at any time in our past.

Assume that you need to remodel your kitchen and do not have a preferred contractor. You could look up a vendor, interview them and hope the job turns out as promised. But with social media, it is a good bet you would take to your page and say something to the effect of, "has anyone recently remodeled their kitchen and have a contractor they would recommend? Please share!" This is an example of the social proof heuristic working to help inform a choice. Yes, there are other ways to find a contractor, but this mode has the benefit of both crowd sourcing and mutual trust in your social circle. Back to our example, if ten friends all point you towards certain company, and sing their praises; it is highly unlikely you would look much further.

The emphasis that humans place on the perception of how others view them is another factor that heavily influences the social proof heuristic. How our actions are viewed by our friends, or by the community as a whole, is important when making decisions. Orange is my favorite color, but I will refrain from painting my house in this bright color to not stand out and draw the ire of my neighbors. This is a form of peer pressure; my peers have influenced my decision and pressured me into keeping a conservative and harmonious exterior. *Nudge* provides more examples of the social influence humans have on others in the following list:

1. Teenage girls who see that other teenagers are having children are more likely to become pregnant themselves.
2. Obesity is contagious. If your best friends get fat, your risk of gaining weight goes up.
3. Broadcasters mimic one another, producing otherwise inexplicable fads in programming. (Think reality television, American Idol and its siblings, game shows that come and go, the rise and fall and rise of science fiction, and so forth.)

4. The academic effort of college students is influenced by their peers, so much so that the random assignments of first-year students to dormitories or roommates can have big consequences for their grades and hence on their future prospects. (Maybe parents should worry less about which college their kids go to and more about which roommate they get.)
5. Federal judges on three-judge panels are affected by the votes of their colleagues. The typical Republican appointee shows pretty liberal voting patterns when sitting with two Democratic appointees, and the typical Democratic appointee shows pretty conservative voting patterns when sitting with two Republican appointees. Both sets of appointees show far more moderate voting patterns when they are sitting with at least one judge appointed by a president of the opposing political party. (Thaler R & Sunstein C, 2008, p. 55)

The social proof heuristic's role in influencing the choices of others is well documented. All of the examples above show how highly we humans value the opinion of others. From the rise of teen pregnancy rates when safety in numbers is felt, to the massively important federal judicial decisions, social influence is present. People like conformity, and harnessing that power to influence choice can be a powerful behavioral tool.

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III. DETAILING PROCESS IMPROVEMENTS

A. PRESENT-DAY DETAILING

The current Naval enlisted detailing system is designed with the utmost priority on meeting the needs of the Naval service. That is, before any other factors are considered, the Navy must fill the billets that are required to complete its mission as assigned by the National Defense Strategy. Once this is met, they can move on to other factors. The Naval Personnel Command (NPC) enlisted detailing webpage lists the following three priorities when assigning sailors to jobs.

1. The Needs of the Navy: Filling valid requirements with the best sailor available

2. Career Needs of the Individual: NPC is charged with developing a broad-based sailor

3. Desires of the Individual: Preserve morale by allowing for the best aligned work/life balance. (Navy Personnel Command, n.d.)

Enlisted Navy detailers work for NPC with the task of putting the right sailor in the right job at the right time. They work together with the individual sailor, the gaining command, and the NPC placement officer, whose role is to represent the command, to align all the preferences and get the best fit. Benjamin Petrsin and Geoffrey Johnson's 2019 Naval Postgraduate School (NPS) thesis on the enlisted detailing process gives a great overview of the three priorities in the Navy's current detailing model:

> Starting 12 months from the Sailor's PRD, he or she can begin negotiating for orders. A Sailor will have three opportunities to negotiate his or her orders; these opportunities are known as the negotiation windows. The Sailor will have a negotiation window 12 months prior, 10 months prior, and 8 months prior to his or her PRD. If a Sailor has not successfully negotiated for orders by 6 months prior to PRD, he or she will be assigned based on the needs of the Navy.

1. Needs of the Navy

The “Needs of the Navy” is a well-known concept amongst Sailors. The Navy has certain job requirements that must be met in order to successfully meet a mission area. When a Sailor is assigned to a command, he or she is given a billet, which identifies his or her job function and duties. Each billet meets one or several job requirements that must be met by the Navy. Some billets can be more challenging than others, and some are in less desirable locations than others. Many times, detailers have difficulty in finding Sailors who possess the right qualifications and want to fill these more challenging and less desirable billets; however, every billet must be filled. When this occurs, detailers may place a Sailor in one of these challenging and less desirable billets even though the Sailor may have no interest in going there. This concept is known as “Needs of the Navy” because every billet must be filled for the Navy to meet its many different mission areas.

2. Professional Development of Individual

Every enlisted Sailor beyond E-3 must have a rating. A rating is simply a job identification, such as Culinary Specialist, Machinist Mate, Yeoman, and Electrician. Different ratings require different training as well as different amounts of training. Additionally, a Sailor does not receive job training only during the first part of his or her career. Job training is spread out over the entire course of a Sailor’s career. As the Sailor progresses up through the ranks, he or she is required to know more about his or her rating and be more proficient in the execution of his or her job. Another aspect of a Sailor’s rating proficiency is met through experience. Different positions along a Sailor’s career each require a certain level of experience. Sailors also gain experience and grow professionally within their specific rating as they take on different billets and positions. This is the idea behind professional development of the individual. The Navy does not want an individual to become stagnant in his or her job and never grow in his or her rating. Professional development is beneficial for both the individual and the Navy as a whole. It is beneficial to the individual for promotion and movement up the ranks. It is beneficial to the Navy in order to fill higher up positions that become vacant due to retirements and attrition. Overall, it is of the utmost importance to both the individual Sailor as well as the Navy for professional development to occur.

3. Individual Desires

Sailors have many different reasons for joining the Navy, and they all have many different expectations for their career path and accomplishments along the way. Some Sailors want to make the Navy a career. Some want to travel the world. Some just want to get some money for college. Oftentimes along the way circumstances change. At some points along one’s career, a

> Sailor may want a stable billet in order to start a family. Alternatively, maybe he or she wants a hard-working billet in order to have better chances for promotion. These different desires are what motivates each Sailor along their professional lives. It is very important for detailers to elicit input from individual Sailors because it could be the difference between keeping or losing a hardworking Sailor. It is for these reasons that the detailing process allows for individual Sailors to provide inputs into the system and to their detailers. (Petrisin & Johnson, 2019, p. 6–7)

1. My Navy Assignment

Available jobs are plugged into an online marketplace, which is currently named My Navy Assignment (MNA). This system allows sailors to see the billets available to them and apply for up to seven jobs that interest them. See Figure 4 for a screenshot of a job list in MNA.

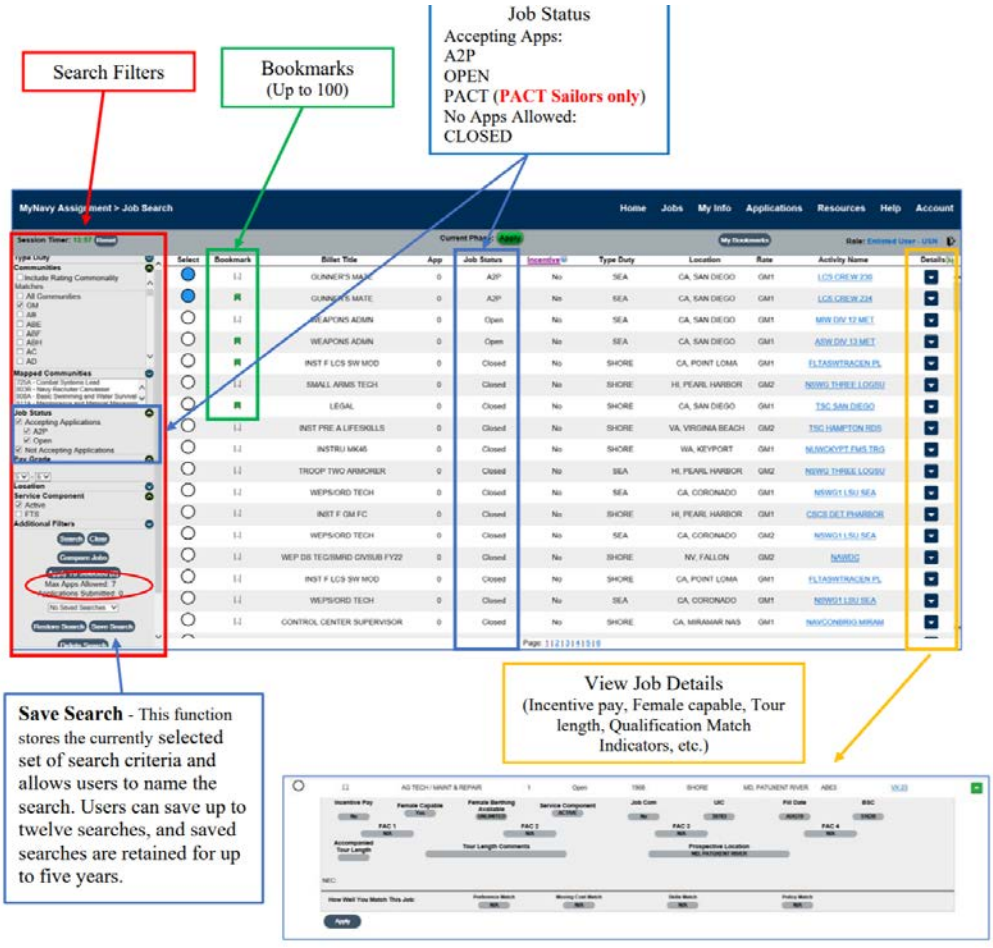

Figure 4. My Navy Assignment Screenshot. Source: NPC (2019).

The function of MNA is to serve as the marketplace for detailers to advertise the available jobs and for sailors to shop for and select jobs that interest them. MNA does allow sailors to rank their preferences, and provide a reasoning behind their selections; however, the ultimate choosing authority remains with the detailers at NPC.

In a perfect model, there would be harmonious matching and all the available jobs would be filled with sailors who stated preferences towards said jobs. However, in practice, friction occurs and there are jobs that remain unfilled. When this occurs, the detailers have to assign sailors into jobs that they have not listed as a preference, or that they listed very low in their priority que.

2. Forced Assignments

Ultimately, the Navy detailing and placement process is required to fill the jobs, regardless of the sailors' wishes. There are many second and third order effects on the Navy in forcing unwanted orders on Naval servicemembers that have typically been written off as unavoidable and the cost of doing business. When sailors enlist, they sign a contract for a certain number of years. They are given the choice to reenlist or not when their obligation is completed, with the major driver often being their satisfaction with the Navy. Pushing overseas orders on a sailor who adamantly does not want to leave the country can be an easy path away from retention. Navy Recruiting Command has to find a replacement for every sailor lost, with all the associated recruiting and training costs. Forced filled orders also have a huge impact on job performance and sailor morale.

The last few years have seen a revelation in the field of talent management in both the U.S. Navy as well as the civilian workforce. Employers understand the power that a happy workforce can provide, and the implications that a dissatisfied labor force can have on productivity and overall organizational success. In addition, the rapid advance of technology and data aggregation methods available has allowed for a much more transparent view on the preferences of employees. If the Navy truly values its people as its most important asset, then safeguards are needed to keep our sailors' morale high and gain their best output. Placing sailors in billets that they do not desire does not foster the environment that talent management theory advocates.

B. BEHAVIORAL ECONOMIC SOLUTIONS

When examining the challenges that the Navy enlisted detailing process currently faces, the behavioral economic concept of nudge theory offers the ability to incorporate specific non-monetary incentives. These incentives will assist sailors in voluntarily choosing a billet that will be a good fit both personally and professionally. In addition, these concepts can help detailers fill available jobs, reduce forced filled positions, and support the workforce by lowering the amount of non-voluntary assignments.

1. Location Challenge

A billet's geographic location is one of the most important factors sailors consider when choosing their next set of orders. The location challenge occurs when the Navy is faced with assigning sailors to billets in areas that they view as undesirable. Although some sailors love the adventure and excitement of moving to an overseas location, many others have no desire to be stationed outside of the United States. This location challenge gets even harder when trying to fill jobs in third world counties, or geographically isolated locations like the military facility on the island of Diego Garcia. The behavioral economic concept of choice architecture and priming are two ways in which nudge can help solve this problem.

a. Choice Architecture

Choice architecture is one area of nudge theory worth exploring. Choice architecture describes how the decisions people make are affected by the layout and sequencing of choices that are presented to them. There is potential to nudge the decisions sailors make towards hard to fill billets by adjusting the manner in which job postings are displayed in MNA. With the current system not prioritizing presentation, NPC is unintentionally nudging sailors, and is failing to capitalize on the opportunity to steer choices towards challenged billets. Sailors have a predisposition towards choosing jobs they view first, jobs at the top of page, jobs with buzzwords and highlights that make them stand out from the rest. The current system does not use this information to its advantage. This is an opportunity lost when NPC has already identified jobs they historically have had trouble filling. These hard-to-fill jobs should be listed first, should be bolded or

highlighted, placed in a separate window that sailors have to view first, etc. Anything that can be done to highlight the job and differentiate it from others will assist sailors in choosing a challenging billet over another.

Detailers preselecting options or a specific job prior to presenting available jobs to sailors capitalizes on the choice architecture concept of default choice. The email to sailors would read, “Based off a review of your past assignments, performance reviews and enlisted service record, your detailer has nominated you to fill the following positions …” Once in MNA, sailors would see those default choices already selected and the responsibility would fall on them to choose a different option.

How NPC frames the detailing process has significant implications on the jobs that sailors select. The current system allots for three separate windows for sailors to view the available jobs and pick their choices prior to being assigned. If a sailor does not like the options in the first window, he or she can choose nothing, wait for the next window, and without penalty, hope for a better set of job offerings the next time around. Those who delay until their third window are ultimately faced with the pressure of choosing their own billet or losing the ability to pick at all, falling into the needs of the Navy status. This third window of detailing is where the first pressure is applied to force sailors into making a decision. They may not love the choices provided, but would rather choose a billet that meets some of their preferences then be told where to go and potentially meet none of their preferences. This concept of applied pressure is framed incorrectly by only placing that stress in the last window; pressure could be spread throughout the entire detailing process and used to help sailors choose billets that the Navy needs filled.

Framing the marketplace as a dynamic and live auction, where sailors can see in real time how others are bidding, can help to compel sailors into decisions at a more aggressive pace. In a model where no detailing windows exist and sailors can view all available jobs in real time, all sailors in the marketplace could observe which jobs are being bid on, when they are taken out of the marketplace, and why a match was made. As the list dwindles, the pressure mounts for sailors to choose a job that perhaps they did not find desirable before. In fact, they may be thrilled with “winning” said job, as it keeps them from going to a position that they find even less desirable.

b. Priming

The idea that you can prime a person before they make a decision can be easily adapted to help solve the Navy's location challenge. As the choice architect for the assignment process, the detailers at NPC have any number of opportunities to influence choice through priming prior to a sailor entering into the detailing negotiation window. As seen in the scrambled sentence test example, a quiz that seemingly has nothing to do with the experiment can have an effect on the brain and how it functions. NPC could use a similar test to prime sailors into choosing locations that they originally had no desire to select. In Figure 5, an example quiz is provided that could be administered to sailors before they access MNA for the first time. Designed to help prime sailors into filling an overseas position in Forward Deployed Naval Forces (FDNF) Japan, the quiz is primed with the words Overseas, Pacific, Exotic, Culture, Adventurous. This could obviously be tailored as needed to fit specific positions or areas of the world, but serves as a priming function for sailors to begin thinking about a specific action and nudge them towards choosing an overseas billet in a challenged location.

Priming could also be used during the entire detailing process through the sailor's correspondence with their detailer and the NPC website. Most sailors have several email conversations with their detailer, and use the NPC website to get information on the process long before orders are issued, and each one of those touch points provides an opportunity. Priming words and phrases can be spliced into email communication and targeted pop-ups can be used on the detailing webpage that advertise the perks of an overseas job, Scuba diving in Guam or hiking Mount Fuji, for example. Any point at which a sailor communicates with NPC is an opportunity to provide a priming nudge.

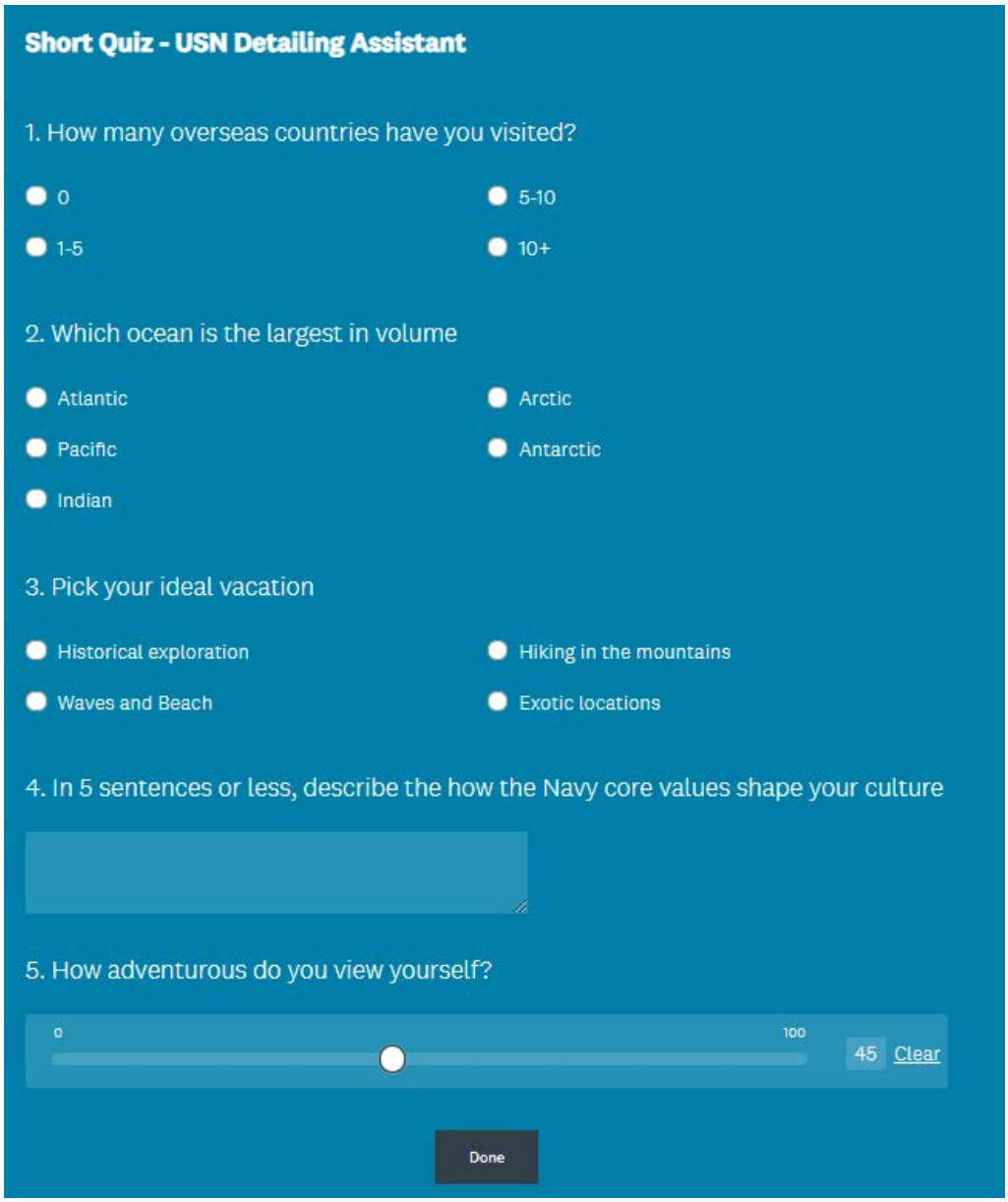

Figure 5. Priming Quiz

The example of pollsters increasing the turnout to vote simply by asking the public if they intend to vote in the election tomorrow, is one way in which NPC already does a fantastic job with priming, although its likely not done specifically with priming in mind. Asking sailors if they have any preference toward serving overseas, or if they would ever consider taking a job in Bahrain, Japan, etc., is very typical behavior for detailers and,

knowingly or otherwise, serves as an effective nudge for sailors to choose these billets in the future.

2. Work Condition Challenge

A massive organization, the United States Navy offers a vast array of different jobs for its employees, regardless of their specific job rating and background. The work condition challenge appears when trying to convince sailors that they should choose a job that will be outside of their comfort zone, or will require a substantial level of work. Naval Recruiting Command (NRC) is one such area that has always had trouble convincing quality sailors to join their workforce due to the challenging work environment facing sailors while selling the Navy experience. Their current solution is to provide monetary incentives, however behavioral economics offers some non-monetary solutions that may help induce sailors to choose a challenging work assignment like Naval recruiting. The concepts of two-sided matching, dominating alternatives and irrational value can all be used to reduce this challenge in the assignment process.

a. Two-Sided Matching

The ability for a marketplace to facilitate a match between buyers and sellers while accounting for the preferences on both sides can be a powerful tool in making assignment decisions. Two- sided matching ensures that all parties concerned are made better off, and are satisfied with the choice they have made. In the Navy detailing model, a two-sided marketplace can help nudge the decisions of the buyers (Navy Sailors) into submitting a preference for a job offered by a seller (NPC and Command Placement). Functionality is being added to MNA that allows the gaining command to enter comments on sailors that have applied to their open position, and help the detailer decide whether to select a sailor for a job or not. However, to truly be a two-sided match, the functionality needs to be expanded and made more transparent. The gaining command, working with their placement officer, should be able to select available sailors, regardless of the sailor's job preferences, and write comments in either a positive or negative direction. These comments could then be provided directly to the sailor. Picture a sailor, who is not considering taking orders to Recruit Duty Command (RDC) (a work condition challenged billet), opening his

MNA page and being notified that RDC command has reviewed his record and thinks he or she would make a great fit for the job. This is not a mass produced and spammed offer, but rather a targeted email from a leadership member of the command, highlighting why the sailor would be a good fit, and how exactly they would make an impact if they select those orders. This nudge will help sailors in deciding. In addition, if they choose along those lines, a two-sided match has been made.

The call to serve in the United States military attracts a certain type of individual, and most sailors are not as put off by the prospect of hard work as they are by the idea that their contributions will not make a difference, or that they would not have the opportunity to succeed. Two- sided matching gives these sailors the nudge they need to feel that they are wanted in their next command, and to understand the impact that they can make by choosing a specific set of targeted orders. Command feedback can transform the current system with a direct flow of information and not rely on the detailer to play middleman with the prospective sailor and the gaining command. Sailors could be nudged into orders they had originally found undesirable if a command had the capability to contact them and sell the merits of their organization.

b. Dominating Alternatives

How you are presented options and the different choices provided will affect how you view the list as a whole, and your eventual choice off that list. In showing sailors an arbitrary list of available jobs in MNA, the detailing shop loses the ability to control the narrative and use the behavioral economic theory of dominating alternatives. As the choice architects, NPC has a huge advantage in knowing the historical trends about which billets fly off the shelf, and which billets are notoriously hard to fill. It would be an easy step to identify the premium billets, and cap the number that sailors are shown. Packaging multiple undesirable billets next to a few premium billets may not induce sailors to choose the least desirable on the list, but should float some challenged jobs into a middle ground where they do not look as bad compared to the alternatives.

The ability for dominating alternatives to influence decisions was highlighted for me personally in my last detailing round, choosing a follow- on assignment from the Naval

Postgraduate School (NPS). I had already targeted and qualified for a specific type of job, the only unknown was the available locations. Always forward thinking and looking to the future, my wife and I had for years discussed all the available options and the pros and cons of each, we had made a mental list of the most desirable, and waited for our detailing window to arrive so we could list our preferences. Both of us are originally from New York, and with many family members still there, we targeted job locations on the east coast that brought us closer to home. We established Buffalo, NY, Springfield, MA, and Tampa, FL as our top picks, with a wild card of Honolulu, HI in the back of our minds, as our adventurous option. However, when the list was delivered it instead offered four choices, Spokane, WA, Amarillo, TX, Oklahoma City, OK, and Memphis, TN. All locations for which we had no desire to fill. Faced with these as the only options, however, we choose the farthest east we could go, and requested being selected for Memphis. As we waited for the decision to resolve, our attitude quickly shifted from "None of these options meet our needs" into "I hope we get Memphis," "I really don't want to move to Oklahoma, so come on Memphis." When faced with the alternative options, Memphis, which was not originally our preference, became our top choice and we were thrilled when we were selected for it.

c. Irrational Value

There are two ways to look at the impact that irrational value has on Navy detailing. The first way is from the lens of an NPC Detailer. They need to understand that sailors will make irrational economic decisions that will complicate the detailing problem. Trying to induce sailors into selecting a billet that you need filled becomes much harder when sailors place irrational values on other positions. There will always be jobs that hold an irrational value for a specific sailor, a position that they value more than the assignment shop expects. This is can be seen when returning servicemembers to their hometowns on recruiting duty. There may not be many people who want to be assigned recruiting duty in Pine Bluff, Arkansas, but someone in the Navy wants to return home and would make a great fill for that billet. Understanding the why behind the irrational value is a step our detailing system can take to cater to these sailors.

The second concept goes back to the idea of establishing premium billets. Just as a name brand coffee shop can charge a premium for a product that is considered "upscale," The Naval detailing enterprise could establish a special list of "upscale" billets. NPC could take this list of designated premium billets, which is generated off historical fill trends, and shape them into perceived irrational value objects for sailors. Once established, there could be two ways to push sailors towards work condition challenged billets: using the premium list as an incentive for the next cycle, in exchange for filling a challenged job, or by the simple rebrand of some challenged jobs as "upscale." There are problems, with this, as it would likely take a while for the identified billets to develop a brand of "premium." Once established however, NPC could use jobs under the enhanced brand to help solicit interest in challenged jobs that have been repackaged as premium jobs. When viewing MNA, if there were billets highlighted (Choice architecture) and designated as premium, their status would be elevated and sailors would be more likely to choose those billets.

3. Information Scarcity Challenge

Very few people are completely comfortable with the unknown and can easily make important decisions in the absence of information. Typically, humans like to gather as much data as possible before making important decisions, with bigger decisions consuming even more time to weigh the pros and cons and determine the best possible choice. The Navy assignment process for choosing and executing orders is a momentous decision and has long ranging implications on a sailor's career. With the information scarcity challenge, the Navy has difficulty assigning the right sailor to the right job when there is little information for a sailor to review to inform their decision. This can happen when new billets are created, generating an obvious information gap, or when the information exists but is not readily available and accessible for sailors. Behavioral economics offers two concepts that can be used to nudge sailor's choice, anchoring and the social proof heuristic. Both concepts can inform and influence choice, which reduces information scarcity and helps sell billets that have previously been passed on due to a lack of information.

a. Anchoring

The anchoring concept provides an easy solution to sailors shying away from billets where they do not have enough information to make an informed decision. All the assignment shop needs to do is provide an anchor. In the Navy's somewhat archaic detailing process, the billets displayed in MNA are not always clear, which can cause confusion. From the MNA smart sheet snapshot in the last chapter, we can see contrasting examples. Line 1 reads, "GUNNERS MATE, SAN DIEGO CA, SEA DUTY" (NPC, 2019), it is doubtful that a rated gunner's mate (GM) sailor would have difficulty understanding the scope of this job. However, line 5, "INST F LCS SW MOD," and even worse line 14 "WEPS DS TEC/SMRD CIVSUB FY22" (NPC, 2019) are far more confusing. Without an anchor, sailors could easily disregard these choices, despite the fact that sailors may be a great fit for these jobs. It would not be terribly difficult to provide a question symbol next to the job title, location, ship type etc., that links to a provided anchor, or has amplifying information to help clear confusion. In the example of "INST F LCS SW MOD," the anchor could be as simple as "This job offers a similar work environment to what you experienced in A school." (A school is a classroom and hands- on learning environment that sailors attend to learn their specific rating training, typically received prior to reporting to their first assignment.)

While monetary incentives are powerful tools to help motivate choice in our sailors, it is important to understand that money is just one of many things sailors value. Opportunity to succeed in their job and potential for promotion are also high on the list. Selling jobs that suffer from the information scarcity problem could become much easier with a system that flags the actual promotion rates for specific jobs and provides that output in MNA. This would be a powerful anchor for sailors to latch on to, if they knew that 89% of all sailors assigned to a specific billet were promoted, for example.

b. Social Proof Heuristic

The last concept to explore is integrating social proof heuristics into the Naval detailing process. The problem of billets being historically difficult to fill due to a lack of information should be solved in the same manner as we solve unknowns in daily life.

People look to choices others have made to inform their own opinions. This is why recommendations on social media have so much power, and why sites that offer peer reviews are so popular (e.g., Yelp or Trip Advisor). In today's overt information-sharing age, this is perhaps one of the most powerful tools that the Navy can use to modify job choices.

Consider a sailor in his or her negotiation window interested in a billet located in Norfolk, VA, but concerned that it will not be a good place for a single sailor. However, when they click on a newly integrated peer review button, they find six reviews from sailors who sing the praises of the base's single sailor outreach program, describe the job in greater detail, highlight the accomplishments they made while there, and give a realistic view on why it was such a great command. This is information that the sailor could possibly have found on his or her own through research, or gotten from the detailer, but if MNA consolidates and provides the information in an easily assessable way, it generates an instant nudge towards filling this position that leans on the social proof heuristic. This info is not coming from the detailer (who could be biased), but rather from the sailor's peers, and even better if it is from someone that the sailor knows personally or has shared friends in common.

The social media model would facilitate social information sharing within our assignment process. Adding a social networking capability to MNA would provide huge gains as viewed through the behavioral economic world. Allowing sailors to lean on the shared experience of others would be a true win against the challenge of unknown information. "Has anyone ever been stationed in Japan with dogs who can share their experience," "Who has filled the "WEPS DS TEC/SMRD CIVSUB FY22" job? What will I be doing there?" MNA should provide the opportunity for Navy sailors to see who has filled assignments in the past and the ability to review and provide highlights as well as lowlights. It would be an easy inclusion to add the names and contact information of the last three sailors who filled a position; this would allow a great flow of information, with a bonus of eliminating the possible biased effect of getting only one sailors opinion. For jobs that are similar but in different locations, such as a Navy recruiter, MNA could provide a list of past recruiters, regardless of location. This would remove any potential

command/leadership bias, and give an honest assessment of the job only. This cuts out the detailer as the sole provider of information, and lets sailors lean on the trust they have in their social circles.

The social proof model should also be integrated into our assignment system with transparency on who is selected for what specific jobs, both in real-time as well as historically. Understanding the importance of perception, nudges can be used in a transparent model to influence the choices that our sailors make. If they know their peers are also in the marketplace, and can see what jobs they apply for, will they be more likely to select assignments that are more difficult? If they see that a Leading Petty Officer (LPO) who they idolize has served in the past in an overseas billet, are they more likely to select an overseas billet for themselves? The power of social influence should be harnessed by MNA and NPC to help fill challenging billets.

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IV. ETHICAL CONSIDERATIONS

Nudge theory is an extremely powerful tool that choice architects use to influence decisions. Yet, organizational leaders should consider the ethical implications of applying a systematic approach toward shaping employees' choices. Craig Johnson's 2018 book, *Meeting the Ethical Challenges of Leadership: Casting Light or Shadow* defines ethics. According to Johnson, "[t]he term ethics refers to judgments about whether human behavior is right or wrong" (Johnson, 2018, p. xxii). Applied here, for example, is it ethical for the choice architect to push or nudge an individual towards a certain outcome? Does the outcome of a systematic approach to nudge always benefit the organization to the detriment of the employee and, if so, is that right or wrong? Does doing so deprive that person of their right to make a choice for themselves? A tension emerges as the choice architect should make ethical decisions in their actions that affect both the organization and the individual, yet satisfying the needs of both is often challenging and at times impossible. Nudge recognizes the easy path to unethical behavior if the utmost care is not taken, and stresses that nudges should only be structured to assist choice, not to force a choice upon an individual.

As described in this chapter, there are three frameworks Navy leadership can adopt to help ensure that nudge is applied ethically by the organization, employed ethically by detailers, and accepted by the detailer-sailor dyad. Specifically, at the organizational level, Navy leadership should adopt a pragmatic framework because it calls for testing and evaluation that would ultimately shed light on the degree to which the Navy might ethically implement nudge. Additionally, at the detailer level, those officers responsible for approving assignments should adopt Nash's 12 Questions. Finally, at the dyadic level between the detailer and the sailor, satisficing becomes increasingly important, as some organizational and individual needs will go unmet.

Nudge theory has been criticized for removing an individual's freedom to make his or her own choices (Sunstien, 2015). The free market economic concept would strive for the exact opposite of nudge, and rather than targeted choices provided, the free market dictates that as many choices as there are available be provided with the ability for the

individual to choose which option they like best. The problem with this is that it is predicated on the assumption that people will make the best choices for themselves all the time, a concept that Dan Ariely's book *Predictably Irrational* disproves. The other problem is that even without trying, there will still be unintended coercion from the choice architect in the design and layout of the choices. It is not possible to completely avoid any influence. Whether intended or not, nudging will happen. In the book, *Nudge*, Thaler provides a great example when he writes; "It is true of course, that some nudges are unintentional; employers may decide whether to pay employees monthly or biweekly without intending to create any kind of nudge, but they may be surprised to discover that people save more if they get paid biweekly because twice a year they get three pay checks in one month" (Thaler & Sunstein, 2008, p. 10). The decisions that choice architects make will have ethical implications and without taking a step back to examine the consequences, the moral high ground can easily be lost.

In the enlisted detailing model, using nudges unethically would push sailors to fill jobs the Navy needs filled without considering the right fit. If detailers are just placing sailors into jobs and using nudge theory to force sailors' hands, this has huge ethical implications. It breaks the trust between employee and employer and rather than focusing detailing on the three advertised priorities (the needs of the Navy, career needs of the individual, and desires of the individual), NPC would be benefiting itself by fulfilling priority one. However, if a sailor is a good fit for a job, but is unaware of the benefits, either personally or professionally, and the detailers can nudge them to choose a job that would fit them, in this area, nudge theory could have great success, and would be used as intended. To assist in the ethical decision making process, the pragmatic framework will be defined and applied to nudge theory, the benchmark for corporate ethics; Nash's 12 questions, will be assessed as a detailer tool, and a holistic view on the satisficing required between sailors and NPC in order to make all parties better off will be examined.

A. PRAGMATIC FRAMEWORK

Using the pragmatic ethical framework as a guide, this section will focus on examining the ethical issues raised by including behavioral economics in the USN detailing

system. Contrary to other rule-based approaches to ethics, such as utilitarianism, the pragmatic view should be applied to nudge theory because it focuses on the thought process behind moral decision-making. Craig Johnson's book is designed as a guidebook for leaders to use when making ethical decisions. He describes pragmatism as the scientific method for solving human dilemmas, by focusing on the process of moral decision making, and believing that good ethical choices emerge though using inquiry. (Johnson, 2018, p. 155) The pragmatic viewpoint stresses that good ethical choices are made by mentally examining the courses of action and considering the likely outcomes. Johnson lists a 5-step process that should be taken mentally prior to making a decision:

1. Identify Options
2. Consider possible outcomes
3. Gather information
4. Experiment
5. Adjust conclusions in the light of new information. (Johnson, 2018, p.157)

Applying nudge theory in the enlisted detailing system can be examined under the pragmatic framework to judge its morality and to determine if it meets the high ethical standards held by the United States Navy. Applying Johnson's mental test to the behavioral economic nudges that could be used in detailing reveals some ethical considerations that need to be explored. In addition, when you work through the mental process, it allows for mitigation as well. Using the nudge concept of choice architecture as an example, the ethical challenge arises where a job choice could be presented to a sailor and nudged to induce a choice that would not be in that sailor's best interest, but would instead fill a Navy need. This would appear to be an unethical decision on the part of NPC to place its needs above that of the sailor. This could be mediated by transparency. Nudges that are performed in the open, with full transparency of the why behind the action, let sailors understand why they are being nudged, and encourage them to use the nudge in their decision. If sailors know they are being nudged towards a choice that fills a greater need for NPC them

themselves, the ethical argument disappears. Cass Sunstien wrote an article titled *The Ethics of Nudging* in 2015 in which he argued that choice architecture is a non-factor, because whether planned or not, nudges will always be present in choice architecture and influence choice. He writes:

> Choice architecture is inevitable. Human beings (or dogs or cats or horses) cannot wish it away. Any store has a design; some products are seen first, and others are not. Any menu places options at various locations. Television stations come with different numbers, and strikingly, numbers matter, even when the costs of switching are vanishingly low; people tend to choose the station at the lower number, so that channel 3 will obtain more viewers than channel 53. A website has a design, which will affect what and whether people will choose. Nor can the state avoid nudging. Suppose that a government is or purports to be firmly committed to free markets, private property, and laissez-faire. Even so, it cannot simply refrain from acting-or from nudging. It creates its own choice architecture. (Sunstein, 2015, p. 421)

Ethical challenges do arise from the application of nudge theory; however, nudges are already being applied, so they might as well be purposeful. The counter to any ethical challenge is transparency, and by being open and honest with how nudges are being used, the Navy can ensure that nudges are being used to help the individual make an informed choice and not just to force jobs on sailors.

B. NASH'S 12 QUESTIONS

In 1981, Laura Nash established a procedure to test pragmatically the ethical content and human fallout of everyday decisions in business and other organizational settings. Her 12-question test is viewed as the standard assessment for businesses to use when reviewing their decisions through an ethical lens. See Figure 6.

Exhibit	Twelve Questions for Examining the Ethics of a Business Decision
1	Have you defined the problem accurately?
2	How would you define the problem if you stood on the other side of the fence?
3	How did this situation occur in the first place?
4	To whom and to what do you give your loyalty as a person and a member of the corporation?
5	What is your intention in making this decision?
6	How does this intention compare with the probable results?
7	Whom could your decision or action injure?
8	Can you discuss the problem with the affected parties before you make your decision?
9	Are you confident that your position will be as valid over a long period of time as it seems now?
10	Could you disclose without qualm your decision or action to your boss, your CEO, the board of directors, your family, society as a whole?
11	What is the symbolic potential of your action if understood? if misunderstood?
12	Under what conditions would you allow exceptions to your stand?

Figure 6. Nash's Twelve Questions. Source: Nash (1981).

Nash's 12-step process is yet another way to pragmatically think though your decision and help to frame the morality of a potentially unethical situation (Nash 1981).This 12-question process could be used by the detailers in NPC to test the ethical nature of the nudges they apply to sailors, and serve as an ethical "backstop" to applying nudges. Applying this test accomplishes two goals: first, it provides a tool to help keep detailers honest and justify their using a nudge: and second, when machine learning and artificial intelligence are eventually folded into the equation, and used with nudges, having this test will keep a human in the loop and allow for a safety net to catch errors. Using the behavioral economic concept of priming for this example, we can step through the 12 questions from a detailer's point of view.

1. *Have you defined the problem accurately?* Does priming sailors choice in billets violate their individual right of choice?

2. *How would you define the problem if you stood on the other side of the fence?* Detailers are sailors too, and my personal opinion is that any sailor would not want to be subliminally nudged towards billets.

3. *How did this situation occur in the first place?* The Navy has challenged billets it needs to fill in order to succeed as an organization.

4. *To whom and to what do you give your loyalty as a person and as a member of the organization?* Ultimately, all service members are giving their loyalty to their country.

5. *What is your intention in making this decision?* To help fill challenged billets.

6. *How does this intention compare with the probable results?* There is a likelihood of success, but also an additional layer of responsibility as sailors may feel that a decision was forced upon them.

7. *Whom could your decision or action injure?* If discovered, there would be a breach of trust between the sailors and Navy.

8. *Can you discuss the problem with the affected parties before you make your decision?* No, adding transparency in this case would not allow priming to work.

9. *Are you confident that your position will be as valid over a long period of time as it seems now?* There would not appear to be a discernable difference.

10. *Could you disclose without qualm your decision or action to your boss, your CEO, The board of directors, your family, society as a whole?* Yes,

the question remains, what is more valued, the opinion of the sailor, or the needs of the Navy

11. *What is the symbolic potential of your action if understood? If misunderstood?* The potential exists for a non-monetary solution to a hard to solve problem, however there is an added element of risk if sailors are unhappy with the actions of the Navy and decide to leave the service.

12. *Under what conditions would you allow exceptions to your stand?* There should not be exceptions. A decision that is applied across the board is needed, not on a one on one situational application.

In this example, Priming may not pass the ethical test, as it is certainly the most subliminal of the behavioral economic options presented. However, other concepts would fare much better as they have the luxury of remaining more transparent. There are still elements of priming that could be used as ethical nudges; the intention behind their use would drive the ethical factor.

C. SATISFICING

In the ethical sense, the term of satisficing is used to describe searching through the available alternatives until an acceptable threshold is met from both sides. That is, an ethical decision may not have a clear right or wrong answer, but a satisficed ethical decision will be "good enough" and meet in the middle despite not being the optimal solution. Another way to think about satisficing is that it is a way to make peace with the outcome of a dyadic decision. Even if you did not get everything you wanted in the negotiation, the other side is also left wanting, and at least you had a say in the process and were able to get some concessions. Satisficing fits the Navy problem, as there are two competing interests: the wants and needs of the individual sailor, and the wants and needs of the Navy as a whole. Detailers and placement officers have always had a slight upper hand in the negation process over the sailors they are placing into jobs, which tends to cause a slight rift of distrust. The NPC team has worked hard to be transparent in dealing with sailors; however, it is easy to see why distrust forms. Major life decisions are being trusted to an

unknown entity, and the lack of complete disclosure in the process leaves a glimmer of "what if" that will never completely disappear. Knowing that there is already a culture of sailors vs. the detailing machine, how does introducing nudges help the problem? The concern being these reforms are designed to be done in the background, without the individual's explicit consent.

The solution to the ethical problem ultimately comes down to making a satisficed, transparent, well thought out, and vetted decision that allows both parties to become better off. Sunstien closes his article on ethics stating that it is pointless to object to nudges, they exist in our world regardless of intention. Transparency and public scrutiny are the safeguards necessary when public officials are responsible for nudges and choice architecture; nothing should be hidden or covert (Sunstien, 2015, p. 450) If the Navy detailing system adopts nudges and remains transparent in how they are using them to help inform choice, is open to public scrutiny towards their applied nudges, and takes a pragmatic view to help guide their choices, the ethical obstacle can be overcome and nudges can be successfully intertwined in the personnel system.

V. CONCLUSION

A. SUMMARY

The United States Navy has identified the importance of talent management in the current competitive job market. Understanding how important the detailing and assignment process is to a Navy sailor's career and the enormous implications on the Navy's ability to retain the best and brightest is the first step. However, the Naval personnel system must be willing to rapidly adapt their processes to retain a competitive advantage. The field of behavioral economics offers non-monetary solutions to a problem that the Navy has only tried to solve with cash incentives in the past, and can increase the satisfaction and retention of Naval personnel. Nudge theory offers insights into the why behind the decisions that humans make, and gives specific recommendations on how to influence choice. By understanding these principles, and then integrating them into the current marketplace detailing system, the Naval enterprise will be able to reduce its three challenged areas of detailing: location, work condition, and unknown condition.

Although there are ethical considerations that must be addressed, nudge theory ultimately endeavors to make all parties involved better off. If adapted correctly, nudge theory should help increase the happiness of both the Navy as whole and its employees. The field of behavioral economics and nudge theory provide tools that can be used to modernize the Navy's enlisted detailing process at a relatively low cost. Reducing forced assignments and allowing sailors to control more of their own destiny when choosing orders will improve morale, increase retention, and craft a more lethal and capable force.

B. RECOMMENDATIONS FOR FUTURE RESEARCH

There are several follow-on concepts from this thesis that should help advance the science of integrating behavioral economic nudges into the United States Navy assignment and detailing system.

1. The applicability of the behavioral economics solutions in this thesis are theoretical only. Further research needs to be conducted in either a laboratory or a classroom experiment, or with a trial run integrated into the

detailing marketplace. Despite the fact that these solutions are non-monetary in nature, and therefore are very cost effective to implement, and have relatively low risk, not having the quantitate data available to be studied and understood increases the risk of unintended consequences, or a failed effort.

2. Nudges are typically successful because the choice architect has an upper hand over the chooser in the form of a greater knowledge base, or a more robust personal experience. Therefore, the application of artificial intelligence and machine learning processes, coupled with understanding how humans make decisions from behavioral economics, can be an immensely powerful tool in shaping choice. Nudge theory and behavioral economics need to be explored hand and hand with these budding technologies.

3. The seven behavioral economic theories touched on in this paper are only a fraction of the available concepts that are currently publicized. Additional research of new and differing ideas and the ability to include them into the detailing model can provide opportunity for additional nudges to be adapted.

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